

A COMPARISON OF READING COMPREHENSION SKILLS TAUGHT IN FIVE ELEMENTARY
SCHOOL READING SERIES AND TEACHER PREPARATION TO TEACH READING:
IMPLICATIONS FOR PROGRAM PLANNERS FOR THE HEARING IMPAIRED

by

James Leland Clack
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Name of Candidate: James Leland Clack
Doctor of Education, 1983

Dissertation Approved: _____

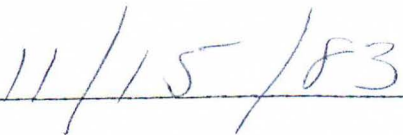


John E. Splaine, Ed.D.

Associate Professor

Department of Education Policy,
Planning and Administration

Date Approved: _____



ABSTRACT

A COMPARISON OF READING COMPREHENSION SKILLS TAUGHT IN FIVE ELEMENTARY SCHOOL READING SERIES AND TEACHER PREPARATION TO TEACH READING: IMPLICATIONS FOR PROGRAM PLANNERS FOR THE HEARING IMPAIRED

James Leland Clack, Doctor of Education, 1983

Dissertation Directed by: John E. Splaine, Ed.D.
Associate Professor
Department of Education Policy,
Planning and Administration

This researcher has studied the problems that teachers and program planners have in selecting basic, supplementary and remedial reading comprehension materials for hearing impaired students from commercially produced materials.

The first phase was a systematic analysis of the teacher's manuals of five current editions of K-6 reading series used in regular public schools and residential schools and classes for the deaf. The reading comprehension objectives in each series were compiled and classified into twelve categories using Bloom's Cognitive Development Levels. The objectives were analyzed and compared relative to scope, format and timing. Tables and charts were used to organize the objectives in each category from all five series.

The second phase was the teacher interviews. Two groups of five teachers each were selected to be interviewed based on availability. The first group was five elementary school teachers with hearing impaired students in their classes. The second group was five residential school for the deaf teachers. Each interview was conducted and completed at

the respective teacher's school. They were asked to describe their training to teach reading, procedures and criteria used to select reading materials and concepts of transformational grammar. A questionnaire was developed and used to conduct the interviews. The data was categorized and the responses were studied for significance.

The textbook analysis revealed significant variations in scope, format and timing of their objective statements. Only one series clearly differentiated its mastery levels.

The public school teachers had an average of 16.2 credit hours training to teach reading while the residential school teachers had an average of 7.2 credit hours. Neither group had more than a minimum introduction to cognitive and child development theories. Only one public and one residential teacher had significant training in transformational grammar. The public school teachers had little knowledge of the educational needs of the hearing impaired.

Using the results of this project, an inservice program was described including cognitive and child development theories, transformational grammar and educational technology skills to help teachers improve their ability to apply criterion-reference objectives to select instructional materials for hearing impaired children.

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CHAPTER ONE

Introduction

Statement of Problem

The problem studied was the process of reviewing, selecting, designing, and modifying reading comprehension instructional materials for hearing impaired students to supplement basal textbooks designed for hearing students.

Need for the Study

Every day the educational process presents new and challenging problems for all personnel levels in regular and special education. One problem that faces most elementary and secondary school teachers, and especially teachers of hearing impaired students, is selecting instructional materials to supplement the basic textbooks. One difficulty is finding materials that meet the needs of individual learners relative to their functional language and conceptual development in a familiar context.¹

The problem that teachers of hearing impaired students face is extremely complex. In addition to the factors that must be considered for hearing students, they must also provide for many other variables. First, educators must provide suitable materials for students with various degrees of hearing impairment. The three basic classifications are:

¹Francis Kay Marshman, "A Descriptive Study of Reading Instruction for the Deaf in Residential and Public Schools in the United States," (Dissertation, Univ. of Georgia, 1974), DAH 75-02620.

mildly impaired, severely impaired, and profoundly impaired. Each group of students requires different educational programming considerations. For example, students with a mild hearing loss may only require special seating, the use of a hearing aid, and perhaps tutoring to maintain regular class placement. On the other hand, severely and profoundly impaired students generally require more extensive program modifications. These students require special language and reading programs at the beginning stages of their schooling. They usually require special classes throughout their formal elementary and post-elementary educational experiences.^{1,2}

In addition to the degree of hearing loss, a number of other factors must be considered by teachers as they make individual placement decisions. Some of these factors are: the student's lip-reading ability, type of hearing loss, age at which the hearing loss occurred, and intelligence. However, because the degree of hearing loss is highly correlated to the student's reading ability, that factor is the major one that teachers are guided by in making broad program planning decisions for the students.³

The problem of reviewing, selecting, designing, and developing reading instructional materials for hearing impaired students is

¹Hallowell Davis and S. Richard Silverman, ed. Hearing and Deafness, (New York, NY: Holt, Rinehart and Winston, 1970).

²Stephen P. Quigley and Robert E. Kretschmer, The Education of Deaf Children: Issues, Theory and Practice, (Baltimore, MD: University Park Press, 1982).

³Ibid., 84.

complicated because basal readers are designed for hearing children.¹ The problem is further complicated because teachers of hearing impaired students have little formal training in teaching reading and have few skills in selecting basal readers for these students.² In addition, direct comparison of basal readers is difficult because of the variation in scope and organization of reading skills included by authors of these textbooks. For example, teachers must be able to differentiate, evaluate, and separate the equivalent levels of reading comprehension tasks among various sources despite the lack of consistent terminology and sequence.

The process of selecting regular, supplementary, and remedial instructional materials requires several steps for teachers. Each step can determine success or failure for a hearing impaired student who is below grade-level in reading skills. These steps include:

1. Matching comprehension skills among various reading series and supplementary materials.
2. Identifying materials with equivalent cognitive levels.
3. Identifying the linguistic level used to compare and select instructional materials.
4. Selecting appropriate content for the learner.

One difficulty for program planners is that most materials are produced by commercial companies who prefer to produce materials for as large

¹Carol LaSasso, "The Validity and Reliability of the Close Procedure as a Measure of Readability for Prelinguistic, Profoundly Deaf Students," American Annals of the Deaf, V. 125, N. 4, (August, 1979), 559-563.

²Patricia R. Bockmiller and Joan D. Coley, "Teaching Reading to the Deaf: An Examination of Teacher Preparedness and Practice," American Annals of the Deaf, V. 125, N. 7, (October, 1980), 909-915.

a market as possible rather than for the relatively "thin" special education market. As a result, most materials available on the market serve either a broad population or a restricted population with large numbers such as the educable mentally handicapped. Thus, few materials designed specifically to meet the special needs of hearing impaired students can be found.^{1,2}

Another problem is that each textbook author approaches a topic or skill such as reading with different schemata, philosophies, and ideas relative to what each author determined to be the most essential skills or concepts. Also each author tends to combine concepts and skills in different ways. General goals but not specific skills or concepts may be identified. Because skills are not always clearly identified or taught specifically in textbooks, educators have difficulty extracting them for the purposes of identifying and comparing materials as they plan specific strategies, such as improving reading comprehension.^{3,4}

A further problem when analyzing the content of reading instructional materials is that one cannot easily separate the language and cognitive functions required for the development of reading comprehension skills.

¹Quigley and Kretschmer, Education of the Deaf, 67.

²Carol LaSasso, "National Survey of Materials and Procedures Used to Teach Reading to Hearing Impaired Children," American Annals of the Deaf, V. 123, N. 1, (Jan., 78), 22-30.

³Philip J. Connell, Joseph E. Spradlin and Leija V. McReynolds, "Some Suggested Criteria for the Evaluation of Language Programs," Journal of Speech and Hearing Disorders, V. 42, N. 4, (November, 77), 563-567.

⁴Maurice Miller and James F. Naas, "Perspectives on Research: Sailing to Windward," (Unpublished: Selected to be published during 1983 by Contemporary Education).

From the time that a hearing impaired child enters a formal educational program, the development of the encoding and decoding skills has direct effect on the individual's ability to comprehend higher functional levels of oral and printed messages. The continued development and expansion of the hearing impaired child's language skills at each functional level are prerequisite for the development of the reading comprehension skills.¹

The importance of selecting reading instructional materials cannot be overemphasized. Hearing impaired children typically enter a special or regular school with a limited functional vocabulary. In many cases, their vocabulary may be limited to a few words. In the cases where students have attended a preschool program, however, they are likely to enter school with an improved learning foundation in language experiences and vocabulary. Still, the oral language and comprehension skills which are necessary to use commercially produced materials must still be developed to some minimum functional level before the student can profit from basal readers. Sometimes the use of a regular reading program must be delayed until the child reaches the age of nine or ten.² In a few cases, a regular textbook may never be suitable, especially in the cases of multi-handicapped hearing impaired youngsters. In most instances, however, the basal reading programs developed for "average" students are inadequate and must be modified or supplemented before they can be effectively used to present reading instruction to hearing impaired students.³

¹Bette B. Zilles, "An Investigation of the Relationship Between Language Performance and Different Reading Strategies Used on Poor Readers," (dissertation, Ohio University, Athens, Ohio, 1978).

²Quigley and Kretschmer, Education of the Deaf, 77-78.

³W. Keith Russell, Stephen P. Quigley, and Desmond J. Power, Linguistic

The need for additional assistance for teachers who teach hearing impaired students is critical. According to such educators as Layton, Schumucker and Holmes, educators of the deaf have failed to achieve the minimum goals of literacy for deaf children. A major cause of this failure, they pointed out, stems from the use of the same teaching materials and methods as are used with hearing children. Few reading materials have been adapted to the language capacity of deaf students. In most schools for the deaf, regular basal reading programs and other supplementary and remedial materials are used.¹ Clearly, instructors need additional information in order to make the modifications and to select materials so sorely needed.

The Purpose of the Study

The purpose of this study is to facilitate the tasks of teachers, supervisors, program planners and developers to select basic, supplementary and/or remedial instructional materials in reading comprehension for hearing impaired children. The two areas studied are: 1) text analysis of five reading textbook series for their reading comprehension skills, and 2) teacher interviews of several teachers who work with hearing impaired students in regular elementary schools and residential school for the deaf for a summary of their skills and knowledge to teach reading to normal and hearing impaired children.

and Deaf Children: Transformation Syntax and its Application, (Washington, D.C.: A. G. Bell, 1976).

¹Thomas L. Layton, Karla J. Schumucker and David W. Holmes, "Vocabulary and Syntactic Structures in Adapted 'Classics' Readers for Deaf Children," American Annals of the Deaf, V. 124, N. 4, (August, 1979, 433-443.

Analysis of Reading Textbooks.

The main purpose of the reading textbook series analysis was to identify, define and organize the reading comprehension skills and concepts in chart form to compare and contrast the scope, sequence, quality, quantity, and emphasis of the different tasks according to the classifications listed and described later in this project.

The textbook analysis was conducted in order to:

- a) identify and illustrate the differences among the definitions of reading comprehension in each of the five series selected;
- b) identify the scope of the objectives included in each series to define the skills and concepts describing the reading comprehension skills;
- c) identify and illustrate statements of objectives used to define the skills and concepts to be mastered in each series; and
- d) illustrate the differences in sequence of the introduction of the skills and concepts among the five series particularly within and between grade levels.

Teacher Interviews.

The teacher interviews provide a description of the teachers' training and experience in selecting reading materials and teaching reading to normal and hearing impaired students. Five regular elementary school teachers with hearing impaired students integrated in their classes and five residential school for the deaf teachers were interviewed. The questions studied were:

- a) What are the teachers' attitudes toward having special education students in their classes, especially the hearing impaired?

- b) How much formal and informal training to teach reading to regular and hearing impaired students do the teachers have?
- c) What method was used to select the reading program or series in their school or district?
- d) How are students, whether normal or hearing impaired, assigned to their current reading level and/or reading program in their school or district?
- e) What process or procedures would each teacher prefer to use to assign students to their school's reading program if they had a choice?
- f) What procedures are used to select remedial and/or supplementary reading materials in their school district? Are these procedures defined, or were they free to select suitable materials? What type of criteria do they use when making their choice?
- g) How much formal and informal training in linguistics (transformational grammar) does each teacher have?
- h) How much training and experience have the teachers had to coordinate linguistics and reading skills in the process of defining reading programs for normal or language delayed children, especially hearing impaired children?
- i) How much training and experience do the teachers have in writing and applying performance or criterion stated objectives to define and select basic, remedial or supplementary instructional materials, especially reading comprehension materials?

Theoretical Background

There are many competing theories with respect to the best method

of teaching children to read. The most common philosophies used to design and develop strategies for teaching reading as described by Zintz¹ are described in the following paragraphs. The philosophies, reviewed in this project, are basal readers, language experience, individual and linguistic approaches to teaching reading.

Basal readers series have a controlled vocabulary with built-in review and maintenance experiences. This system is sometimes referred to as a stereotype because there is little or no flexibility and because it depends on repeated activities. The basal reader approach utilizes the directed reading activities method involving vocabulary, word attack skills and comprehension by following four stages of development: readiness, oral guided reading, silent guided reading and skill development.

Language experience is based on a philosophy that incorporates initial, remedial and supplementary activities into the ongoing development of the reading skills. This approach focuses on three key elements: most materials are student-produced; teaching reading and language are integrated; and vocabulary is based on the student's own experiences.

Individual approach uses a philosophy based on individual's learning rate. The selection of reading materials is based on student interest and progress continues at their own rate with most instruction occurring during individual conferences.

The linguistic approach, however, uses a philosophy focusing on the ability of the individual to use language, such as printed materials, to convey messages. Textbooks contain few pictures, charts, and other

¹Miles V. Zintz, The Reading Process: The Teacher and the Learner, (Dubuque, Iowa: William C. Brown, Co., 1970), 79-97.

supporting aides to interpret the printed materials. More attention is given to sentence length and sentence structure at the beginning levels than other philosophies.

Ruddell supports teaching reading to normal hearing children using a language based approach which has direct implications for teaching hearing impaired children how to read. Ruddell also emphasizes the relationship between the child's pre-school and home languages experiences to their ability to re-tell stories that affect their language development and reading ability.¹

The development of a hearing impaired child's basic language can be accomplished utilizing oral sounds, signs, gestures, pictures, and other visual cues, either individually or combined. These communication modes are referred to as through-the-air (T/A) communication. Using T/A, the hearing impaired child's communication skills can be developed and expanded. These communication skills include the development of their vocabulary, and the encoding and decoding of their language skills. This development of their T/A communication skills is similar to the development of a hearing child's pre-school language.

Goodman and Burke also discuss the ability to comprehend based on the child's pre-school language experiences with spoken and printed materials. Children gain an insight that spoken and written materials have meaning. They also pointed out the importance of using reading materials that the student has experienced through discussions and

¹Robert B. Ruddell, Reading-Language Instruction: Innovation Practices, Englewood Cliffs, NJ: Prentice-Hall, Inc., 1974), xiii.

other learning activities.¹ These verbal experiences permit the normal student to be able to predict information based on previous experiences, a skill which is more limited for hearing impaired children.

Quigley and Kretschmer agree that the development of the individual's language ability is germane to the development of the ability to read and write. They emphasize that reading is a visual rather than an auditory procedure for hearing impaired children. Hence, the idea that language preceeds reading comprehension illustrates the importance of having a coordinated reading/language development program, for both normal children as well as the deaf.²

Wilson and Hall also support the language based approach to teaching reading to normal children by advocating a linking of the teaching of language and reading with the development of the comprehension skills important for reading and interpreting printed materials.³

Another concept important to this project involves the application of Bloom's Taxonomy of Cognitive Skills.⁴ The cognitive skills defined in the following statements are used to identify and classify the reading comprehension skills and concepts obtained from the analysis of the five reading textbook series. The six cognitive levels are:

¹Yetta M. Goodman and Carolyn Burke, Reading Strategies: Focus on Comprehension, (New York, NY: Holt, Rinehart and Winston, 1980), 10-11.

²Quigley and Kretschmer, Education of Deaf, 84.

³Robert M. Wilson and Maryanne Hall, Reading and the Elementary School Child: Theory and Practice for Teachers, (New York, NY: D. Van Nostrand Company, 1972), 3,35,44.

⁴David Krathwohl, Benjamin S. Bloom and Bertram B. Masia, Taxonomy of Educational Objectives Handbook II: Affective Domain, (New York, NY: David McKay Co., 1956), 186-193.

Knowledge is the simplest level that involves the recall of specific, universals, methods, processes, patterns, structures and setting of general ideas and information concerning events, places and individuals.

Comprehension refers to the understanding or appreciation of events being communicated to make sure that the ideas being communicated are related to the events, places and individuals presented.

Application uses abstract and concrete interpretations and events to form and interpret ideas for other uses.

Analysis refers to the ability to breakdown communication into its parts to make clear and/or interpret other relationships between ideas expressed.

Synthesis involves the assembly of parts to form a whole.

Evaluation, highest functional level, utilizes individual judgement about materials or events to determine quantitative and qualitative appraisal of given criteria.

In addition to these ideas being used to define and categorize the materials obtained from the five reading series, a teacher of hearing impaired children must be able to recognize different cognitive levels to interpret a child's functional level needed to select appropriate instructional materials to meet the individual's needs.

Assumptions

1. The selection of appropriate instructional materials is related to the degree to which a student masters the reading comprehension skills.
2. The appropriateness of the instructional materials varies from individual to individual and includes consideration of the following variables: personal experiences, content taught, language (encoding and

decoding) skills, and the cognitive developmental level of the individual

3. A teacher's knowledge and experiences to coordinate the use of linguistic and the development of reading skills are related to their ability to select appropriate instructional materials to teaching reading to hearing impaired children.

4. A student with a hearing impairment requires especially selected or developed instructional materials and, as the degree of hearing impairment increases, the need for highly specialized materials also increases.

Design of Study

Two primary components are studied in this project requiring two different techniques to find the answers to the related problem. First, the questions concern the reading comprehension skills as defined by the authors of five reading textbook series. Secondly, the questions concern the knowledge and training to teach reading to hearing impaired students in regular public elementary schools and residential schools for the deaf.

Textbook Analysis.

The five reading textbook series were selected to provide a sample of textbooks with current publication dates that are being used in either the public schools or schools for the deaf. Furthermore, the texts reviewed represent a non-random sample of texts using various philosophies of organization (i.e., basal, linguistic, etc.).

A systematic trace of each skill or concept from point of introduction to mastery using a page-by-page analysis of the teacher's manual for each textbook series from K-6 was completed. Each concept or skill was classified and organized into the defined categories and presented in

chart form based on the six levels of Bloom's Taxonomy of Cognitive Skills¹ utilizing the schema defined by Smith and Barrett.² The questions investigated include the scope, sequence, quality, quantity and emphasis of the various skills within each series.

Teacher Interviews.

The questions concerning the teacher preparedness were investigated using an interview questionnaire. Each teacher was interviewed individually during a scheduled conference. Five public elementary school teachers who had hearing impaired children in their classes and five residential school for the deaf teachers were interviewed. The scope of the questions described earlier involved investigating the knowledge and training to teach reading to hearing impaired and normal children.

The regular elementary school teachers interviewed had to have one or more hearing impaired students currently enrolled in their classes and the school had to have trained teachers of the deaf assigned to the staff. Their teaching assignment had to include the grades from K-6.

The teachers at the residential school had to be regular classroom teachers at the school. Their teaching assignments had to include students whose age levels would correspond to those enrolled in public elementary schools.

The questions concentrated on their knowledge, training and experience in teaching reading to either or both regular and hearing impaired children, linguistics, using criterion or performance objectives for

¹Bloom, Taxonomy of Cognitive Skills.

²Richard Smith and Thomas C. Barrett, Teaching Reading in the Middle Grades, (Reading, Mass.: Addison-Wesley Publishing Co., 1976), 50-51.

selecting and planning instructional materials, their attitude toward teaching hearing impaired students, and the general concept of mainstreaming. During the interview, ample time was given to orally explore their responses to each question. All interviews were taped for future references.

A summary of the interviews is presented later to illustrate the range of their training, and experiences in regard to each question investigated.

Definitions

Age of onset of deafness is the age when the hearing loss occurs.

Adventitious deafness refers to the loss of hearing at birth.

Conductive hearing loss describes a hearing loss caused in the outer or middle ear resulting in the interference of the acoustic transmission of sound.

Congenital deafness is the term describing a person with a hearing loss that occurred after birth.

Criterion/Performance objective is a statement defining what a person is to learn by describing the performance, conditions and criterion.

Degree of hearing loss refers to the hearing loss in the better ear as measured in decibels (db) and categorized as:

Mild Hearing Loss (less than 50 db): This group generally includes only those students with conductive hearing loss. The educational effect on this group is minimal. In school, the aid of special seating, use of a personal hearing aid, assistance of a speech therapist, some tutoring and guidance should help the individual student maintain normal class placement.

Severe Hearing Loss (50-85db): Depending on the age of onset and type of hearing loss, the educational program could require considerable modification. The program change will vary from meeting the needs of the mild hearing loss group to individuals who will require placement in special classes or schools designed to meet their special education needs.

Profound Hearing Loss (85+db): Generally, students in this classification require a special class or special school placement to meet their total educational needs. As with the other two groups, some students can be mainstreamed part of the time, but special language and math classes are necessary.

Individualized Educational Plan (IEP) is an educational plan required by Federal Law for all special and handicapped children that defines in criterion terms what a child is expected to learn in a stated time limit.

Linguistics is the study of language syntax in verbal and printed materials.

PL94-142 is a Federal Law that required all handicapped youngsters be provided an educational program in the least restrictive environment.

Sensory-neural hearing loss is caused by sense organ or auditory nerve damage which can occur before, during or after birth.

Transformational grammar is linguistics combined with grammar, sentence length, level of complexity, and the cognitive development required to comprehend printed materials.

Limitations

1. The textbook analysis segment of this project is limited to the reading comprehension skills as presented in the five reading series.

2. The two groups of teachers interviewed in this study represent two populations from two instructional settings that provide educational programming for hearing impaired students.

3. The schools were selected on the basis of their accessibility to the researcher and the number of teachers available with hearing impaired students enrolled in their classes. Other regular school systems were contacted and were willing to participate but were rejected due to the limited number of teachers with hearing impaired students enrolled in their classes.

4. The five reading series reviewed were chosen from the current Kentucky Department of Education Reading Textbook Adoption List¹ to represent the types of textbooks currently used in public education, and LaSasso's² survey of reading materials used in school for the deaf.

Significance

The problems with respect to teaching reading to hearing impaired children are well-documented in the literature. Substantial evidence exists which indicates that the average deaf student reads at a level significantly below his or her peers. While educators generally agree that supplementary reading materials are needed, little research exists that identifies the specific materials that could be useful to students. Further, assistance for teachers attempting to identify materials for hearing impaired students is limited. The purpose of this study was to

¹Kentucky Department of Education, 1979-85 Approved Reading Textbook Adoption List, (Frankfort, KY, 1979).

²Carol LaSasso, "National Survey of Materials and Procedures Used to Teach Reading to Hearing Impaired Children," American Annals of the Deaf, V. 123, N. 1, pp. 22-30.

provide two types of information that could assist individuals responsible for planning and implementing preservice and inservice training for teachers of hearing impaired students. First, this study provides an analysis of five reading textbook series, and second it provides information about a group of teachers' training and experience in selecting supplementary reading materials.

The findings of this study could be used to improve teachers' ability to prepare more effective instructional plans and materials to teach reading to hearing impaired children regardless of the educational setting.

For teachers who work with the hearing impaired, recognition of the differences among reading comprehension skills when selecting supplementary, remedial, and basic materials is fundamental knowledge. The literature review and the linguistic information necessary to interpret a child's functional language level when selecting and/or developing reading instructional materials is also vital teacher knowledge. The summary of the interviews information describes the current level of the two staff's abilities to teach reading, linguistics, and related skills to hearing impaired children. Therefore, the recommendations provided are based on the combination of these factors which help determine criteria used in a staff development program.

Information about the reading series can be used as an evaluative instrument to objectively determine the instructional level and teaching strategies that will guide the development of the individual's reading skills program through the typical K-6 grade levels. It can also become a decision making tool used by instructors, administrators, and other professionals to define and develop IEPs.

Information about the staff's knowledge, training and experience are important components to determine a staff development program in any school system or district.

CHAPTER TWO

Literature Review

The problems associated with selecting instructional materials to teach reading to hearing impaired children have many facets. The educational staff must have knowledge, training and experience to interpret, evaluate and plan instructional materials based on individual needs. When hearing impaired children are mainstreamed, the problems include the additional factors involved in equating the materials with their hearing peers' abilities. Therefore, the selection of remedial, supplementary and basic reading instructional materials is a process that must balance these variables to provide the most effective reading program possible.

The purpose of the literature review is to establish the importance of each variable that supports this study. The topics included in this review are: the relationship between linguistic and teaching reading; the relationship between teacher training and teaching reading; the content and concept variables for teaching reading; the role between instructional materials and learning process for hearing impaired; the educational problems of the hearing impaired, and the effects of the hearing loss on the need for special instructional materials; the educational problems and criteria involved in mainstreaming hearing impaired children; and the cognitive and child development theories used to help classify and organize the textbook analysis information. The literature review supports the two major components of this project which are: the

differences between reading textbooks, and the teacher's attitude, knowledge, training and experience to identify and select appropriate basic, supplementary and remedial reading comprehension instructional materials for hearing impaired children.

Linguistics and Reading

The review of the literature demonstrated that research in the area of reading has received considerable attention. The focus of the majority of this research has centered on pre-school preparation, phonics, vocabulary, and, more recently, linguistics. Linguistics concentrates on grammar, sentence length, level of complexity, and the cognitive development required to comprehend the content of printed materials, i.e., basal readers, instructional materials and achievement test. This form of linguistics is commonly referred to as transformational grammar. The psychologist has joined the linguist to form the studies of psycholinguistics in the teaching of reading. Wilson and Hall¹ define psycholinguistics relative to reading by emphasizing that psycholinguistics draws upon both psychology and linguistics to focus on several main points which are: the interrelationship of thought and language; how an individual learns language; how he uses the symbols in thinking and communicating; how the features of a language, which linguistics have been able to identify, relate to common behavior in learning and thinking.

Transformational grammar has become the primary guide for the development of language and reading programs for hearing impaired children.

¹Wilson and Hall, Reading in Elementary School Child, 3,35,44.

Two examples are the Rhode Island Curriculum Guide,¹ and, more recently, the language curriculum guide currently being developed for the hearing impaired at Kendall Demonstration Elementary School for the Deaf.² The term "linguistics" is used synonymously with transformational grammar in this study.

Psycholinguistics relationships between teaching reading and language are integral factors in this project. Wilson and Hall³ and Harris and Sipay⁴ strongly support the relationship between teaching reading and language development and stress the fact that printed materials must be commensurate with the child's own language. LaSasso,⁵ Quigley and Kretschmer,⁶ and Stauffer⁷ point out the strong relationship between teaching the hearing impaired to read and developing their language skills. Clark and Clark⁸ point out in their studies that linguistics is a communication tool that can be used to study how acquired language can

¹Clara A. Hamel, ed., Guide to the Language Curriculum, (Providence Rhode Island School for the Deaf, Providence, RI, 1971).

²Kendall Demonstration Elementary School for the Deaf, Language Curriculum Guide, (Washington, D.C.: Gallaudet College, 1983).

³Wilson and Hall, Reading and the Elementary School, 3,35,44.

⁴Albert J. Harris and Edward R. Sipay, How to Increase Reading Ability, 7th.ed., (New York, NY: Longman, 1980), 8,10.

⁵LaSasso, "Validity and Reliability."

⁶Quigley and Kretschmer, Education of Deaf.

⁷Marian Stauffer, "Comparative Effects of a Language Arts Approach and Basal Reading Approach to First Grade Reading Achievement," (dissertation, U. of Delaware, 1974), 7408748.

⁸Herbert H. Clark and Eve V. Clark, Psychology and Language: An Introduction to Psycholinguistics, (New York, NY: Harcourt Brace Jovanovich, Inc., 1977).

be used to determine how children develop their language which applies to the methods used to teach reading.

Degree of deafness is strongly related to the development of the hearing impaired child's ability to read. Generally, the average hearing impaired child is not familiar with the English used for reading textbooks. Therefore, teaching reading becomes a language/reading learning process. Current reading textbooks do not meet the needs of the hearing impaired. These textbooks, even at the beginning levels, contain complex sentence structures that the hearing impaired can not comprehend. Hence, there is a need for reading materials designed to introduce linguistic structures at a gradual rate with repeated exposure to the same language levels.¹

Naas and Coady have expressed concern that disparate disciplines such as reading and linguistics sometimes fail to recognize their interdependence, consequently contributing to a non-comprehensive approach. Additionally, previous efforts at linking linguistics and reading also suggest an obligation to develop specific methods and objectives to critically implement such recognition of the interdependence.²

Teacher Preparation for Teaching Reading to Hearing Impaired Children

The following information supports the concept that the teachers working with the hearing impaired have little formal training to teach

¹Quigley and Kretschmer, Education of the Deaf.

²James F. Naas and James M. Coady, "Phonetics, Phonemics, and Phonics: A Look at Similarities and Differences," Journal of the Michigan Speech and Hearing Association, V. 15, N. 1, (Fall, 1979), 136-141.

reading and stresses the need for an indepth knowledge of the relationship between language development, reading skills, and a systematic approach to selecting instructional reading materials.

Coley and Bockmiller¹ surveyed teachers of the hearing impaired in both public and residential schools relative to their formal training to teach reading to the hearing impaired. They found that the majority of the teachers responding had very little formal training to teach reading to either regular hearing or hearing impaired children. They also pointed out that these teachers depended on basal reading series for teaching reading.

In 1977, LaSasso surveyed 800 teachers of the hearing impaired regarding materials and procedures to teach reading.² With 65 percent return, she found that the majority of them used basal readers to teach reading. Further, the results of the survey indicated that most of the teachers responding had little formal training to teach reading. In a research project conducted in 1978 by LaSasso using the Close Procedure to measure readability, she found that hearing impaired children had difficulty in reading and interpreting the vocabulary, linguistic structures and the idiomatic expressions in the basal readers.³

A specially modified edition of the Stanford Achievement test for hearing impaired students was used by Karchmer and Trybus in 1977 to

¹Joan D. Coley and Patricia R. Bockmiller, "Teaching Reading to the Deaf: An Examination of Teacher Preparedness and Practice," American Annals of the Deaf, V. 125, N. 7, (October, 1980), 909-915.

²LaSasso, "National Survey of Materials and Procedures..."

³LaSasso, "Validity and Reliability."

evaluate the reading ability of hearing impaired students.¹ They found that the average reading ability of nineteen year old hearing impaired students was near the 6th grade level. Figure 1 is a graphic illustration of the eight to twenty year old hearing impaired children's

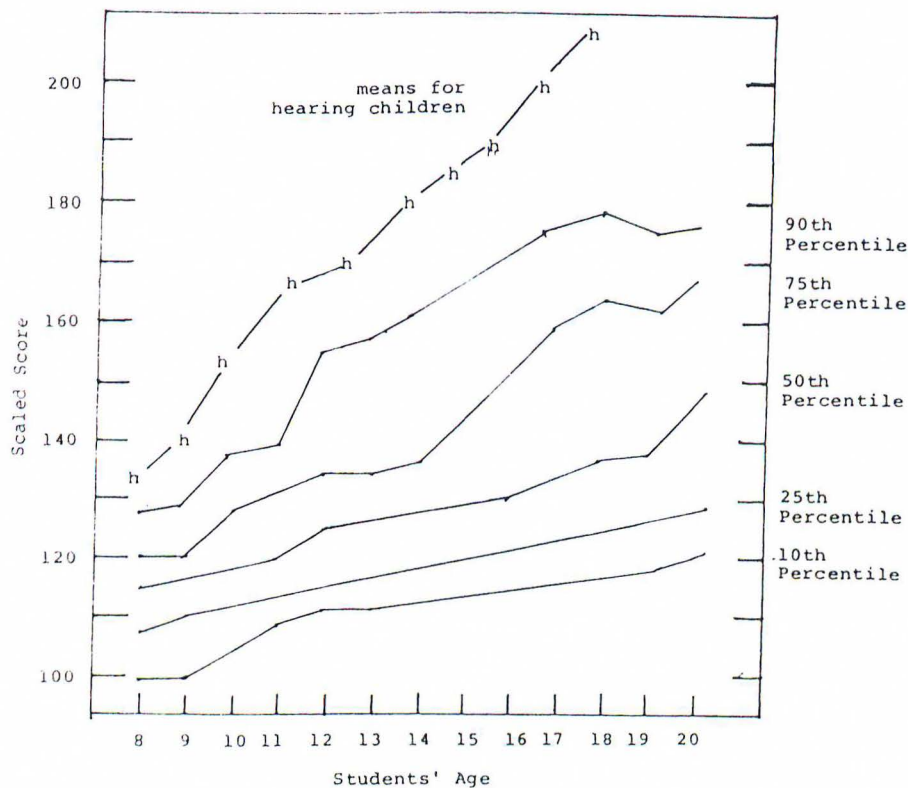


Figure 1. Reading Comprehension Scores National Distribution for Hearing Impaired Students

Scale score 132 = 3.2 grade level
Scale score 182 = 8.2 grade level

reading abilities. This information clearly shows that their reading abilities are far below their hearing peers' at all age levels.

The process of teaching the hearing impaired children requires more

¹Michael A. Karchmer and Raymond J. Trybus, "Who Are the Deaf Children in 'Mainstream' Program?" (Washington, D.C.: Office of Demographic Studies, Gallaudet College, October, 1977), 4,5.

than just knowledge of how to teach reading. Teachers working with hearing impaired children must be able to interpret the developmental stages of reading skills, the structures of linguistics, the cognitive development of students, and the inter-relationships of these concepts according to Quigley and Kretschmer,¹ and LaSasso.² The 1977 study conducted by LaSasso found that only twenty percent of the programs for the hearing impaired utilized a systematic procedure to select instructional reading materials to meet the functional language level of the hearing impaired.³

Quigley and Kretschmer⁴ define four descriptive variables and their educational effects to distinguish the various subgroups within the hearing impaired population relative to its impact on language development. The four variables are: 1) degree of hearing impairment, 2) age of onset, 3) types of hearing impairment, and 4) etiology of hearing impairment.

Degree of Hearing Loss

Concerning the degree of hearing loss, the three primary levels are mild, severe and profound. The mild hearing loss population have a 50db or less hearing loss in the better ear. Educationally, the mild group generally requires only tutoring assistance in reading, language, and speech training. The teachers also need to look at these students when

¹Quigley and Kretschmer, Education of Deaf, 1

²LaSasso, "Validity and Reliability."

³LaSasso, "National Survey of Materials and Procedures..."

⁴Quigley and Kretschmer, Education of Deaf, 1

they are talking to help them better understand the teacher's speech and oral discussions.

Those with severe hearing loss (50-85db) can be mainstreamed less effectively than the mild loss group, especially on a full-time basis. The age of onset and type of hearing loss can further limit a hearing impaired child's ability to function in a regular classroom. Those who are mainstreamed require considerably more tutoring and generally special classes in language arts, reading and math.

The profound hearing loss group (85db or more) is usually mainstreamed in the non-academic subject areas such as art, physical education and other physical activities. Generally, these students require special language, reading, math and speech training classes. The ability of students with severe and profound losses to orally communicate is the greatest limiting factor. There are children with exceptional mental ability and desire that can compensate for these deficiencies and allow them to function very well in the normal classroom, but among the severe and profound, there are few in this category.

Types of Hearing Loss

Myklebust¹ describes four basic types of hearing loss, namely: conductive, sensorineural, mixed and central. Depending upon the degree of hearing loss, each of these affect the educational planning needed to effectively program for the hearing impaired children.

Conductive loss refers to problems of the middle ear which may be

¹Helmer R. Myklebust, The Psychology of Deafness, (New York, NY: Grune and Stratton, 1964), 4.

blocked, underdeveloped or damaged. Hearing aids are usually effective with this type of hearing loss. Sometimes, the defect can be surgically corrected. Educationally, these students fit in the mild hearing loss group even if their auditory loss is in the severe range.

Sensorineural loss is a nerve or inner-ear problem. These can not usually be corrected by surgical or other means. Also, the effective use of a hearing aid is reduced by the nerve damage. Educationally, these students usually have severe to profound hearing losses. Depending on time of onset, they generally require more specialized skill programming.

Central loss results from a damaged auditory neural nerve system which can not be corrected. Like the sensorineural group, the hearing aid has minimal value. In the classroom, these youngsters will require special programs like the sensorineural group.

Mixed loss is any combination of the conductive, sensorineural or central losses. The educational effects are a result of the combination of factors involved.

Age of Onset

Hearing loss is either acquired or congenital. Congenital occurs before birth. Acquired, or adventitious hearing loss as it is commonly called, occurs after birth.¹

The congenital hearing impairment refers to the pre-linguistically deaf. The prelinguistic group requires more structured educational programming in their earlier years and this may have to be extended in their

¹Ibid, 3.

formal educational training.

Hearing losses occurring after the age of five in an individual are called postlinguistically deaf. This group has usually established their "normal" language system.¹ Postlinguistic children who lose their hearing after the age of eight or ten usually have developed the ability to read. These students can normally be mainstreamed very effectively and progress almost normally.

Etiology

Two general causes, encloegenous and exogenous, are assigned to hearing impairment. Encloegenous problems result from birth defects, blood incompatibility (Rh Factor) and biological factors. Exogenous causes result from accidents, tramas and other factors that block or damage the auditory mechanism. Sometimes the latter type can be corrected; whereas, the first type usually results in permanent sensorineural damage.

Mainstreaming Hearing Impaired Students

The present writer, in the capacity of a supervisor, consultant and a principal of both public elementary schools and a residential school for the deaf, was in the position to observe and work with hearing impaired children in residential, day school and satellite programs, observed that a thorough, planned staff development program and an informed school administration were conducive to a successful operation of mainstreaming the hearing impaired.

The writer has further observed hearing impaired children enrolled

¹Quigley and Kretschmer, Education of Deaf, 66-67.

in educable mentally handicapped classes without the assistance of anyone knowledgeable of their educational needs to guide their program. Therefore, the need for staff development and program planning is severe, especially in rural areas where the student population is small. Two of the most effective day school programs observed are in the large metropolitan areas of Atlanta and Dallas. Both of these programs received staff and supervisory support through a coordinated State Department of Education program for the hearing impaired.

Quigley and Kretschmer¹ summarized a factor analysis project performed by Pflaster on 251 independent variables of which 64 were found to be significant when reading comprehension skills were the dependent variable. A total of 182 hearing impaired students with hearing losses ranging from 30db to 110db were used in the project. The 64 independent variables were grouped into the following five classifications as the most significant criteria to be used when determining if a hearing impaired child could be successfully mainstreamed. They are: 1) highly developed oral skills, 2) high levels of motivation, positive attitude toward learning, determination, independence, social maturity, and acceptance of criticism and frustration, 3) high degree of ability to use spoken and written language, including paraphrasing, using idiomatic expressions, and the use of varying sentence structures, 4) artistic and synthetic abilities, and 5) involvement with realistic family members and wide array of professional support including trained teachers, psychologist, and others.

¹Quigley and Kretschmer, Education of Deaf, 66-67.

Karchmer and Trybus¹ 1977 study of a large population of hearing impaired children provides a summary of: 1) distribution of hearing impaired children in seven types of educational program settings such as residential, special classes in public schools, day schools for the deaf, resource rooms, part-time classes, and others (Figure 2), and 2) distribution of the hearing impaired population within the four larger types by degree of hearing loss (Figure 3).

Cognitive and Child Development Theories

Two theories involved with the recommended inservice training program and interpretation of the reading comprehension skills are Bloom's Taxonomy of Cognitive Skills and Piaget's Theories of Child Development. Both of these theories are taught in learning theory courses, but are seldom fully developed in relationship to teaching reading. A functional relationship between each of these theories and this project are discussed in the following information.

Bloom's Taxonomy of Cognitive Skills

Smith and Barrett² classified the reading skills into six cognitive levels using Bloom's Taxonomy of Cognitive Skills. A summary of the definitions of the six levels are as follows.

Knowledge. This involves the recall of specifics and universals, the recall of methods and processes, or the recall of a pattern, structure or setting. For measurement purposes, the recall situation

¹Karchmer and Trybus, "Who are the Deaf Children..."

²Smith and Barrett, Teaching Reading.

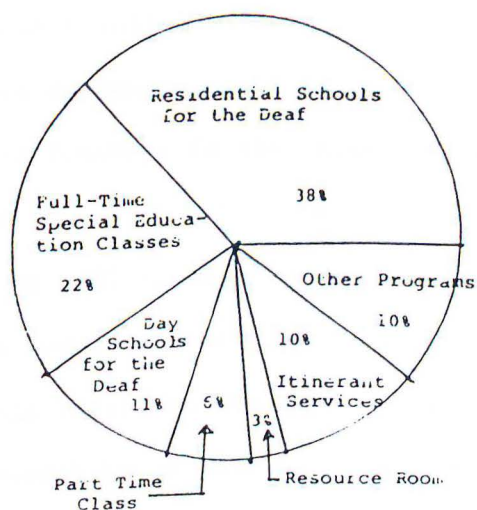


Figure 2. Where Do Hearing Impaired Children Go To School?
1976, N= 49,427

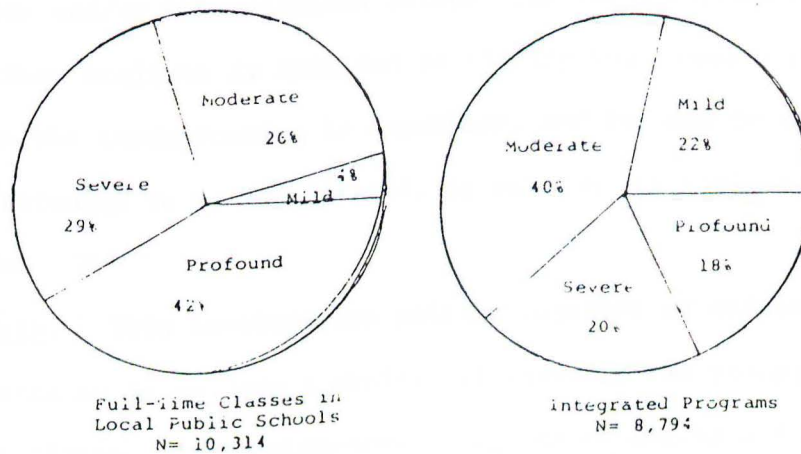
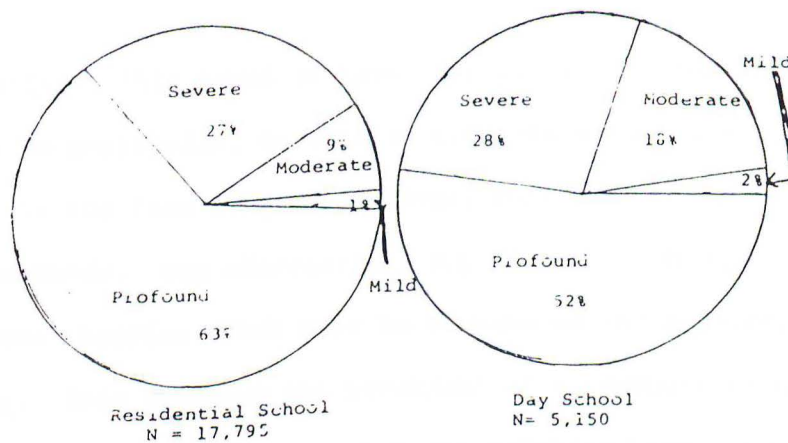


Figure 3. Distribution of Hearing Loss by Type of Program

involves little more than bringing to mind the appropriate materials. The knowledge objectives emphasize most the psychological process of remembering. Using relationships is also involved in that a knowledge test situation requires the organization and reorganization of a problem in such a way that it will furnish the appropriate signals and cues for the information and knowledge the individual processes.

Comprehension. This refers to the type of understanding or appreciation so that the individual knows what is being communicated and can make use of the materials of ideas being communicated without necessarily relating it to other materials or seeing their fullest implications.

Application. This level of knowledge relates to the use of abstractions in particular, as well as concrete situations. The abstractions may be in the form of general ideas, rules of procedure, or generalized methods. The abstractions may also be techniques, principles, ideas and theories which must be remembered and applied.

Analysis. This concerns the breakdown of a communication into its constituent elements or parts, so that the relative hierarchy of ideas is made clear and/or the relations between the ideas expressed are made explicit. Such analysis is intended to clarify the communication, to indicate how the communication is organized, and the way in which the message is intended to be interpreted, as well as its basis and arrangements.

Synthesis. This involves the putting together of different elements and parts so as to form a whole. It involves the process of working with pieces, parts, elements, etc., and arranging and combining

in such a way as to constitute a pattern or structure not clearly there before.

Evaluation. Judgements are made about the value of materials and methods for given purposes. Quantitative and qualitative assessments are made about the extent to which materials and methods satisfy criteria. The criteria may be determined either by the student or by those given to him by the teacher.

Piaget's Theory of Child Development.

Piaget's theory of child development has basic concepts that help classify and organize objectives in the textbook analysis process of this project. This theory or another theory of child development should be used by a local district to facilitate the communication between the staff and promote a more consistent approach. These communications should be related to what is expected of the normal child which can then be compared to a hearing impaired child to better judge a developing pattern for the hearing impaired child. One must also keep in mind during these program evaluation procedures for a hearing impaired child all of the effects of the type and degree of hearing loss that the individual child has, including language and mental abilities.

The basic premises of Piaget's Theories that need to be considered when classifying, and organizing, and matching skills and concepts were summarized by Herzoz.¹

1. The cognitive development processes occur on a continuum.

¹Virginia Herzoz, Preschool Curriculum Guide, (Dallas, Texas; Callier Hearing and Speech Center, 1972).

2. Development proceeds through a continuous process of generalizations and differentiations.
3. The continuity is achieved by a continuous unfolding. Each level of development finds its roots in a previous phase and continues into the following one.
4. Each phase entails repetitions of the processes as the previous patterns are sensed as inferior and become a part of the new, superior level.
5. The differences in organizational pattern create a hierarchy of experiences and actions.
6. Individuals achieve different levels within the hierarchy, although, "...there is in the brain of each individual the possibility of all these developments but they are not all realized."

Conclusions to Literature Review

The purpose of the literature review was to provide a background for the present study in terms of both the theoretical bases and the applicable findings of previous researchers. The major findings and conclusions are:

Teacher preparedness to teach reading to hearing impaired students was limited. Researchers further indicated that the hearing impaired children had difficulty interpreting complex language structures in printed materials like reading textbooks, achievement tests and other instructional materials. Researchers also pointed out that the average 19 year old hearing impaired student's average reading level was near the 6th grade level. The findings suggested that program planners, teachers and others working with the hearing impaired need specialized

training to interpret and select methods and materials for individual student needs.

The researchers pointed out that the professionals working with the hearing impaired children need to be aware of the effects of their hearing loss relative to type, degree and other factors in their educational program needs. The information obtained also indicated that many hearing impaired students needed specialized program considerations to be mainstreamed.

Several researchers indicated that the theories of cognitive and child development are necessary conceptual background information to help judge and select instructional materials for individual students. Language development and cognitive development were key factors mentioned in several sources as key criteria for successful mainstreaming considerations.

CHAPTER THREE

DESIGN AND PROCEDURES

The following information describes the procedures used to design and complete this project. The description includes the methods used to classify and organize the information obtained and the procedures followed to complete the major elements of this project, namely, the analysis of the reading comprehension skills and the interview questionnaire.

Reading Textbook Content Analysis of Reading Comprehension Skills

This project attempts to exemplify the important differences among the five reading series relative to reading comprehension. To achieve this, the following steps used are defined and explained.

Step 1. Define the Scope of the Textbook Analysis:

The textbook analysis was limited to the reading comprehension skills because the total array of reading skills was beyond the scope of one project.

Step 2. Select the Reading Textbook Series to be Reviewed:

The criteria applied to select the five reading textbooks series used in this project were: a) its current use in either public school or schools for the deaf; and b) a sample representation of the styles of textbooks used (i.e., basal and linguistic) that have recent publication dates.

To select current textbooks, the Kentucky Reading Textbook List¹ and LaSasso² survey were used to identify the textbooks series used. The Kentucky Adoption List listed the Ginn 720 and Scott-Foresman Basic Reading Series as the two top series. LaSasso survey had the Ginn 720 and Scott-Foresman Reading Unlimited series as two of the top three. The fifth series was selected to represent the Linguistic Textbook approach to teaching reading. To serve the major thrust of this project, the unpublished results of a survey, which included 800 schools and classes for the hearing impaired, conducted by Carol LaSasso, were used to select the two series listed above. The latest editions of the Scott-Foresman Reading Unlimited (1977) and the Ginn 720 Rainbow Edition (1977) were selected to represent those typically used for the hearing impaired population. The American Book Basic Reading (1977) and Scott-Foresman Basic Reading (1977) were selected to represent the typical basal reading series. Merrill's Linguistic Approach was selected to represent the linguistic approach to teaching reading. Additionally, the two Scott-Foresman series were selected to demonstrate that two series from the same company will differ in structure, scope, sequence and developmental schema, as with those from different companies. These five series provide a sample with a sufficiently broad base to illustrate the objectives for this segment of the project and a sufficient number of samples to illustrate the diversity between the five series relative to the

¹Kentucky Department of Education, 1979-85 Approved Reading Textbook Adoption List, (Frankfort, KY, 1979).

²LaSasso, "Validity and Reliability."

objectives defined earlier. The following reading textbooks used in this project were:

American Book Reading Program, 1977, K-6
 Authors: Marjorie S. Johnson, Roy Kress and John D. McNeil
 American Publishing Company

Ginn 720 Rainbow Reading Series, 1977, K-6
 Authors: Theodore Clymer, Ned B. Daniels, Helen Wardeberg
 Ginn Publishing Company

Merrill Linguistic Reading Program, 1977, 1-6
 Authors: Wayne Otto, Richard Smith,...
 Charles E. Merrill Publishing Company

Basics in Reading Series, 1977, 1-8
 Authors: Ira E. Aaron, Dauris Jackson,...
 Scotts-Foresman and Company

Reading Unlimited Reading Series, 1977, K-6
 Authors: Katherine B. Wingert, Barbara A. Pearson,...
 Scotts-Foresman and Company

Step 3. Analyze Reading Textbook Series:

The analysis and compilation of the data from the five reading series is not an analytical tabulation of all the items relative to the reading comprehension skills. A systematic trace through each source from the kindergarten level to the sixth grade level, and the seventh and eighth, when available, was completed to identify the descriptive statements relating to the reading comprehension skills used. The systematic trace was completed by doing a page-by-page review of all teacher manuals for each series so that the development of each skill within each series could be identified. The page-by-page review of each text series was necessary to describe the contents of the five series because looking only at the teacher's manual did not provide for full identification of how a concept was defined and developed in a particular reading series. No attempt was made to include drill and supplementary materials.

Step 4. Organize and Compile the Information Obtained in Step 3:

Several charts are used to present the information obtained from the text analysis of the reading comprehension skills that show all five sources for each skill area. The charts are designed to facilitate the study and comparison of the differences or similarities between the five reading text series reviewed for this project.

Categories Used to Classify and Organize Reading Comprehension Skills

The two major categories and their subsections were selected on the basis of functional relationships within the scope of the concepts of reading comprehension skills and their application to the total educational process. The categories are defined based on their relationship to the cognitive concepts of Bloom's Taxonomy of Cognitive Skills¹ and Piaget's Cognitive Development.² These concepts are pertinent to the development of the comprehension skills used in any mode of communication, be it oral, through-the-air, printed materials, pictures, or any combination thereof. The concepts in Bloom's Taxonomy and Piaget's Child Development are necessary in order to compare key ideas and to establish guidelines and generalizations made in the text of this project.

The two major categories and their subsections are listed and defined as follows:

¹David Karthwohl, Benjamin S. Bloom and Bertram B. Masia, Taxonomy of Educational Objectives Handbook II: Affective Domain, (New York, NY: David McKay Co., 1956), 186-193.

²Barbel Inhelder and Jean Piaget, The Early Growth and Logic in the Child, (New York, NY: Holt, Rinehart and Winston, Inc., 1967).

I. Literal Comprehension:

Bloom's Taxonomy lists two distinct levels for literal understanding, knowledge and comprehension, both of which define the basic conceptual levels of content in this section.

I-A. Recognizing Sentence Meaning: This relates to understanding word order; word association; sentences with similar meanings; recognizing topic sentences; recognizing the first and last sentence in a paragraph as the topic sentence; and similar divisions.

I-B. Recognizing and Recalling Details: This relates to recognizing information in pictures; recognizing speaker in sentences; recognizing details that support the main idea; recalling details that support the main idea.

I-C. Recognizing Main Idea: This involves identifying the main idea from pictures; recognizing title as main idea; recognizing the main idea of paragraphs; distinguishing between main idea and supporting details; recognizing main idea in an expression.

I-D. Identifying Sequence Relationships: This has to do with the understanding a sequence or order of events.

II. Interpretative Comprehension:

Bloom's Taxonomy defines four levels that guide the selection of materials for these skills and they are: application, analysis, synthesis and evaluation.

II-A. Inferring Main Idea and Details: This is developed from pictures; from titles; from story details; from implied details; and from any combination of these.

II-B. Inferring Supporting Details: These derive from details given; from main ideas; or inferences from supporting information and/or details.

II-C. Identifying and Inferring Comparisons: Likeness/differences between things, people, places and characters are involved.

II-D. Predicting Outcomes (Inferring): This relates to using pictures and stories to predict two or more outcomes and to predict outcomes based on story characters using life experiences and attitudes.

II-E. Identifying, Inferring and Using Cause and Effect Relationships: If given the cause, infer the effect; given effect, infer cause; using cause and effect relationship to predict outcomes and character traits.

II-F. Inferring Character: This involves understanding traits, qualities and appreciation of character parts in plays and stories.

II-G. Distinguishing Between Fact and Opinion: This relates to using oral statements, signed words, through-the-air communications, and printed materials.

II-G. Distinguishing Between Realism and Fantasy: This involves comparisons between characters, statements, stories and the interpretation of propaganda.

Interview Questionnaire

The second component involves the questions concerning the teacher's knowledge, training and experience in teaching reading and related activities. The following statements describe the design of the questionnaire, the content of the questionnaire, and the setting and procedures applied in this component of the project.

Questionnaire Design:

The two primary functions of research are gathering evidence and its subsequent describing it and explaining the information found. In

this project, the interview questionnaire was selected to gather or describe the current knowledge and abilities of various instructors working with the hearing impaired, relative to teaching reading, linguistics and technical program developmental skills.

Methods used by Babbie¹ and Berdie and Anderson² provided the descriptive information about questionnaire design and application. Most general research textbooks described a questionnaire, but in most cases very little specific design information was provided.

The unstructured format of the interview questionnaire was selected as the most effective method to obtain the descriptive summary of the scope and depth of the instructor's knowledge and skills in teaching reading. The design and development of the questionnaire proceeded through the developmental steps defined by Babbie and Berdie and Anderson. The first step involved several activities: 1) identification of the information to be obtained and its purpose, 2) development of several sample questions for each category, and 3) selection of the actual format of the interview questionnaire.

The unstructured interview was selected because this format permits the interviewer to explore in depth certain responses to obtain a clearer view of what an individual is describing. In this project, the skill and knowledge level of those interviewed ranged from almost zero to very comprehensive.

¹Earl R. Babbie, Survey Research Methods, (Belmont, CA: Wadsworth Publishing Company, 1977), 131-185.

²Douglas R. Berdie and John F. Anderson, Questionnaire: Design and Use, (Metuchen, NJ: Scarecrow Press, Inc., 1974).

Following is a description of the basic elements and the purpose of each section of the questionnaire.

Section 1. This section contains background information that was used to determine response classifications and categories to be used to group the information obtained in the remainder of the sections of the interview. The mainstreaming questions in this section were designed to identify the teacher's attitude toward having special education students, especially the hearing impaired, in their classes. Another question included in this section attempted to ascertain the teacher's knowledge and training so as to comprehend the educational needs of the hearing impaired and obtain insight into the potential need for staff development.

Section 2. The purpose of this section was to obtain the results of the questions concerning the scope and type of training that the teachers had in order to teach normal and/or hearing impaired students how to read.

Section 3. The content of this section defines the scope of the teacher's interpretation, application and implementation of the school district's reading program. Furthermore, the questions concerned which procedure they would prefer, if permitted. The preference questions were another attempt to obtain an insight into their interpretation of reading strategies.

Section 4. This section investigates the teacher's training and his/her procedures when selecting supplementary and remedial reading instructional materials.

Section 5. The questions sought to explore the scope and depth of the teacher's knowledge and ability to apply the concepts of linguistics (transformational grammar) to teach reading to normal and handicapped

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Section 5. The questions sought to explore the scope and depth of the teacher's knowledge and ability to apply the concepts of linguistics (transformational grammar) to teach reading to normal and handicapped

youngsters, particularly those with language problems like the hearing impaired.

Section 6. The questions in this section explore the teacher's knowledge and experience in applying the instructional technology dealing with the ability to write and interpret criterion/performance stated objectives in the process of defining instructional strategies and selecting remedial and supplementary instructional materials in reading. Also, the teacher's ability to employ immediate and long range planning in the instructional preparation techniques and procedures was explored.

Setting and Population:

Two groups of five teachers were interviewed: teachers at the residential school for the deaf and the teachers in a public school district with hearing impaired children integrated in their classes. The information is summarized by teacher group, i.e., regular elementary school teachers and special teachers at the residential school.

Regular Elementary School Program: A K-12 program for hearing impaired students was offered, but the questions included in this project were limited to the teachers teaching grades K-8. Twelve hearing impaired students were supported by three teachers trained in hearing impairment. All of these students are integrated for at least one and a half hours per day in social development classes, i.e., physical education, art and music. Two of these students spent only an hour or so each day with the special teachers for tutoring and speech therapy assistance in speech and language training.

The hearing loss of this group ranged from very mild to less than a 60db loss, except for one who had a profound loss but whose parents

were also hearing impaired.

The grade placement level and reading level for these students were at least two years below normal age level, except for the two enrolled in the kindergarten class.

Three schools were involved with these students. One middle school had one trained teacher of the deaf and four students of which one attended the high school located next door. The other three students were integrated at the sixth grade level. The remaining eight students attended classes at an elementary school in grades K-5 with two trained teachers of the deaf to support them. In addition, each hearing impaired student worked with a speech therapist for at least two thirty-minute sessions per week. Of the regular elementary school teachers interviewed, the maximum number of hearing impaired students integrated in their classes at one time was one, except for the kindergarten class which had two.

Residential School for the Deaf: This school offered a program from pre-school (age five plus) through high school for a total of over three hundred and fifty hearing impaired students whose hearing loss was 70db or better. They also offered programs for multi-handicapped hearing impaired children. Several students lived with their parents and were day students. The school also operated several satellite pre-school programs located in several regions of the state. The teachers interviewed did not have any multi-handicapped hearing impaired children in their classes.

Phase two of the design of the interview questionnaire included the formulation of the test draft copy and eventually the copy used (Appendix B). During informal discussions with several elementary

school teachers, sample questions for each section were asked to ascertain the type of potential responses they would give. After several of these informal sessions, a working draft was assembled and submitted to several teachers, principals, a superintendent, and a college professor in order to research their reactions and suggestions. Based on these efforts, the field test draft copy was completed and field tested.

Field testing of the interview protocol was developed for field testing the questionnaire and the interview procedures. Two elementary school teachers were selected for this phase. One teacher had a standard elementary teaching certificate and the second teacher had the standard certificate plus a special reading teacher's certificate that included work in diagnostic methods and procedures in teaching reading.

The interviews for the field test work were conducted using the same protocol described in the following information. After an interview, their comments were reviewed with them to explore their responses and interpretations to each question. These comments were used to revise the draft copy for the final copy used in this project. Their comments were also used to help select the check-list used to classify responses to the questions.

Site Selection and Interview Arrangements;

Contact was made with the Director of Special Education in Kentucky to obtain a list of school systems that could provide the number of teachers needed for this project. They suggested the Bullitt County School System in Sheperdsville, Kentucky. The Kentucky School for the Deaf in Danville was selected to represent a special school for the deaf since it was the only one located in the state.

Telephone contact was made with the superintendent of each school

to request permission to interview their teachers. Both superintendents approved the concept and requested a brief description of the information sought, the assistance needed from them, and the approximate dates. This information was provided and they appointed a contact person to make all of the arrangements.

The interviews were conducted on site in each school system. All interviews were conducted during individual conference time that had been arranged by the school principals. A minimum of one hour and fifteen minutes was scheduled for each interview.

Interview Protocol:

The general information regarding the purpose of the interview was reviewed with each teacher at the beginning of the interview. They were informed that their responses would not be given to their administrators and that only a summary would be provided. They were also informed that the interview would be taped, beginning with the first section used for clarification purposes when the data was being summarized.

At the beginning of each section, a brief overview of what would be asked was stated. To guard against any bias by the interviewer, no personal opinions were stated. They were asked to feel free to expound on any topic to explain what they meant by their responses.

Following the formal interview, time was spent reviewing each question to see if they would like to add to what they had previously stated. Several took advantage of this to rephrase what they had said earlier and/or to add to their responses. A few stated that the other questions reminded them of related information to a previous question.

One of the teachers at the residential school was hearing impaired herself and this interview was not taped.

CHAPTER FOUR

Findings and Results

This project is designed to illustrate the need for teachers of hearing impaired children to have the necessary training to select appropriate basic, supplementary and remedial instructional materials to teach these students to read. In this chapter, a summary of the results of the analysis of the reading comprehension skills obtained from the five reading textbook series and the interviews with the regular elementary and hearing impaired teachers are presented.

Reading Comprehension Skills

Several tables are used to present the information obtained from the text analysis of the reading comprehension skills because they are the most efficient mode for presenting the comprehension skills, concepts and knowledge accumulated from the five reading series. These charts facilitate the study and comparison of the differences between the five series as to how each treated reading comprehension. The tables enhance the process of analyzing, comparing and evaluating the differences between the five reading series in each category.

After an extensive examination of the information presented, it should be evident that the task of selecting additional resources or supplementary instructional materials for teaching any topic should be approached systematically by employing stated criteria to insure consistency relative to the factors of linguistic level, cognitive

development and the skill itself.

Several significant differences between the five reading series were revealed, namely: the total scope of the objectives used to develop the series; how the authors defined their objectives; their emphases on different conceptual areas; the timing of the introduction of the concepts; and other information described in the following pages. The

Table 1

Comparison of the Authors of the Five Reading Series Definitions of Reading Comprehension

| Reading Series | Definition |
|---|---|
| Ginn 720 Rainbow Edition | "Comprehension skills are emphasized in every level. The reading and discussing the selection of each lesson plan focuses on both literal and inferential comprehension. Inferential comprehension is stimulated through the interpretation of feeling, motive and traits of story characters, as well as a number of other techniques. With guidance and questioning the children are helped to supply missing information and anticipate outcomes. The developing Reading Skills Section of each lesson plan emphasizes the literal comprehension..." TE:33 |
| Scott-Foresman Basic Reading Series | No clearly defined definition of reading comprehension was provided in the teacher's manuals or support materials. |
| Scott-Foresman Reading Unlimited Reading Series | "The nature of Reading: experience extended. Behind the interest-centered structure of Reading Unlimited lies a philosophy which maintain that: 1) reading is an extension of natural language development, 2) reading, like speech, is both a personal and a social form of communication, and 3) reading is experience extended." TE:15 |
| American Basic Reading Program | "The American Basic Reading Program incorporates a language experience approach to teaching beginning reading. Pupils are encouraged to explore their own experiences before they share vicariously in the experiences of others. In looking at their own experiences, pupils become involved in both oral and written comprehension." TE:iv. |
| Merrill Linguistic Reading Program | "Program is based on the principles of structural linguistics..." "Comprehension--Reading is treated as a means of acquiring meaning... Not only the meaning of individual words, but also the cumulation meanings of sentences, paragraphs, and entire stories. Comprehension is always stressed as the pupils most important goal. For that reason pictures that illustrate the text have been omitted from the instructional selections of the Readers to prevent pupils from using pictures clues to guess words and their meanings." TE:5-7 |

following information highlights the differences between sources that program planners must be cognizant of.

One should begin by examining the definitions of comprehension used by the authors of the five reading series. Table One contains the definitions provided by the authors in their respective reading series.

This information shows that several of the authors couched their definition of comprehension in terms of language arts or linguistics while one author did not identify a definition. A cursive review of all five series while completing the analysis confirmed that language skills are considered an integral part of the development of the reading comprehension skills.

The major categories used by the authors of the series are an indication of the differences in the philosophies used to define reading comprehension and organization of each reading series. For example, Merrill Linguistic Reading Program, as expected, emphasizes language or linguistics. The other series incorporated language into their schema but did not clearly define their level of dependence. Table Two contains a summary of the major categories used in each series that can be used to compare their organizational schema.

An inspection of the information in Table Three illustrates the first significant difference for program planners. The number of objective statements used to define the comprehension skills to be developed in each series vary widely. As illustrated in Table Three, some categories contain a long list of objectives while others contain only a few. In some cases, no objective statements are given within one or more categories by some authors.

The emphasis on different topics by individual authors is the second significant difference. In the previous paragraph, the sheer number of objective statements was brought out as one indication of the problem in dealing with skill and concept differences between text series. One could assume that the more objectives in one category implies more emphasis for that category. Generally, this could be true,

but one must analyze the differences not only quantitatively, but qualitatively, to make the best judgement. Two effects of this imbalance in objective statements between series are when teachers try to cross match materials between two or more series. Program planners must be cognizant of which book contains more descriptive and developmental information relative to specific skills; and the candor with which an author defines

Table 2
Comparison of the Major Organizational Categories
Used to Develop Each Reading Series

| Textbook Series | Major Organizational Categories |
|---|--|
| Ginn 720 Rainbow Edition | Three Categories ---vocabulary ---comprehension (literal and inferential) ---decoding |
| Scott-Foresman Basic Reading Series | Four Categories ---word identification ---comprehension (literal, implied and evaluative) ---study and research ---literary understanding and appreciation |
| Scott-Foresman Reading Unlimited Reading Series | Four Categories ---word identification ---comprehension (literal, implied and evaluative) ---literary understanding and appreciation |
| American Basic Reading Program | Two Categories ---word recognition (phonetic and structural skills) ---comprehension (literary, vocabulary, study skills, and language/mechanics) |
| Merrill Linguistic Reading Program | Eight Categories ---linguistic skills (word attack and decoding) ---linguistic skills (word attack) ---linguistic skills (encoding) ---linguistic skills (syntax) ---comprehension and critical reading skills ---comprehension and critical reading skills (adjusted rate for purpose and difficulty) ---creative and interpretation ---literary skills |

an area determines how different authors define what should be included, much less the level of intensity to apply to specific skills. The concept of what should be included is very important. If one author decides some specific skill is of minor importance and can be developed

as part of another broader skill, then program planners will not be able to identify and separate these ideas as required. Hidden or assumed skills can be more of a problem for hearing impaired youngsters requiring special programming than for normal ones.

Table 3

Comparison of the Number of Reading Comprehension Objective Statements Used in Each Series to Define the Twelve Skill Areas Obtained from the Analysis of the Five Reading Series

| Reading Comprehension Skill Areas | Cinn 720 Reading Program | Scott-Foresman Basic Rdg. Series | Scott-Foresman Reading Unlimited | American Book Reading Program | Herrill Linguistic Reading Program |
|--|--------------------------|----------------------------------|----------------------------------|-------------------------------|------------------------------------|
| Recognizing Sentence Meaning | 6 | 0 | 9 | 0 | 3 |
| Recognizing Main Idea | 21 | 5 | 17 | 4 | 1 |
| Recognizing and Recalling Details | 21 | 6 | 9 | 7 | 5 |
| Sequence | 19 | 1 | 8 | 6 | 5 |
| Supporting Details | 8 | 1 | 1 | 2 | 0 |
| Inferring Main Ideas and Details | 16 | 0 | 25 | 1 | 1 |
| Inferring Character | 7 | 2 | 48 | 4 | 3 |
| Inferring Comparison and Relationships | 9 | 1 | 70 | 0 | 4 |
| Predicting Outcomes | 16 | 5 | 57 | 4 | 3 |
| Cause and Effect | 17 | 1 | 7 | 5 | 4 |
| Distinguishing Between Fact & Opinion | 8 | 3 | 5 | 2 | 5 |
| Distinguishing Reality and Fantasy | 1 | 1 | 5 | 2 | 0 |

The type of objective statements employed to define the goals is the third significant difference. Table Four is an illustration of the ideas in this section. Some authors repeatedly used the same objective statement at different stages or levels in their series. Some authors defined the developmental stages using objectives linked to activities throughout their series to discriminate between levels of mastery. The Scott-Foresman Basic Reading Program was the only source that clearly delineates its stages of development for each skill or concept. A

- Table 4. 1. Sample of the type of objective statements used in each reading series to describe the skills and concepts to be mastered.
2. Illustration of the variance in the sequence or timing of the introduction of the skills and concepts in the five series.
3. Illustration of the mastery levels used in the Scott-Foresman Basic Reading Series to describe each skill or concept.

| GENERAL CONCEPTS: LITERAL COMPREHENSION | | | | | |
|--|---|--|---|--|---------------------------------------|
| TOPIC: Recognizing the Main Idea | | | | | |
| BASIC CONCEPTS | GINN 720 | SFBR | SFRU | ABRP | MLRP |
| <p>--Identify: picture/text relationships paragraphs containing main idea of story parts</p> <p>--Distinguish: main idea from pictures between main idea and supporting details</p> <p>--Recognize title as main idea topic sentence that express main idea of paragraph main idea of paragraph in a story main idea in an oral expression</p> | <p>2-1-23 id. main idea by relating text to picture</p> <p>2-1-25 id. main idea from pict.</p> <p>3-1-28 recog. title as main idea</p> <p>8-4-150 recog. topic sent. in 1st., middle or last position as the main idea of paragraph</p> <p>9-4-159 recog. topic sent. that express main idea of paragraph</p> <p>10-3-121 id. paragraph in which topic sent. states the main idea</p> <p>11-5-285 recog. main idea stated as topic sent. of paragraph</p> <p>13-3-164 id. paragraph that contains topic sent. expressing main idea</p> <p>14-1-53 recog. the main idea of a brief paragraph or story</p> <p>14-1-60 id. topic sent. which states the main idea of a paragraph</p> <p>14-1-64 add details to support a main idea of a paragraph</p> <p>14-1-65 choose a topic sent. that states the main idea of a paragraph</p> <p>14-3-153 distinguish between the main idea and supporting details</p> <p>14-4-187 select details from an article to support two main ideas</p> <p>14-4-205 id. the main idea of an article</p> <p>15-1-51 recog. main idea of an oral exercise</p> <p>15-1-52 recog. topic sent. in several paragraphs</p> <p>15-1-59 decide whether certain paragraphs have a topic sent.</p> <p>15-1-64 determine the main idea of paragraph and then match topic sent. to appropriate paragraph</p> <p>15-3-150 distinguish between main idea and supporting details</p> <p>15-4-186 select details to support two main ideas in an article</p> | <p>2-8-84 recog. main idea</p> <p>3-7-156 recog. main idea picture/word (initial)</p> <p>6-12-159 recog. main idea (formal inst. level)</p> <p>7-8-67 recog. main idea (mastery level)</p> <p>8-8-59 recog. main idea (maintenance level begins)</p> | <p>2-9-3-251 id. main idea of selection</p> <p>4-1-2-46 use pic. cues to clarify concepts & processes</p> <p>4-4-6-128 recog. main idea of photograph</p> <p>4-5-1-130 use pic. cues to verify content</p> <p>4-6-4-186 use content & pic. cues to solve riddle</p> <p>4-7-2-198 use pic. cues to id. setting</p> <p>5-5-4-158 use pic. cues to detect contents of book</p> <p>7-4-2-123 distinguish main idea and supporting details</p> <p>7-6-2-161 recog. main idea of story segment</p> <p>7-6-4-110 summarize main idea of selection</p> <p>8-4-5-119 recog. main idea and supporting details</p> <p>8-5-5-141 recog. main idea of song</p> <p>8-5-7-148 use pic. cues to broaden concepts in text</p> <p>8-6-3-174 use pic. cues to help determine contents of books</p> <p>9-5-2-156 use pic. cues to recog. setting</p> <p>13-3-7-97 id. introductory and concluding paragraphs</p> <p>14-4-1-116 recog. plot structure</p> <p>20-2-5-85 recog. main idea of both art and text</p> | <p>A-2a id. main idea on book cover</p> <p>B-10a id. details of a picture or group of pictures</p> <p>C-17d id main idea told through pic. or combination of pic. & text</p> <p>G-6lc id. main idea of a written selection when main idea is directly stated in a topic sent. or summary statement</p> | <p>A-6 id. main idea of selection</p> |

sample of its stages of development is illustrated in Table Four. None of the series employed clearly stated criteria relative to any specific developmental, cognitive or linguistic strategy. One has to refer to the actual text materials to identify the cognitive or linguistic functional levels expected.

The fourth area of difference that creates programming problems is the timing of the introduction of the skills and concepts. Timing is significant because it dictates the expected functional linguistic and cognitive levels required to handle a specific skill or concept. The introductory level varied among the several text and instructional levels in the five series. Table Four is a visual aid to help compare the timing levels within one concept level by the five authors.

A complete summary of the reading comprehension skills identified and classified as a result of the analysis of the five series is presented in Appendix A. The differences discussed in the previous statements can be reviewed in each section.

Interview Questionnaire

The questionnaire was used to summarize the knowledge and training of the two groups of teachers to teach reading comprehension to normal and hearing impaired children. The information is summarized according to the six sections of the questionnaire.

Section I. Demographic and Mainstreaming

The demographic information, like all sections of this summary, is divided into two sections based on district, i.e., regular elementary school teachers and residential school for the deaf teachers. Table

Five is a summary of the training and type of training that these two groups of teachers had that is described in the following paragraphs.

Regular Elementary School Teachers. All five had B.S. Degrees in Elementary Education with standard elementary teaching certificates. Three had M.A. Degrees in Elementary Education, one in Library Science and one in Guidance. None of these teachers had any special education training. This group of teachers had an average of nine years of teaching experience.

Table 5
Educational Background of Teachers

| Type and Level of Training | Public School Teachers (N=5) | Residential School Teachers (N=5) |
|-------------------------------|---------------------------------|--------------------------------------|
| Undergraduate | | |
| Elementary Education | 5 | 3 |
| Secondary Education | 0 | 1 |
| Deaf Education | 0 | 1 |
| Graduate Degrees | | |
| Elementary Education | 3 | 1 |
| Library Science | 1 | 0 |
| Guidance | 1 | 0 |
| English | 0 | 1 |
| Learning Disabilities | 0 | 1 |
| Deaf Education | 0 | 2 |

Residential School for the Deaf Teachers. Three of these teachers had a B.S. Degree in regular Elementary Education, one in Secondary Education, one in Deaf Education who was also hearing impaired herself. All five had M.A. Degrees, one in English, one in Learning Disabilities, one in Elementary Education and two in Deaf Education, including the hearing impaired teacher. Only three had deaf education teaching certificates and two of these obtained theirs with the minimum of eighteen credits in deaf education. This group of teachers had an average of twelve years of teaching experience with the hearing impaired.

Mainstreaming was defined by the teachers interviewed as having handicapped students enrolled in their classes for one or more periods per day. In the public school population used in this study, the hearing impaired were all integrated or mainstreamed for physical education, art and music. Only two of the students were enrolled in the reading and language classes. Furthermore, all of these students were integrated into the regular classes at least two years below their chronological age except for one of the two enrolled in the kindergarten program. This exception was a child whose parents were also deaf and his social maturity was also judged by his teacher as being almost normal.

Regular Elementary School Teachers. One supporting idea expressed by all of these teachers was that the hearing impaired child needed to be integrated because of his social development. For a hearing impaired student to be successful in their class, these teachers felt that the individual had to have a mild hearing loss, the ability to speak and use good language skills. The hearing impaired should be enrolled in the skill classes of reading, language and math, according to the teachers' comments.

Four of these teachers felt that the hearing impaired needed special teachers in language arts, reading and math. They also felt that these students needed extra help in reading in such content subjects as science and social studies.

Several of these teachers expressed fear and/or frustration in handling teacher-student communication, especially with an individual who required sign language to communicate. They expressed the concern that the communication problem with the hearing impaired children slowed

down the educational process with the normal children in their classes. They stated that they had to write many of the instructions on the board for the hearing impaired. One teacher who taught second grade math stated that she thought the process of writing directions on the board in simple language for the hearing impaired children was helping the other students better comprehend what she was teaching.

Residential School for the Deaf Teachers. All but one of these teachers expressed the idea that some of the hearing impaired should be mainstreamed. They believed other children should be permitted to try, but not forced, to remain in these educational settings. One teacher, who was also hearing impaired and worked in regular elementary schools as an instructor in a special classroom for the hearing impaired, stated that, based on her experience as a child and as a teacher, she did not believe in the mainstreaming concept.

All of these teachers expressed the need for special training for the hearing impaired in the skill subjects like reading, language arts, math and speech training. They did not feel that the regular school could offer sufficient support services. An example was that the children enrolled in their school received speech training daily, not during two or three 30 minute periods per week.

These teachers thought that the hearing impaired children would be limited because of their hearing loss and limited oral communication skills in the extracurricula school activities in which they would be able to participate, such as cheerleading, sports, and other social events.

Section II. Teacher Training to Teach Reading to Normal and Hearing Impaired Students.

The purpose of this section was to summarize those questions dealing with teachers' formal and informal training to teach reading to normal and/or hearing impaired students. Table 6 is a summary of the information presented in the following paragraphs.

Regular Elementary Teachers. These teachers had an average of 16.2

Table 6

Formal and Informal Training to Teach Reading

| Types of Training | Cr. Hrs. | Public School Teachers (N=5) | Residential School Teachers (N=5) |
|----------------------------------|-------------|---------------------------------|--------------------------------------|
| College Credits Undergraduate | 0-3 | 0 | 0 |
| | 4-6 | 1 | 3 |
| | 7-9 | 1 | 1 |
| | 10-12 | 1 | 0 |
| | 12+ | 2 | 0 |
| Graduate | 0-3 | 0 | 2 |
| | 4-6 | 1 | 1 |
| | 6+ | 1 | 0 |
| Inservice and Workshops | 0 hrs. | 2 | 0 |
| | 1-2 | 2 | 0 |
| | 3-5 | 0 | 1 |

credit hours in teaching reading to normal children with a range of six to thirty credit hours at the undergraduate and graduate levels.

These teachers had attended only one or two short mini inservice training sessions or workshops designed to implement specific reading instructional materials into their district. No special training to work with the hearing impaired had been included in these sessions. One teacher had previously taken some sign language training on her own, but this was only a simple introductory course.

Residential School for the Deaf Teachers. This group of teachers had an average of 7.2 credit hours in teaching reading with a three to twelve credit hour range of training at undergraduate and graduate level. Only three of these teachers had three or more credit hours in teaching reading to the hearing impaired. One of the beginning level teachers did not have any training to teach reading to either normal or hearing impaired children.

Three of these teachers responded that they had participated in some inservice training workshops that focused on teaching reading to hearing impaired youngsters. One had attended three such workshops and the others one or two each that were approximately three hours in duration. The other two had attended some language development workshops, but none in reading.

Section III. Instructional Procedures Applied.

This section obtained responses to the questions about the textbook selection procedures, assignments of students to programs, and their opinion as to which methods of assigning students to specific programs they would prefer.

Regular Elementary School Teachers. Textbooks were selected by a committee of teachers that recommended a series for adoption to the administration. No considerations were given to special education students enrolled. Specially trained hearing impaired teachers provided tutoring work in addition to regular work for those who were not enrolled in the regular classes for reading, language and math. The textbook series adopted by the school system is centered on a language based reading program using structured vocabulary skills, but the

teachers interviewed preferred the phonetic system for teaching reading.

Students are assigned to these teachers by their supervisors and school administrators. One supervisor stated that the staff had completed some screening before the students were placed in their classes. The supervisor had no training to work with the hearing impaired.

The selection of the instructional materials was based on the regular teacher's selection for her normal students. The placement in the reading groups within a class was made with the advice of the special hearing impaired teachers at the school. Placement was based on the regular and special hearing impaired teachers' evaluation, student performance and the California Test of Basic Skills (CTBS-U) test information.

Oral communications were used in the regular classes since none of the regular teachers could use any form of sign language. Total communication, which involves the use of signs, speech and other visual aides, and/or oral communications are used in the special classroom with the hearing impaired teachers. Some parents have refused to permit sign language in any form to be used with their child.

Residential School for the Deaf Teachers. Teachers and supervisors reviewed performance and test data, when available, to group the students. For the students under the age of ten, most of the evaluation was based on performance, not achievement test data which the teachers, supervisors and administrators felt was not accurate because of the hearing impaired's delayed language and vocabulary. The key criteria used was their functional skills in total communication, oral skills (receptive and expressive) and the general ability to think, perform math and other school tasks.

Through the age of eight, most of the instructional materials used were selected for language experience developmental activities. When reading was introduced, the Scott-Foresman Reading Unlimited Series was used. The teachers made most use of the materials at the beginning levels which used life-oriented topics about families and daily living activities to develop basic concepts that the youngsters could express to others in their own living environment at school and home.

Section IV. Selecting Supplementary and Remedial Reading Materials.

The focus of the questions in this section was designed to gather information regarding the criteria used, procedures applied, and a description of the materials used to supplement and/or replace the regular reading materials when needed.

Regular Elementary School Teachers. Most of these teachers stated that for both regular and hearing impaired students, their reading supervisor recommended materials for remedial and/or supplementary activities, with the final decision left with them. Most of the supplementary materials came from commercial materials like SRA and other reading kits available on the market. The kindergarten through third grade teachers stated that most of their materials came from textbooks and workbooks with extra emphasis on phonetic work.

Four of the five teachers stated that they would prefer a structured program that provided guidelines showing the developmental patterns. However, two preferred the regular textbook to define what should be taught while the other three would use the developmental guide and the textbooks for their materials.

Residential School for the Deaf Teachers. The selection was mostly the teacher's decision, but the supervisor would help, especially when help was requested. Also, teachers at the same level of instruction regularly discussed materials for different needs. These areas of criteria were used when selecting instructional materials, namely: content, vocabulary and language difficulty level. Most of the materials selected were developed specifically for the hearing impaired; 50 percent or more of the materials used were teacher-made by either re-writing social studies materials or developing new materials. At the two upper levels, instructors stated that as much as 70 percent of the materials used to develop the reading skills were materials that they had re-written to include specific content while controlling the vocabulary and language skill levels.

Four of the five stated that they would prefer a structured curriculum showing a developmental pattern for all skills.

Section V. Linguistics: Formal and Informal Training and Application in Teaching Reading.

The questions in this section sought to determine the training and application of linguistics (transformational grammar) by both groups of teachers in relationship to teaching reading to the hearing impaired.

Regular Elementary School Teachers. Three of the five had no idea what linguistics or transformational grammar meant beyond the concept of the study of language. One had an introduction to linguistics as part of two reading courses. One had a course in transformational grammar and linguistic structures of language but had never applied the information in five years of teaching with either regular or hearing

impaired children. Therefore, none of these instructors considered language level as a factor in the selection of instructional materials. Only two of them mentioned that they simplified the directions given orally for the hearing impaired youngsters. No changes were made in the reading or language text, as well as homework drills and practice materials assigned.

Residential School for the Deaf Teachers. Four of the five teachers interviewed had some training in linguistics or transformational grammar. A summary of their training was: one secondary English major, two with nine credits in linguistics, and one with three credits. The fifth teacher had completed several inservice training workshops and received help from her supervisor.

All five of these teachers stated that they could not separate the limitations of transformational grammar and reading skills when they developed and/or selected instructional materials to teach reading and writing to their students. They further stated that they controlled the expressive language that they used with the individual students during instructional periods. The first two instructional levels relied almost entirely on materials they developed in which they controlled the grammar, vocabulary and content.

Section VI. Training and Application of Criterion/Performance Objectives.

Finally, teachers were asked if they had ever had a course in educational technology or a course in which the concept of criterion-based or performance objectives were explained. All teachers in both groups stated that they had been introduced to these terms, but that none had

been taught to use the concepts effectively to determine instructional criteria for their students.

CHAPTER FIVE

Conclusions and Recommendations

The purpose of this study was to facilitate the tasks of teachers, supervisors, program planners and developers to select basic supplementary and/or remedial instructional materials in reading comprehension for hearing impaired children. The two areas studied were: 1) text analysis of five reading textbook series for their reading comprehension skills, and 2) teacher interviews of several teachers that work with hearing impaired students in regular elementary schools and residential school for the deaf for a summary of their skills and knowledge to teach reading to normal and hearing impaired children.

The content of Chapter Four could have several separate, but proper, interpretations. The information could be used to interpolate the training of another group of teachers relative to these concepts when and if the same or a similar questionnaire is used. Information from this project could be applied to interpret another educational program provided the interpreter is cognizant of the specific group's training and experiences with both regular and hearing impaired children.

The content analysis of the reading comprehension skills obtained from the five reading series should be considered as part of the staff training program to improve the decision making process for instructional materials. For this project, the information from the interviews were interpreted relative to their importance for preparing a staff development program for teachers, program planners, supervisors and curriculum

interested persons who work with hearing impaired children in either integrated or special schools.

The two sections were reviewed separately, then a composite of the recommendations was presented. Minimum details relative to the content of the in-service programs are listed in each section because the summary lists specific concepts to be considered, suggesting implementation procedures and recommendations to be considered for teachers that work in different types of programs, i.e., regular elementary schools, special classes, etc.

The recommendations are based on the findings obtained from the research of the total project. The concepts are included to define a decision-making criteria used to define the elements of staff training under consideration. No single program will include all of the ideas that individuals at one site will consider the most important. However, these recommendations can be used to define the local needs by providing criteria to begin studying their local needs rather than starting from scratch. The idea is to provide directions to better develop and implement inservice or workshops that improve the instructional programming for hearing impaired youngsters in similar educational settings.

Reading Comprehension Skills

The differences illustrated in Tables 1, 2, 3 and 4 and summarized in Appendix A can either collectively or individually create programming problems for teachers, supervisors and curriculum personnel seeking regular, supplementary and remedial materials. Unfortunately, the differences between textbook organizations do not exist independently relative to their design, goals or implementation procedures.

Consequently, program planners should be cognizant of these existing differences including the other elements of the text beyond the reading comprehension section studied in this project. Supervisors, teachers and other professionals must be knowledgeable of an acceptable set of criteria that define the reading skills that they can use to evaluate and objectively analyze instructional materials in a variety of source for application to their program. The availability of a criterion stated scope and sequence is important because some personnel working with hearing impaired or other students do not have sufficient knowledge and training in linguistics, cognitive functional levels, and structural development of reading to select goals for learners that require special considerations. Furthermore, the time required to screen and select appropriate instructional materials is not available for an in depth, on-the-spot study of a series of materials. Accordingly, the selection of supplementary and remedial materials should be made using stated criteria with defined task levels, not general goals. The criteria should include skills to be mastered, the language performance level to be expected, and techniques to evaluate the performance by the learner.

For the instructors working with hearing impaired children, the knowledge of required linguistic levels and cognitive skills is a prerequisite to selecting materials for individual learners. At the beginning instructional levels, the teacher working with these students, especially those with severe hearing loss, may have to develop special instructional materials. Using restricted linguistic, vocabulary and/or cognitive levels in each phase of the development of the oral, reading, and writing skills, from a single word or phrase to sentences and

paragraphs according to the learner's developed functional ability, may be necessary.

Another factor that must be considered in the development of instructional materials is the degree of difficulty in the content which the residential school teachers mentioned several times. If content is foreign to the learner, then another factor is introduced which could also become a 'failing' factor. In summary, the program developer must consider, in addition to the reading skills, the limitations involved because of the cognitive and linguistic levels and the content of the materials included.

Appendix A contains the descriptive identification information for each source including: publisher, author(s), organizational structure, instructional grade levels, testing information, supplementary materials available, and a description of the reference code for each source used to classify all of the information obtained from the analysis of the textbooks.

Appendix A also contains the compilation and listing of the objectives employed by each author to define and develop the reading comprehension skills which were classified according to the section defined in Chapter Three. A unified organizational definition was used for this project to classify the information. Trying to use five different definitions would make it almost impossible to critically compare and study individual differences between the five reading series. Using Appendix A, one can examine and compare sources relative to their scope of content for one or all five series per category or their total scope can be examined; the areas receiving the most emphasis by one or all

authors; the objective statements format employed by each source to define their goals; and other information found to be of interest to the reader.

One effective method to analyze and comprehend the contents of these materials would be first, review the total scope of the information included by each author and the organizational format to get a general idea of the information available. This step includes becoming familiar with the content of each category for each source as well as the general content of each category. Secondly, identify the areas from each source that received the most significant amount of emphasis. Thirdly, note the variance in the depth, scope and style of objective statements employed by each author to define the skills, concepts and knowledge included. Fourthly, compare and contrast the five series by taking one category at a time to survey the differences in the scope of the information contained which can then be used to identify the strength and weakness of each. Fifthly, begin to conceptualize by combining a list of specific skills that should be included to complete the list and applying this information to program planning, developing and implementation procedures.

Interview Information

Each section of the interview was reviewed separately utilizing a similar format to Chapter Four. Specific ideas for training in each segment are listed in the concluding summary remarks.

Education Program.

The first significant factor to be considered when comparing these

programs was the student population of each. In Chapter Two, the educational needs of the hearing impaired were presented based on their hearing loss. The students at the residential school represent those who require the most extensive program modification to fit their educational needs. However, the process of selecting materials for supplementary and remedial materials is similar for either educational setting. Therefore, the competencies needed for each group are similar with only the level of application varying to fit the needs of the specific learners.

The implication of various strategies to improve the educational program or instructional procedures is examined in the skills defined in the following sections.

Mainstreaming.

One conclusion derived from the interviews was that both groups of teachers had considerable disagreement on the pro and con of mainstreaming hearing impaired children. Given appropriate conditions, all of the teachers, except one, felt that the hearing impaired children should be permitted to try an integrated or mainstreamed learning environment. However, if the academic or social progress was not considered successful within a reasonable time period, then the teachers, especially the teachers of the deaf, felt that the child's program should be re-evaluated to determine a more appropriate instructional environment. The major obstacle identified by the supervisor of the hearing impaired in the regular elementary school district was the parents who refused to consider modifying or changing their child's class placement. The requirements of Public Law 94-1-2 give the parents a strong voice in determining the placement of their child. Therefore, in some cases, the

staff must have sufficient factual information to counsel and convince the parents of the need to change their child's educational program. Sometimes this is not possible, leaving the local district to make the best of a difficult task.

The most significant bit of information obtained from the regular teachers was their concern and/or fear of the communication problem in their classes, especially with the severe and profound hearing impaired children. They did not feel comfortable using sign language because they did not have the training to use it effectively. Recognizing the intended goal of not using sign language in their classes, it was clear that these teachers felt the need to have either sign language or an approved alternate method to communicate more effectively with these students.

Another important concern expressed by the teachers in the regular elementary school was that the progress of the regular students was being slowed by the presence of the hearing impaired children in their class. This concern, which is relative to communication, could place these teachers under strain that could result in one of three possible classroom decisions regarding the hearing impaired children, namely: 1) ignore them and teach the regular students as usual, 2) spend excessive time with the hearing impaired at the expense of the anticipated progress of the normal children, or 3) proceed at a normal rate and provide as much extra help for the hearing impaired as possible. As several teachers stated, extra tutoring time in their classroom was limited, if not impossible. The third choice is the preferred, but for a child to be successful in this situation, the characteristics for success listed in Chapter Two are very important to consider. Several of the regular

elementary instructors mentioned some of the same characteristics necessary for the hearing impaired to be successful in their class.

One should conclude that the regular elementary teacher needs training in the total educational needs of the hearing impaired, including communication skills. Like the preceeding section, the specific recommendations are presented in the summary list at the end of the sectional information.

Training to Teach Reading.

Several gaps in the training of both groups were identified from the interviews. The regular elementary teachers have considerable training in the fundamental methods of teaching reading, especially phonetics, but very little training in the development of the reading skills schema. More significantly, they had little or no training to teach reading to special education or problem readers, especially the hearing impaired.

There are several points to consider. If the regular elementary teachers do not have any training in diagnostic, prescriptive teaching procedures in reading, how can they explore the instructional needs of the normal, much less the hearing impaired? If the teachers of the deaf do not have a well developed concept of what is considered normal reading, as well as lacking diagnostic reading skills, how can they make logical decisions about what should be taught next and how best to approach the preparatory skills for the next instructional level? Hence, the scope of training in either group does not allow sufficient decision-making criteria regarding the needs of the hearing impaired students.

The regular elementary teachers described phonetic training as the key, not specific reading skills. These teachers generally followed the

reading textbook but felt the need to have a guide that describes the developmental stages of the reading skills to aid them in the decision making process. The teachers of the deaf stressed language but did not attend to specific reading skills. These teachers, like the elementary teachers, expressed the need for a criterion-defined reading skills curriculum guide.

The general conclusion was that both groups need training in the developmental stages of reading skills. The regular elementary teachers need training in diagnostic and special education relative to teaching reading. The deaf teachers need a broader scope of training in teaching reading from the methods of teaching normal children to the diagnostic-prescriptive methods of teaching reading.

Instructional Procedures.

The placement procedures utilized in the public school appeared to be the minimum criteria to determine in which class or with which teacher a hearing impaired child was placed. The supervisors used a composite of the child's diagnostic information from psychologists and other sources of data, but they did not involve the receiving teacher in the decision making process. Many stated that they did not know that they would have a hearing impaired child in their class until school started. These teachers indicated that they did not feel that they had sufficient training to effectively work with these children. They stated that they were frustrated in their attempts to program for these children. As expressed earlier, they felt that they were holding the regular students back while they attempted to work with the hearing impaired.

The hearing impaired students were all placed, except for two

kindergarten students, at least two years below the normal age level. Furthermore, no interpreter or additional help was in the classroom to assist the hearing impaired students. The regular classroom teachers requested help by the trained teachers of the deaf, speech assistants and other help when possible.

How did the teachers feel this situation could be improved? They requested training in communication, the needs of the hearing impaired, and other items such as special classes in language and math for these students. They all agreed that the social classes mentioned earlier were fine.

The residential school for the deaf teachers said that individual student abilities in language, communication and other factors were used to place the hearing impaired into instructional groups at their school. These teachers had better supportive assistance than the regular elementary teachers because their supervisors had training and experience to work with these students. Also, they were able to discuss their instructional problems with their peers while they were occurring and make modifications within a day or two. The regular elementary teachers did not feel that they were able to make the adjustments as needed.

Remedial/Supplementary Materials.

As a group, the residential school for the deaf teachers had a more realistic perception of the type of materials that their students needed; whereas, the regular elementary teachers could not perceive the solution to the problems that they faced, particularly for those whose oral receptive and expressive skills were limited.

Residential school for the deaf population consisted of more

students with severely delayed language than those enrolled in the public school, due to the greater degree of hearing loss. Therefore, these teachers recognized the child's functional language level to select instructional materials appropriate for individual needs. The most difficult task for the residential teachers of the deaf was finding materials on the appropriate instructional level. Consequently, training in the normal development of both the reading and language skills is necessary to make objective decisions regarding materials from other sources or to write materials for specific needs.

The regular elementary teachers did not recognize the student's language performance or functional level as a basic criteria. One said that she had to simplify her directions and explanations but did not express any concern that the text materials could be above the child's comprehension level.

The training in this section would be related to task analysis, identifying reading levels of materials, interpreting reading skills and correlating the development of the reading skills with the student's linguistic level.

Linguistic/Transformational Grammar.

The regular elementary teachers, except for one, had little concept of the meaning of linguistic or transformational grammar in general or in relationship to teaching reading and language arts. Based on the interviews, these teachers depended on language arts textbooks for teaching language skills, just as they depended on reading textbooks for teaching reading. Furthermore, these teachers relied on the cross reference materials provided in the teacher's manuals for supplementary materials.

Additional suggestions were provided by their supervisor of reading.

The teachers of the deaf had more knowledge of the functional relationship between language and teaching reading. Their most significant problem appeared to be the lack of knowledge regarding the development of the reading skills mentioned earlier, plus additional training in the total scope of transformational grammar. Each stated that she had some training in transformational grammar but did not feel that was enough. Only one teacher had several courses where the relationship between reading and transformational grammar was the focal point of the course.

For the regular elementary teachers, there appeared to be a need for an extensive course in transformational grammar structure plus work in the connective relationship between language level, reading skill level and cognitive development. Similar training would be appropriate for the residential school for the deaf teachers also.

Behavioral Objectives.

Neither group of teachers had sufficient training and experience to effectively use criterion objectives to define instructional goals that could be used to select instructional materials for specific needs. The ability to perform task analysis of the skills, write PERT charts and link the necessary reading and language skills needs to be developed.

The teachers in both groups had very little training in educational technology skills necessary to develop and utilize media of a variety of types, as well as writing programmed instructional materials and other related skills.

In training them to use performance objectives and develop the necessary skills to design and implement specialized instructional

materials, the total array of educational technology skills including media utilization could be included. Almost all of both groups of teachers used SRA type materials but did not know how they were developed.

Summary

One oversimplified conclusion that could be derived was that neither group of teachers was prepared to teach the hearing impaired students. The regular elementary teachers have considerably more training in the process of teaching reading but lack knowledge of the development of the reading skills. For hearing impaired children, they lack knowledge of the effects of hearing loss on language development.

The regular elementary teachers could profit from training in the following areas if they are expected to have hearing impaired students integrated in their classes.

1. Knowledge of the effects of hearing loss on the educational programming needs of hearing impaired children in general and specifically those with mild to severe hearing losses. The inclusion of all levels of hearing loss would facilitate the differentiation of the needs of the hearing impaired enrolled in their classes versus others.

2. Knowledge of program modifications necessary to accommodate the hearing impaired mainstreamed or integrated in their class, i.e., language levels, modified instructions, communication skills, and so forth.

3. Knowledge of the communication needs of the hearing impaired, both oral and total communication methods. Training in sign language should be included for both teachers and hearing students.

4. Knowledge of all educational programs available in their state and throughout the nation for hearing impaired children to make an

intelligent comparison of the educational opportunities available to the hearing impaired to be able to discuss alternate programs with parents and other professionals. This is especially important training for the supervisors and special trained teachers of the hearing impaired.

5. Training in transformational grammar from the simple kernel sentence through complex structures. This is needed to interpret and simplify some of the instructional materials and directions given to the hearing impaired, especially in remedial and supplementary work.

6. Knowledge of educational technology skills associated with writing programmed instructional materials and media to identify and define special presentation and ways to select materials using criteria to define specific needs.

7. Develop sensitivity to the effects of hearing loss on the emotional stability of the hearing impaired child and how to cope with these needs in their class.

The most apparent weakness of teachers at the residential school was in the area of teaching reading. The second significant need was a more comprehensive knowledge of linguistics, such as the one defined for the regular elementary teachers. Some of the needs of this group were like mirror needs of those defined for the regular elementary teachers. The areas suggested are listed below.

1. Knowledge of the structural development of reading skills from visual perception or pre-reading skills through interpretative reading.
2. Knowledge of the transformational grammar, similar to the ideas presented for the other group.
3. Develop the ability to link (1) and (2) together to develop

the concept and application of the interrelation between these two skills to improve the selection process of basic supplementary and remedial reading materials.

4. Knowledge of educational technology skills, such as writing criterion-reference objectives, system management techniques, procedures to write programmed instructional materials, etc., to facilitate the decision making process needed to select appropriate instructional materials.

Recommendations for Inservice Training

The following statements include several ideas worth considering for inservice training to increase staff awareness and skills in the areas listed. If these are undertaken as the focus of staff development through inservice training, then they should be well planned. The school system should contact a source like Gallaudet College in Washington, D.C., which is the Center for Deafness or some other college with a program to train teachers to work with hearing impaired students, to help identify the needs and procedures to make sure that the materials and content of the workshop and/or inservice training meet the staff's needs. Also, do not attempt to use one or two short workshops for these topics because it would be a waste of time and could create misleading guidance to a staff unfamiliar with these topics. True, most colleges include course-work similar to some of the information, but the coordination and linking of the information for teaching reading for the hearing impaired is typically done in a more abstract method. These workshops could be coordinated by realistically integrating the development of the teachers' knowledge into the task of producing usable instructional

materials. Active staff participation could be expected if a long range type of inservice training could be designed, developed and implemented to incorporate the learning and application together. The one shot programs usually tend to "turn-off" teachers before they get started. To help encourage active participation, consideration of the following could help motivate individuals to participate more actively: excused time from teaching duties, special pay or college credit.

Topic for Inservice Training.

Because of the differences in training and experiences between staff members of both schools relative to the following information, only a descriptive outline of what should be considered for inservice will be given in addition to a recommended sequence for implementing the training program.

The following recommendations define the skills and knowledge that should be considered for teachers who work with the hearing impaired in either special schools, regular elementary schools or any combinations of these. Some of these skills will require more in depth training for one group or the other, but they all need a common base of knowledge and training. An attempt will be made to define some minimum skill levels but no attempt will be made to define the ultimate scope of the skills for each topic because each school district would be expected to determine this in conjunction with their consultants.

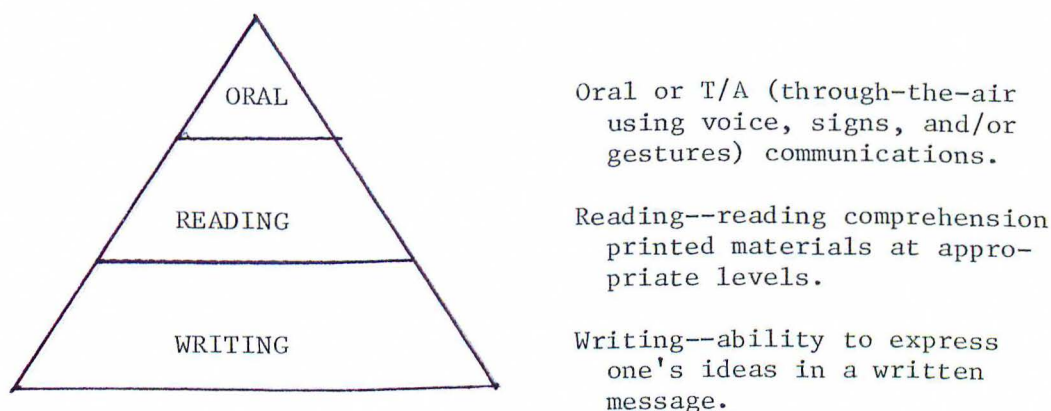
The first area to be considered is reading. An in depth study of the reading skills from pre-reading visual perceptions, etc., through what is typically considered sixth grade or higher where the areas of comprehension and interpretation reading skills receive the most

attention. As the cognitive functions become more difficult in the comprehension and interpretation skills of reading, the ability of the individual to use language becomes more important. This was apparent in the data presented regarding reading achievement levels in the demographic studies presented on the hearing impaired.

Comprehension is a direct function of the learner's linguistic ability as noted by Ruddell¹ in Chapter Two. Since a child can not read what he can not comprehend orally, the development of the ability to read will be difficult. Figure 4 is a visual image of this idea that

Figure 4

Triangle represents a cone going through the space of communication.



incorporates writing skills applicable to both the hearing impaired and other youngsters whose language development has been delayed or limited.

Figure 5 is a visual representation of a controlled flow of linguistic development of the three stages mentioned in Figure 4 for the developing relationship between oral, reading and writing skills of the

¹Ruddell, Reading-Language Instruction.

Figure 5

Conceptual Language Development Schema Using Transformational Grammar that Illustrates the Relationship Between the Three Modes of Communication

| CONCEPTUAL LANGUAGE DEVELOPMENT MODEL | | | |
|--|--|--|---|
| "THROUGH-THE-AIR" LANGUAGE DEVELOPMENT (RECEPTIVE/EXPRESSIVE) | [RECEPTIVE] | | single words, and/or simple two-three word phrase |
| | | | short descp. sent. or phrase - low level Kernal Sent. |
| | | | simple sent. all levels of Kernal Sent. with simple transform |
| | | | simple sent. with most levels of trans. used |
| | | | complex sent. |
| | | | expresses self in detailed descp. statements |
| | | | |
| READING SKILLS DEVELOPMENT (RECEPTIVE) | BASIC SKILLS NECESSARY FOR PRE-READING | | read & compend simple words |
| | | | read & comp. simple K-type sentences |
| | | | read & comp. simple K-type sent. with transformations |
| | | | read & comp. idioms, expressions, etc. |
| | | | read & comp. 1 & 2 sent. paragraph |
| | | | read & comp. 1/2 page paragraph |
| | | | read & comp. short stories |
| | | | read & comp. books |
| WRITING SKILLS DEVELOPMENT (EXPRESSIVE) | BASIC SKILLS NECESSARY FOR PRE-WRITING | | capable of writing a, b, c's, numerals & copying words |
| | | | capable of producing words |
| | | | capable of writing a K-type sent. |
| | | | capable of writing a K-type sent. with trans. |
| | | | cap. of writing a comprehensive with good structure |
| | | | cap. of writing 2-3 sent. p. - descp. type |
| | | | cap. of writing a 1/2 page paragraph |
| | | | capable of writing 2-3 page short story |

Developed by: J. Leland Clack

LEGEND:

"Through-the-Air" (T/A) Language Development: Receptive/Expressive--- Communication between two or more individuals whose primary mode is talking, signing, gestures or any combination. Also used for instructional levels.

Reading Skills Development--This represents the scope of reading skills defined by a text or local curriculum that can be developed using controlled structured linguistics.

Writing Skills Development--This represents the scope of the language arts skills defined by a text or local curriculum that (like reading) can be developed using controlled structured linguistics.

Note: The shaded areas preceeding each section represent basic skills that can be developed prior to the formal skills included in each area. Ex.-reading: the visual non-verbal skills, pictures, etc.

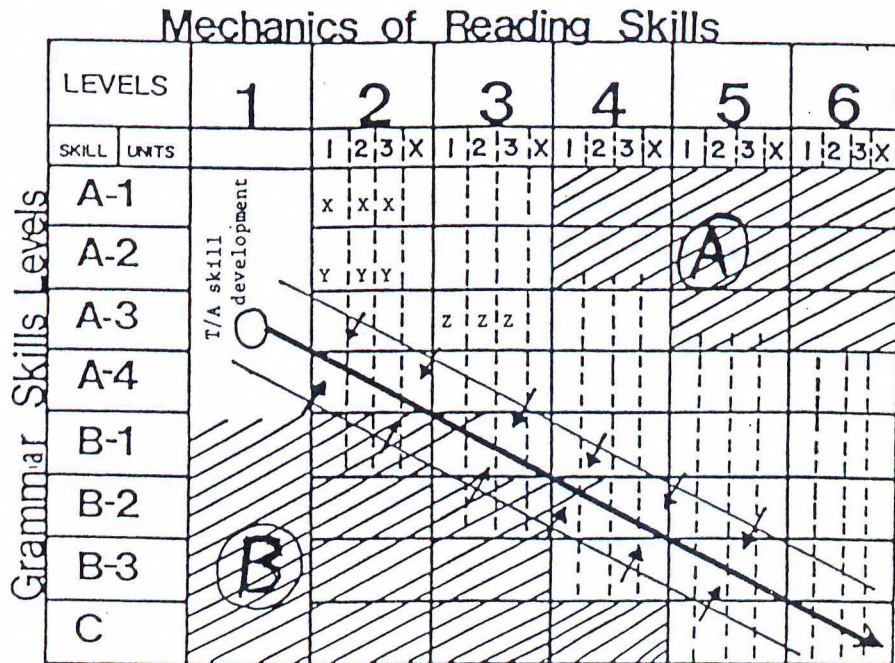
hearing impaired. Figure 6 is an example of a controlled procedure that could be used as a model for evaluating students using each cell (see X, Y and Z in Figure 6) as a criterion level, especially for the severe and profound hearing loss population. Two additional factors must be considered when working with these models: cognitive level and vocabulary. If these two factors are considered, then it would be possible to coordinate the growth of a child's oral (total communication) language, reading and vocabulary development while expanding their cognitive and conceptual knowledge. It must be kept in mind that the idea of pressing a child's maximum functional level tends to cause continued growth, but his goals can be exceeded beyond realistic limits.

The interrelationship between reading, linguistics and the other skills should be in the total schema of the staff development. The next element is a study of the linguistic structures of transformational grammar beginning with one or two word sentences and higher order including paragraphs as noted in Figure 4. This type of training is important because most teachers had English in college, but the time spent on linguistics and how they apply to the process of teaching reading have been inadequate to comprehend the functional relationship. This is true for both elementary and secondary teachers.

Linguistic/transformational grammar is considered an important element that must be considered in the development of both reading and expressive language of the hearing impaired. This knowledge becomes critical as the hearing loss increases because of the more specialized programming needed to develop the ability to read and interpret printed materials which is the key to comprehension.




Figure 6

Conceptual Schema to Illustrate the Development of the Reading Skills Using a Controlled Introduction of the Reading Skills and Transformational Grammar



DESIGNED BY: J. LELAND CLACK

LEGEND:

-  Reading skills that can not be developed using grammar skill Levels A-1, A-2,...
-  Reading skills which the listed grammar skills exceed the functional level of the learner's and/or the level required for the development of the listed reading skills.
-  Illustrates the conceptual developmental range of the "typical" reading series relative to the reading skills and grammar (or linguistic) skills.
- 1,2,3,... Indicates defined developmental levels of the reading skills (Ex. 1st. grade or a locally defined format.)
- A-1,A-2, etc. Indicates a defined developmental levels of grammar skills (linguistic).
- A,B,C,... Indicate linguistic developmental stages, i.e., A = preschool; B = 1st.-6th grades; C = 5th. plus (note overlapping at late B and early C)
- X,Y,Z Indicate mastery levels for which cell evaluation test can be developed. Using a combination of X,Y,Z's, one could develop placement and overall achievement tests.

There are several programs developed for the hearing impaired with the Rhode Island Language Curriculum,¹ one of the best known in deaf education. An expanded version of this was completed at Kendall Demonstration Elementary School for the Deaf² that defines what can be developed at each level and how it relates to the development of reading, as graphically shown in Figure 6. These materials are not listed to indicate that they are the best, only to represent a possible set of materials to be used for inservice training.

Cognitive Development.

It would be helpful if the staff had a common communicable knowledge of Bloom's Cognitive Development³ or Piaget's Theory of Child Development⁴ or some other developmental psychology concepts to help judge and communicate growth and define learning stages (i.e, task analysis concepts). As with linguistics, this knowledge would be very useful in the selection of initial and supplementary instructional materials as well as finding appropriate materials for older learners whose reading skills are far below normal. To properly implement programs like Title I, Public Law 94-142, etc., the instructors involved need to have functional knowledge of these concepts to create effective-efficient instructional programs for the hearing impaired.

¹Hamel, Guide to the Language Curriculum.

²Kendall School, Curriculum Guide.

³Bloom, Taxonomy of Educational Objectives.

⁴Inheler, Early Growth and Logic.

Criterion Objectives.

Staff members need to have the ability to write and employ criterion or performance objectives to develop and implement instructional programs for individuals or groups of learners. Most teachers, supervisors, etc., know what an objective is, but many do not know how to write and utilize them to define, teach, and evaluate for determining progress. Experience has proven that some teachers will say that they are teaching one thing at a given level, but when you evaluate their materials and tests, they are working at a different level or testing information not being taught and expected more or less than was intended. In the cases studied, neither staff had enough training to effectively use these concepts. A recommendation would be to obtain some materials like Mager's Preparing Instructional Objectives¹ or some other sources that could be used to direct the training in this area.

Many teachers fear the use of criterion objectives because of accountability implied in the evaluation cycle of instruction. However, this element should not be stressed. One should feel that better defined goals that tell what you want to achieve, level of performance expected and how you plan to evaluate student progress will help eliminate some of the problems facing instructors and program planners of the hearing impaired children.

Inservice Training Program.

Some specific skills and concepts have been outlined in the pre-

¹Robert F. Mager, Preparing Instructional Objectives, (Belmont, CA; Fearon Pub., Inc., 1975).

vious statements. The following is a recommended staff analysis and development program that could be used to work with staff like those included in this project to work on ways to improve the educational program for the hearing impaired in each situation.

Figures 4, 5 and 6 are graphic demonstrations of the scope of the problems to be solved in the design, development, implementation and evaluation of reading comprehension program for hearing impaired children. Remember, this is only a recommendation of how these skills could be worked; they may have to be modified based on the needs of each situation.

Step 1. Criterion Objectives. An understanding of how to describe what is to be taught is very critical because general terms used by teachers of different training and backgrounds, teaching levels and roles in a school must have a common ground to discuss specific goals for children. If criterion stated objectives are used with clearly stated tasks for each component of the educational setting, then the role of each person can be communicated and understood by all concerned. As in the two examples, this task could be very difficult, if not impossible, to achieve without clearly stated goals and responsibilities.

If time does not permit a program such as the Behavioral Approach to Teaching¹ provides, then working through a book like Mager's² could possibly be used to establish a minimum base.

Step 2. Study of Linguistics. As mentioned earlier, this segment is

¹Hugh Baird, et al., A Behavioral Approach to Teaching, (Dubuque, Iowa: Wm. C. Brown Company, Publishers, 1972).

²Mager, Preparing Instructional Objectives.

very important to interpret the receptive and expressive language level of the hearing impaired. The establishment of this base data is crucial to designing and implementing an educational program in reading and with other skills like writing for the hearing impaired.

The amount and scope of the training needed will differ for teachers in normal elementary schools compared to the special teachers. The resource room teachers will need the same program that the residential school teachers need. These teachers need in depth training to be able to evaluate and interpret the needs of the hearing impaired, as will the regular elementary teachers, supervisors, and other professionals to better define the instructional needs of these students. Factual information based on this type of criteria will be helpful to interpret and communicate the functional level of a child to the parents for future programming considerations. Figure 5 is an example of the scope of the competencies in linguistics that the teacher needs to interpret and make use of the information presented in the other materials.

Step 3. Reading Skills. Based on the differences presented in Appendix A that exist between text series and the lack of criteria objectives used to define what is expected, then, if possible, it is necessary for teachers at a school to develop their own continuum of all the reading skills or select one by some publishing company. In Kentucky, the State Department of Education, in cooperation with the McGraw Hill Publishing Company, is developing a skills continuum that matches the CTBS-U achievement test currently used in the State. The skills continuum could be expanded at the local level to include task performance levels that are

beyond those stated for general grade level guidelines.

With the hearing impaired children and other children whose skills are below grade level, the teachers have an inability to perform a task analysis of the skills that child is having trouble with so as to continue using instructional materials at a level beyond the individual's current performance or mastery level. A well defined skills guide would facilitate the task, especially for the hearing impaired and others who are working below grade level, to identify appropriate skills to be taught or supplementary for others.

Step 4. Sign Language. A sign language course in signed English should be provided for regular and special teachers who work with hearing impaired children in public schools. This course should include a descriptive comparison and application of both signed English and American Sign Language. This could be one solution to the classroom communication problem that the elementary teachers felt delayed their progress since they were giving their oral explanation to the regular students and the hearing impaired at the same time. Since this is included in the definition of total communication, the hearing impaired children would have the opportunity to read the lips of the teacher and, using sign language, to supplement the receptive procedures. As the physical distance between the teacher and student increased, the child would still be able to comprehend what the teacher is saying. As mentioned, some parents do not want sign language used, but it should be used when possible. In some cases, sign language is the only effective means of communication for some children. The teacher would be able to handle either situation to the best benefit of each hearing impaired child.

The scope of the recommendations, other than the section on behavioral objectives and other educational technology, are limited to reading and language (transformational grammar) skill areas. Any district could easily add math or other skill areas and/or content to their program. The information taught in the reading and language sections has direct implications for science and social studies because both depend on the child's ability to comprehend printed materials. For those having trouble with the content, then the task analysis skills taught in the behavioral objective segment of the training program could be applied.

The content of the ideas presented was kept to a minimum because each district has a choice of the scope of training to be implemented. The concepts of Bloom's Taxonomy of Cognitive Skills,¹ Piaget's Theory of Child Development,² and a development language curriculum like Kendall School for the Deaf's Elementary Language Curriculum Guide,³ should be part of the total inservice training program. A full copy of these materials are beyond the scope of this project. The staff at the Kendall School for the Deaf could explain in depth how to use their materials. More importantly, with a broad understanding of the problems facing instructors, individual teachers will be able to comprehend the instructional problems and develop ways to accomplish their task of providing the best educational program possible for each hearing impaired child.

¹Bloom, Taxonomy of Cognitive Skills.

²Inheler, Early Growth and Logic.

³Kendall School, Curriculum Guide.

How much time would be required? A well defined program would require about as much work as twelve to fifteen credit hours time. This is a minimum and would be limited only by the teacher's previous training and experience. For teachers in training now, all of these skills should be considered required.

If two programs used by districts similar to these could do a cooperative project to implement several of these recommendations, they could conserve time and money as well as provide practical information to both staffs. Separately, each program would rely on the other for consultant assistance. This could be arranged several ways by having special workshops conducted by individuals from each school. Each could arrange special consultants that could work with both staffs.

The extent of the training should be based on well defined goals and a practical time schedule to achieve the stated goals. To be effective, the local district must be able to cover all cost, all time from regular duty and offer possible aid to achieve this task.

Future Research

Some research could be used to expand the work begun in this project. One must remember that this study only took a look at two programs. As noted, this project supported considerable research that was summarized by Quigley,¹ who listed several characteristics necessary for hearing impaired children to be able to achieve in regular classes. The demographic information supported the distribution of the students in this group. Some specific ideas for future research are listed in the

¹Quigley, Education of Deaf.

following statements.

1. After modifying it for mailing, use the same questionnaire to conduct an in depth study of the training and knowledge of the teachers to determine if a larger population would have similar results. Based on the information present in Chapter Two, this could be the most significant follow-up research for this project. Similar findings could be used to influence future teacher training programs for teachers of the deaf, especially the smaller undergraduate programs.

2. Using similar staffs identified in this project, conduct a long-range project following the recommended inservice training program to determine if the desired improvements in the instruction of the hearing impaired in residential and integrated programs would occur.

3. Conduct a survey of the college teacher training programs for the hearing impaired to determine the scope and depth of the training provided in reading, linguistics and educational technology required to implement individualized instructional programs. This information could be examined individually or collectively to determine some criteria that could be used to study the data from a project such as defined in number one above.

These two studies (number one and three) together could help determine a future trend in the scope of the training to be included for teachers of the deaf and other special education teachers. Also, it could indicate that regular teacher training programs could benefit from similar training.

Appendix A

Summary of the Analysis of the Five Reading Textbook Series

| Category | page |
|--|------|
| Textbook Information: Authors, reference codes and textbook organization. | 95 |
| Recognizing Sentence Meaning | 98 |
| Recognizing Main Idea | 99 |
| Recognizing and Recalling Details | 100 |
| Sequence | 101 |
| Supporting Details | 102 |
| Inferring Main Idea and Details | 103 |
| Inferring Character | 104 |
| Inferring Comparison and Relationships | 106 |
| Predicting Outcomes | 109 |
| Cause and Effect | 112 |
| Distinguishing Between Fact and Opinion | 113 |
| Distinguishing Reality and Fantasy | 114 |

BASIC TEXT INFORMATION:

| CATEGORIES | GINN 720 | SFBRS | SFRU | ABRP | MLRP |
|---------------------------------------|--|--|---|---|---|
| Reference Information | <p>Pub. Ginn and Company</p> <p>Text: GINN 720 RAINBOW READING SERIES, 1976 ed.</p> <p>Levels: K-6</p> <p>Authors: Theodore Clymer, Ned B. Daniels, Helen Wardeberg</p> <p>Structure: Defined instructional levels</p> <p>Supplementary Materials: Basic word vocabulary card set, picture maps, skill paks, reteaching materials</p> <p>Evaluation: Placement test, pretest [lv. 2-13], Evaluation Criterion Exercises [lv. 2-13], and Level Mastery Test [lv. 1-13]</p> <p>Management aids.</p> <p>Population: all inclusive</p> | <p>Pub. Scotts, Foresman and Company</p> <p>Text: BASICS IN READING SERIES, 7B ed.</p> <p>Levels: 1-8</p> <p>Authors: Ira E. Aaron, Dauris Jackson, Carole Riggs, Richard G. Smith, Robert Tierney</p> <p>Structure: Basal Reader</p> <p>Supplementary Materials: workbooks, duplicating masters</p> <p>Evaluation: Skill test (all books above readiness), End-of-Book Test, placement test</p> <p>Population: Average-- "designed for pupils who are considered by most standards average in their rates of learning and in their reading achievement." TE</p> | <p>Pub. Scotts, Foresman and Company</p> <p>Text: READING UNLIMITED SERIES, '76 ed.</p> <p>Levels: K-6</p> <p>Authors: Katherine B. Wingert, Barbara A. Pearson</p> <p>Structure: Defined instructional levels--skill devel.</p> <p>Supplementary Materials: Independent Practice Books, ditto masters</p> <p>Evaluation: 4 Tests-- Initial placement [gr. 1-4] Pre-Test [gr. 1], Skill Assessments tests, and End-of-Level.</p> <p>Management Aids:</p> <p>Population: Not defined</p> | <p>Pub. American Book Company</p> <p>Text: AMERICAN BOOK READING PROGRAM, '77 ed.</p> <p>Levels: K-6</p> <p>Authors: Majorie S. Johnson, Roy Kress, John D. McNeil</p> <p>Structure: Language experience approach to teaching reading combined with the structure of a Basal Reading Program</p> <p>Supplementary Materials: Skill Books, duplicating masters, picture cards, word cards</p> <p>Reteaching Materials: Sound and Structure for word-recognition, and message and meaning for comprehension skills</p> <p>Evaluation: Placement Test and Check-up Tests each level</p> <p>Population: Average with a broad concept of all students.</p> | <p>Pub. Charles E. Merrill Publishing Company</p> <p>Text: MERRILL LINGUISTIC READING PROGRAM, '75 ed.</p> <p>Levels: 1-6</p> <p>Authors: Wayne Otto, Richard Smith, etc.</p> <p>Structure: Series of Text</p> <p>Supplementary Materials: reinforcement materials, linguistic word pattern program, and word practice kits.</p> <p>Evaluation: Placement (1-2) and Summary of Skills</p> <p>Population: Designed to meet needs of the pupils who might have difficulty getting meaning and satisfaction from reading-- found effective with average and above average also.</p> |
| Authors' Definitions of Comprehension | <p>"Comprehension skills are emphasized in every level. The Reading and Discussing the Selection section of each lesson plan focuses on both literal and inferential comprehension. Inferential comprehension is stimulated through the interpretation of feeling, motive and traits of story characters, as well as a number of other techniques. With guidance and questioning the children are helped to supply missing information and anticipate outcomes. The developing Reading Skills Section of each lesson plan emphasizes the literal comprehension..." TE:13</p> | <p>No clear statement was provided in the teacher guides that defined their philosophy of objectives for comprehension.</p> | <p>"The Nature of Reading: experience extended. Behind the interest-centered structure of Reading Unlimited lies a philosophy which maintains that: --reading is an extension of natural language development, --reading, like speech, is both a personal and a social form of communication, --reading is experience extended." p. 15</p> | <p>"The ABRP incorporates a language experience approach to teaching beginning reading. Pupils are encouraged to explore their own experiences before they share vicariously in the experiences of others. In looking at their own experiences, pupils become involved in both oral and written comprehension." p. iv.</p> | <p>"Program is based on the principles of structural linguistic set forth by... Dr. Fries." p. 5</p> <p>"Comprehension--Reading is treated as a means of acquiring meaning. Not only the meaning of individual words, but also the cumulation meanings of sentences, paragraphs and entire stories. Comprehension is always stressed as the pupils most important goal. For that reason, pictures that illustrate the text have been omitted from the instructional selection of the Readers to prevent pupils from using pictures clues to guess words and their meanings." p. 7</p> |

BASIC TEXT INFORMATION

| CATEGORIES | GINN /20 | SFBRS | SFRU | ABRP | MLRP |
|---|---|---|---|--|--|
| Reference codes used to identify information obtained from the texts. Note: all references are to teacher's edition. | <p>1-2-3</p> <p>└─ page number</p> <p>└─ lesson number</p> <p>└─ Book or Level Number</p> | <p>1-2-3</p> <p>└─ page number</p> <p>└─ lesson number</p> <p>└─ Book or Level Number</p> | <p>1-2-3-4</p> <p>└─ page number</p> <p>└─ lesson number</p> <p>└─ section of level</p> <p>└─ level</p> | <p>A-1</p> <p>└─ page number</p> <p>└─ Book Identification</p> | <p>A-1</p> <p>└─ page number</p> <p>└─ Book Identification</p> |

BASIC TEXT INFORMATION

| CATEGORIES | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|--|---|---|---|---|---|
| TEXT MAJOR ORGANIZATIONS | <p>Three Core Areas:</p> <ul style="list-style-type: none"> --Vocabulary --Comprehension (Literal & Inferential) --Decoding | <p>Four Major Areas:</p> <ul style="list-style-type: none"> --Word Identification --Comprehension (Literal/Implied/Evaluative) --Study & Research --Literary Understanding & Appreciation | <p>Four Major Areas:</p> <ul style="list-style-type: none"> --Word Identification --Comprehension (Literal/Implied/Evaluative) --Study & Research --Literary Understanding & Appreciation | <p>Two Major Categories:</p> <ul style="list-style-type: none"> --Word Recognition Phonic & Structural Skills --Comprehension Comprehension, Literary, Vocabulary, Study Skills, & Language/Mechanics | <p>Eight Categories:</p> <ul style="list-style-type: none"> --Linguistic Skills (Word Attack & Decoding) --Linguistic Skills (Word Attack) --Linguistic Skills (Encoding) --Linguistic Skills (Syntax) --Comprehension & Critical Reading Skills --Comp. & Crit. Rdg. Skills (Adj. Rate, Rate for Purpose & Difficulty) --Creative & Interpretative --Literary Skills |
| <p>TEXT GRADE LEVEL EQUIVALENTS (Preschool-K)</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> | <p>K</p> <ol style="list-style-type: none"> Ready for Rainbows A Pocket Full of Sunshine A Duck is a Duck Helicopters & Gingerbread May I Come In? One to Grow On The Dog Next Door & Other Stories How It Is Nowadays Inside Out A Lizard to Start With Tell Me How The Sun Rose Measure Me, Sky Mountains Are For Climbing To Make A Difference | <ol style="list-style-type: none"> Hello, Sunshine First Feathers Puppy Paws Jumping Jamboree No Cages, Please Dragon Wings Calico Caper Daisy Days Hootenanny Ride a Rainbow Step Right Up! Flying Hoofs Fins & Tales | <ol style="list-style-type: none"> Higgledy Peggledy All in Row, etc. Rub-A-Dub-Dub To Market, To Market On Your Mark Take a Giant Step You're It All In Fun A Hundred Eyes Taller Than Trees Golden Treasures Catch A Spoonful Window Doorways Bridges Passport Excursions Discoveries | <p>Away Begin</p> <p>Care Dream Enjoy Find</p> <p>Grow Hopes Images Jewels</p> <p>Keystones Lanterns</p> <p>Moments</p> <p>Networks</p> | <ol style="list-style-type: none"> I Can Dig In Catch On Get Set Step Up Lift Off Take Flight Break Through Making Choices Looking Around |

GENERAL CONCEPTS: LITERAL COMPREHENSION

TOPIC: Recognizing Sentence Meaning

| BASIC CONCEPTS | GINN 720 | SEBR | SEBR | ABRP | MLRP |
|---|--|---|---|---|---|
| <p>--Word order and association</p> <p>--Recognize: Sentence Meaning Incongruities relationships btw. words, sentences & paragraphs</p> <p>--Recognize topic sentence in 1st., 2nd. or last of paragraphs</p> <p>--Use context cues to identify, recognize sentence meaning</p> | <p>3-2-103 make word association</p> <p>4-2-84 recog. order of words in sentences (receptive)</p> <p>6-2-62 recog. order of words in sentences (expressive)</p> <p>4-1-41 recog. sentences having similar meanings</p> <p>4-1-42 recog. incongruities</p> <p>5-5-206 recog. sentences that express the main idea</p> | <p>Text did not contain any specific information that could have been separated and included in this section.</p> | <p>1-2-1-54 seek meaning from written materials</p> <p>1-5-4-142 use context cues to determine word and sentence meanings</p> <p>2-2-1-62 use pic. & context cues to determine word, phrase & sentence meaning</p> <p>5-2-4-79 use context cues to determine the relationship of missing phrases to sentence stems</p> <p>6-1-1-24 use content cues to recognize relationship of words and phrases within sentences and of sentences within paragraphs</p> <p>7-2-5-77 use words & phrases to determine word & sentence meanings</p> <p>9-2-7-91 use content cues to recognize relationships of words, phrases and sentences.</p> <p>9-4-5-135 use content cues to recognize relationships of words, phrases, sentences & paragraphs</p> <p>9-5-2-156 use context cues to determine word, phrase, sentence and paragraph meanings</p> | <p>Text did not contain any specific information that could have been separated and included in this section.</p> | <p>A--44,45 classify words, phrases and sentences</p> <p>A--41 demonstrate understanding of words, phrases and sentences in print</p> <p>A--43,44 demonstrate understand- ing that word order affects meaning</p> |

GENERAL CONCEPTS: LITERAL COMPREHENSION

TOPIC: Recognizing the Main Idea

| BASIC CONCEPTS | GINN 720 | SFBRs | SFRU | ABRP | MLRP |
|--|--|--|--|---|---------------------------------------|
| <p>--Identify: picture/text relationships paragraphs containing main idea of story parts</p> <p>--Distinguish: main idea from pictures between main idea and supporting details</p> <p>--Recognize title as main idea topic sentence that express main idea of paragraph main idea of paragraph in a story main idea in an oral expression</p> | <p>2-1-23 id. main idea by relating text to picture 2-1-25 id. main idea from pict. 3-1-28 recog. title as main idea 8-4-150 recog. topic sent. in 1st., middle or last position as the main idea of paragraph 9-4-159 recog. topic sent that express main idea of paragraph 10-3-121 id. paragraph in which topic sent. states the main idea 11-5-285 recog. main idea stated as topic sent. of paragraph 13-3-164 id. paragraph that contains topic sent. expressing main idea 14-1-53 recog. the main idea of a brief paragraph or story 14-1-60 id. topic sent. which states the main idea of a paragraph 14-1-64 add details to support a main idea of a paragraph 14-1-65 choose a topic sent. that states the main idea of a paragraph 14-3-153 distinguish between the main idea and supporting details 14-4-187 select details from an article to support two main ideas 14-4-205 id. the main idea of an article 15-1-51 recog. main idea of an oral exercise 15-1-52 recog. topic sent. in several paragraphs 15-1-59 decide whether certain paragraphs have a topic sent. 15-1-64 determine the main idea of paragraph and then match topic sent. to appropriate paragraph 15-3-150 distinguish between main idea and supporting details 15-4-186 select details to support two main ideas in an article</p> | <p>2-8-84 recog. main idea 3-7-156 recog. main idea picture/word (initial) 6-12-159 recog. main idea (formal inst. level) 7-B-67 recog. main idea (mastery level) 8-B-59 recog. main idea (maintenance level begins)</p> | <p>2-9-3-251 id. main idea of selection 4-1-2-46 use pic. cues to clarify concepts & processes 4-4-6-128 recog. main idea of photograph 4-5-1-130 use pic. cues to verify content 4-6-4-186 use content & pic. cues to solve riddle 4-7-2-198 use pic. cues to id. setting 5-5-4-158 use pic. cues to detect contents of book 7-4-2-123 distinguish main idea and supporting details 7-6-2-161 recog. main idea of story segment 7-6-4-110 summarize main idea of selection 8-4-5-119 recog. main idea and supporting details 8-5-5-141 recog. main idea of song 8-5-7-148 use pic. cues to broaden concepts in text 8-6-3-174 use pic. cues to help determine contents of books 9-5-2-156 use pic. cues to recog. setting 13-3-7-97 id. introductory and concluding paragraphs 14-4-1-116 recog. plot structure 20-2-5-85 recog. main idea of both art and text</p> | <p>A-2a id. main idea on book cover B-10a id. details of a picture or group of pictures C-17d id main idea told through pic. or combination of pic. & text G-6lc id. main idea of a written selection when main idea is directly stated in a topic sent. or summary statement</p> | <p>A-6 id. main idea of selection</p> |

| GENERAL CONCEPTS: LITERAL COMPREHENSION | | | | | |
|---|---|--|---|---|---|
| TOPIC: Recognizing and Recalling Details | | | | | |
| BASIC CONCEPTS | GINN 720 | SFRU | SFRU | ABRP | MLRP |
| <p>--Recall: picture character & story details details that support the main topic</p> <p>--Recognize picture speaker in sentence (oral and print) details that tell who, what, when and where sentence with similar ideas details that support the main idea</p> | <p>2-1-4 pictures--recognize</p> <p>2-1-14 recall pictures</p> <p>2-6-169 recog. speaker in a sentence</p> <p>3-2-84 recognize details that tell who, what</p> <p>4-1-10 recog. details that tell who, what or where</p> <p>4-1-37 recog. sent. having similar meanings</p> <p>4-2-83 recall story and character details</p> <p>5-4-158 recog. details that tells who, what, when, where</p> <p>6-1-40 recog. details that tells who, what, when, where on specific story pages</p> <p>6-2-103 recog. sent. in a set of sent. as the main idea</p> <p>7-1-13 recall story details</p> <p>7-1-22 recog. topic sent. in 1st. or last position as the main idea of paragraph</p> <p>8-1-42 recalling story character and details</p> <p>8-5-215 recog. details that support main idea of paragraph</p> <p>7-4-167 recog. details on specific pages</p> <p>10-5-295 recog. details that support main idea of story parts</p> <p>12-5-307 recall details from story</p> <p>14-1-28 will be able to locate details</p> <p>14-1-53 id. topic sent. of a brief paragraph</p> <p>15-1-28 will find details in an article to answer questions</p> <p>15-3-151 recognize details that support the main idea of paragraph</p> | <p>1-1-36 recognize details (pictures)</p> <p>2-2-43 recognize details (pictures & sentences)</p> <p>3-1-89 recog. details word-pictures</p> <p>4-4-214 recog. details photographs</p> <p>7-18-176 recog. details (mastery level)</p> <p>8-1-36 maintenance level begins for recog. details.</p> | <p>3-9-1-126 use pict. cues & ltrs. cues to read a story & answer questions</p> <p>3-9-2-258 use labels as textual aids</p> <p>4-2-4-80 use pic. cues to id. action</p> <p>4-3-5-106 id. details that support a main idea</p> <p>6-1-/-92 use pict. cues to support and extend textual aid</p> <p>6-3-5-123 use pict. cues to increase understanding of text enjoyment</p> <p>6-4-1-144 use visual discrimination to id. particular plants in an illustration</p> <p>6-4-2-146 use pict. cues to enrich details in setting</p> <p>6-2-8-99 read article to find out whether specific questions are answered</p> | <p>J--103 id. types of information (symbols)</p> <p>K-53 photographs and captions</p> <p>J--231 cartoons</p> <p>A-60b locate designated info. in pict.</p> <p>A-62a id. main idea & details: top/bottom pict.</p> <p>A-62b id. main idea & details: on/off pict.</p> <p>A-64a over/under</p> <p>A-64b in/out</p> <p>A-66a up/down</p> <p>A-66b left/right</p> <p>A-68a big/little</p> <p>D-65d id. details of a pict. or a group of pict.</p> | <p>A-41 recall facts</p> <p>A-7 id. information cues in a selection</p> <p>B-18 id. elements of direct discourse (argumentation, description, exposition, narrative)</p> <p>D-35 select details or proof to support main idea</p> <p>J-36 Follow the logical development of thought in a selection--all story pages--</p> |

| GENERAL CONCEPT: LITERAL COMPREHENSION | | | | | |
|--|--|---|--|--|--|
| TOPIC: Sequence | | | | | |
| BASIC CONCEPTS | GINN 720 | SFRS | SFRU | ABRP | MLRP |
| <p>--Recognize: pic. sequence of events two to eight seq. of events story events in sequence and write summary</p> <p>--Identify time signal words and determine events in story</p> <p>--Arrange: pic. in sequence events in sequence paragraphs in story in sequence</p> | <p>2-5-136 recog. seq. of events (pictures)</p> <p>3-3-113 recog. the seq. of two story events (wds./pic.)</p> <p>4-2-56 recog. seq. of two story events (written)</p> <p>5-1-20 recog. seq. -3- story ev. -4-</p> <p>6-1-33 -5-</p> <p>7-1-29 -6-</p> <p>8-1-12 -8-</p> <p>9-1-23</p> <p>10-1-15 pupil will recall story events in sequential order</p> <p>11-1-93 recog. seq. of given events</p> <p>12-3-166 recall the seq. of story events and write a paragraph summarizing the seq. of events</p> <p>14-2-87 id. time signal words and determine order of events in sentences and story sequence</p> <p>14-2-97 arrange events in seq. order</p> <p>14-3-121 put story events in chronological order</p> <p>15-2-87 recog. time signal words which indicate sequence</p> <p>15-2-92 write directions that follow a logical sequence</p> <p>15-3-121 put events in a story in chronological order</p> <p>15-4-180 arrange events into correct sequential order</p> <p>15-4-180 arrange paragraphs from a story in seq. order</p> | <p>id. & recog. sequence relationships</p> <p>1-10-63 initial intro.</p> <p>3-12-153 formal inst. begins</p> <p>4-4-66 main instructions begin</p> <p>10-2-45 mastery level</p> <p>11-8-92 maintenance level begins</p> | <p>K-2-67-192 use pic. cues to id. sequence</p> <p>1-2-1-54 recog. seq. of events</p> <p>3-6-1-158 recog. story sequence</p> <p>5-1-2-30 use seq. relationships to number pictured events in the order in which they occur in a story</p> <p>5-1-8-52 recog. seq. relation- ships by following steps in a process</p> <p>5-4-2-114 recog. time in a paragraph that describes sequence action</p> <p>7-5-3-151 id. sequence of actions</p> <p>14-2-7-79 recog. seq. relation- ships in the re-cycling process</p> | <p>A-32a id. sequence of events through pictures</p> <p>A-32b concepts of 1st., middle, last</p> <p>B-70b id. sequence of events in a story read orally</p> <p>C-10d id. sequence of events told through pic. or combination of pic. and text</p> <p>F-39a id. cue words to the sequence of events in a written selection</p> <p>H-18c id. seq. of events in a written selection</p> | <p>B-26 recall or arrange events in sequence</p> <p>D-58 summarize a rdg. passage (seq. of events)</p> <p>F-108 id. topics of consecutive passages, stanza or selection</p> <p>F-118 recog. or id. steps in a given process</p> <p>I-48 id. major times and events within a division</p> |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Supporting Details

| BASIC CONCEPTS | GINN 720 | SFBR S | SFRU | ABRP | MLRP |
|---|---|--|---|---|---|
| <p>--Match title & topic and supply details for topic</p> <p>--Infer: story details details that could be added to a story feelings from details supporting details given main idea main idea given supporting details</p> | <p>12-2-88 infer detail that could be added to a story</p> <p>14-1-41 given the main idea, student will be able to infer details.</p> <p>14-1-41 infer story details</p> <p>14-2-110 match title and topic and supply details for topic</p> <p>14-3-153 id. the supporting details in a paragraph</p> <p>15-1-46 infer feeling from details</p> <p>15-4-202 use main idea to infer supporting details</p> <p>15-4-203 use supporting details to infer the main idea in two articles</p> | <p>recognize main idea and supporting details</p> <p>7-B-104 informal intro.</p> <p>8-B-148 initial pre-inst.</p> <p>9-3-52 formal inst. begin</p> <p>11-5-72 mastery level begin</p> <p>12-B-53 Maintenance level begin</p> | <p>18-3-4-107 use pic. cues to supplement information in text</p> | <p>M-191c id stated details of a written selection that support the main idea of the selection</p> <p>L-205a id. statement in a written selection that best support inference or conclusion drawn about the selection</p> | <p>Text did not contain any specific information that could have been separated and included in this section.</p> |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION
 TOPIC: Inferring Main Idea and Details

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|--|--|---|--|---|---|
| <p>--Infer details: from pictures implies</p> <p>--Infer main idea; expressed in Title of a story or story part from story details from paragraph, story</p> <p>--Infer both main idea and supporting details in a passage given limited infor- mation</p> | <p>2-1-4 infer details from pic. 5-2-59 infer main idea expressed as title 6-1-11 infer story details 6-4-163 infer main idea of given story 7-5-246 infer main idea of given paragraph 9-5-214 infer details implied in story 10-4-201 infer main idea in group of paragraphs 12-1-27 infer the main idea of paragraphs and write topic sent. to express them 14-1-47 student will provide details that lead to specific inferences 14-2-75 use details to infer the main idea 14-2-80 write a sent. that expresses the unstated main idea of a paragraph 14-2-110 infer both the main idea and supporting details in a passage 15-1-41 infer details given the main idea 15-2-76 infer main idea of paragraph from details in the paragraph 10-2-84 infer details implied in the story 15-2-111 infer some of the details books might include from their title</p> | <p>Text did not contain any specific information that could have been separated and included in this section.</p> | <p>K-2-84-232 use context cues & pic. to answer riddle 3-2-3-50 use pic. cues, context and letter-sound cues to determine meaning of a selection 7-1-2-29 make judgement concern- ing content of selection 7-4-4-129 distinguish between main idea and supporting details 8-1-4-40 id. details that support an inference 9-1-6-51 extend and enlarge concepts 10-1-6-55 distinguish relevant & irrelevant information 10-3-5-125 use context cues to determine paragraph meaning 10-2-6-110 use pic. cues to learn about life in old west 10-4-7-143 evaluate information from different sources 13-1-5-39 make judgement about main idea of selection 13-4-10-147 increase ability to evaluate own program 14-2-7-79 use pic. cues to clarify re-cycling process 14-3-5-107 match captions and pic. according to main idea 15-3-1-76 id. cues to different settings 15-4-5-114 use pic. cues to clarify concepts 16-1-2-26 demonstrate understanding of text by explaining pic. cues 16-1-6-41 select from 3 choices the main idea of an article in one item and important details of the article in other items 16-3-1-106 use context cues to choose which of two responses mean same as a sentence contain- ing a derived form 17-4-3-145 ans. questions about sent. containing more than one idea 18-1-8-57 interpret the main idea of a biographic selection 19-1-2-28 ans. comprehensive questions about story 19-1-3-31 use text and aids implied main idea of section of an article 20-1-1-22 answer comprehensive questions using comparisons 21-1-1-22 ans. comprehensive questions about events in a story</p> | <p>J-121d id. main idea of a written selection when the main idea is not directly stated in the selection</p> | <p>A-22 predict subject matter from title, 1st. paragraph, or or stanza and/or typographic cues</p> |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Inferring Character

| BASIC CONCEPTS | GINN 720 | SFBRs | SFRU | ABRP | MLRP |
|--|---|---|---|--|--|
| <p>--Infer and predict character: traits, feelings, and qualities from paragraphs, stories and sentences</p> | <p>9-1-13 infer character traits 11-1-27 infer character feelings 12-5-270 make inferences about appropriateness of character's behavior 13-5-286 infer qualities of a character's implied in a paragraph 14-3-146 infer character's traits and predict action 15-3-140 infer character's traits from details in a story 19-1-28 infer about story's characters</p> | <p>recognize feelings, actions, traits & motive of characters x informal intro. 7-11-124 initial pre-inst. 8-6-84 formal inst. 9-13-144 mastery 12-3-56 maintenance</p> <p>story elements character 8-6-84 informal intro. 11-35-341 initial pre-inst. x formal inst. x mastery x maintenance</p> | <p>k-2-34-120 id. actions & motives of characters and traits k-2-91-246 use pic. cues to id. character and setting to clarify concepts 3-4-1-110 recog. character traits and motives 4-2-4-71 choose descriptive labels to show recog. of character delination 6-1-6-45 id. paragraph in which author deliniate: character fears 6-1-6-45 helpfulness 6-3-2-114 bravery & fears 6-3-8-130 6-2-7-92 evaluate knowledge of American Indian & their culture 6-6-4-184 evaluate selection character and illustrations 7-1-3-34 id. reactions to characters 7-1-3-34 relate moral of story to own experience 7-4-2-123 evaluate principles of play-play, unselfishness and other behavior 7-5-2-143 relate to problem encountered in interpersonal relationships and suggest solution 8-1-2-29 recog. traits and motives of main characters 8-1-3-36 id. character feelings 8-1-4-40 make inference to id. traits, motives and reaction of character 8-3-3-83 use descriptive details to compare and contrast characters 8-6-4-179 evaluate character, illustrations and selection 11-2-4-100 id. motives of characters 11-5-3-196 react emotionally to written materials 12-4-1-124 use pic. cues to id. time, setting, character and action 13-1-4-37 compare and contrast with each other and with themselves at different times 13-1-4-47 id. traits and motives of two characters 13-3-1-80 make judgement about actions of story characters</p> <p>continued next page</p> | <p>C-17d id. emotions of character in pic. H-75c id. attitudes or emotions of a character whose actions are described in a written selection I-24c id. traits of a character whose actions are described in a written selection I-90c compare and contrast the attitudes, emotion or traits of characters whose actions are described in a written selection</p> | <p>A-18 evaluate behavior of characters I-28 id. the basic characteristics of subject of discourse I-28 detect change or lack of change in subjects of discourse</p> |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION
 TOPIC: Inferring Character continued

| BASIC CONCEPTS | GINN 120 | SFRU | SFRU | ABRP | MLRP |
|----------------|----------|------|---|------|------|
| | | | <p>13-3-9-104 recog. authors delineation of character</p> <p>15-1-2-26 infer feelings of character</p> <p>15-1-7-40 draw conclusion and make judgement about the characters in the story</p> <p>15-3-6-95 id. traits of character (JFK)</p> <p>15-5-1-128 note character delineation (hero vs villian)</p> <p>15-5-1-128 id. conflict between characters</p> <p>15-5-4-146 id. climax of conflict between characters</p> <p>16-1-2-26 id. traits and justify choice</p> <p>16-1-7-45 note change in characters traits and motives</p> <p>16-1-7-45 id. emotional reaction of character</p> <p>16-1-7-45 id. types of conflict in story</p> <p>16-1-9-53 find examples of methods of character delineation in stories read earlier</p> <p>16-4-2-135 recog. conflict</p> <p>17-4-1-134 answer questions about characterization by finding appropriate examples in the story</p> <p>17-4-2-137 contrast characters and id. them as individual rather than stereotypes</p> <p>18-1-2-27 id. traits of characters</p> <p>18-2-2-67 recog. traits of characters</p> <p>18-3-1-94 infer traits and motives of main character</p> <p>18-4-5-171 recog. types of conflicts in story</p> <p>19-2-4-66 compare two characters presented in two biographic sketches</p> <p>20-1-2-26 recog. 1st. person narrative point of view as a means of delineating character</p> <p>20-2-1-64 recog. both personalized and stereotyped traits in characters</p> <p>20-4-3-141 use postscript to increase knowledge of a character</p> <p>20-4-6-153 make inferences about characters</p> <p>20-4-8-161 draw conclusions about persons and situations</p> <p>21-4-4-144 id. changes in traits, motives and actions of characters</p> | | |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION
 TOPIC: Inferring Comparison and Relationships

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|---|---|--|--|--|---|
| <p>--Identify and compare the relationships of: time place size opposite part/whole analogous classifications</p> <p>--Infer likeness between: two people two things</p> <p>--Compare & contrast character, story elements</p> | <p>6-5-208 infer likeness between two people or things 7-1-48 telling an original story from an illustration 7-5-213 infer differences between two people or things 8-5-196 infer likeness and differences between two people or things 9-3-123 select a statement of comparison that can be inferred from a given paragraph 10-5-251 infer likeness between two unlike things 11-3-159 will compare story characters for likeness 12-1-15 contrast story elements 13-1-14 infer likeness and differences in story elements</p> | <p>Recognize relationships:</p> <p>size x 6-9-125 pre-instruction x 7-8-189 mastery 8-3-52 maintenance</p> <p>place x 8-15-166 pre-instruction 5-2-55 formal inst. 9-4-59 mastery 12-6-77 maintenance</p> <p>time 7-4-71 informal intro. 10-18-183 pre-instruction 11-2-48 formal inst. 13-4-65 mastery x</p> <p>opposite 1-50-167 informal intro. 4-4-214 pre-inst. 3-2-119 formal inst. 6-2-49 mastery 7-12-131 maintenance</p> <p>analogous 7-8-50 informal intro. 10-8-92 pre-inst. 11-12-142 formal inst. 13-1-38 mastery x</p> <p>part/whole x informal intro. 5-11-142 pre-inst. 3-10-180 formal inst. 6-3-59 mastery 7-8-87 maintenance</p> <p>classification 1-50-167 informal intro. 2-6-70 pre-inst. 5-1-36 formal inst. 7-4-61 mastery 8-8-16 maintenance</p> | <p>K-2-33-118 recog. likeness and differences 2-4-4-136 compare & contrast two selections 2-7-2-200 recog. part/whole relationships 2-7-1-198 use pic. cues to id. place relationships 3-4-2-126 recog. place relationships 3-9-2-126 recog. time relationships 4-1-1-24 use pic. to note passage of time 4-5-1-130 id. similarities and differences in two or more items 5-1-2-30 use time, place and cause/effect relationships to choose answers to questions 5-1-4-40 use time relationships to choose phrases that answer question WHEN 5-2-2-70 use time relationship to answer questions 5-4-1-104 compare and contrast story setting with similar settings 5-4-8-137 use place relationship to distinguish paragraphs that describe appropriate action 6-2-7-92 compare and contrast story information and informational article 6-3-4-119 compare and contrast essay and informational article 7-1-1-24 recog. part/whole and cause/effect relationships 7-3-2-93 use time relationships 7-3-5-103 recog. general/specific relationships 9-1-1-24 recog. place, cause/effect and analogous relationships 9-2-7-91 use time/place relationships 9-4-3-124 recog. cause/effect, analogous and sequence relationships 9-4-4-131 recog. analogous relationships 9-5-4-170 recog. cause/effect and general/specific relationships 11-1-5-54 recog. cause/effect and place relationships</p> | <p>Text did not contain any specific information that could have been separated and included in this section</p> | <p>A-56 id. points of passages of comparison/contrast A-8 relate story theme to a personal experience I-125 recog. ideas associated in a selection I-64 distinguish categories of people or things</p> |

continued next page

GENERAL CONCEPTS: INFERENCEAL COMPREHENSION

TOPIC: Inferring Comparison and Relationships (continued)

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|----------------|----------|-------|--|------|------|
| | | | <p>11-2-1-76 compare and contrast two places 11-2-5-106 compare and contrast three selections 11-3-5-152 draw conclusions and substantiate them 13-3-1-80 use opposites as content cues 13-3-9-104 id. time relationship 13-4-5-132 draw conclusion about population shift and food appropriate for a camping trip 13-4-7-138 id. general/specific relationships 13-4-8-141 analyze time/size relationships 14-1-4-33 recog. cause/effect and time relationships 14-1-4-33 evaluate changes in space adventure movie 14-1-8-48 use place, part/whole and analogous relationships 14-2-1-60 id. urban/place relationship 14-2-4-71 compare and contrast between towers 14-2-5-74 recog. part/whole relationship 14-2-8-82 recog. part/whole and sequence relationships in paper re-cycling process 15-1-1-26 compare and contrast between two cities 15-1-8-46 recog. general/specific relationships 15-2-3-58 recog. analogous relationships between two stories 15-2-2-50 compare and contrast between two main characters 15-4-7-121 recog. analogous relationship between folk tales 15-3-5-91 recog. time setting in relation to other situations 15-3-6-95 recog. time setting (period of history) 16-2-3-67 relate idea from a poem to a photograph 16-3-1-96 note relationship of setting to story plot 16-3-3-110 compare and contrast ideas in two selections 17-2-1-58 note details indicating time setting of a story</p> <p>continued next page</p> | | |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Inferring Comparison and Relationships (continued)

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|----------------|----------|-------|--|------|------|
| | | | <p>17-3-1-94 id. cues to a mystery story</p> <p>17-3-1-94 use cues in paragraph to decide what is happening</p> <p>17-3-7-122 recog. elements of plot structuring, including foreshadowing, conflict and suspense</p> <p>17-4-2-137 share previous knowledge to develop understanding of story setting and concepts</p> <p>17-4-2-139 consider meaning of friendship and apply generalization to specific incidents in the story</p> <p>18-1-8-57 evaluate information and ideas</p> <p>18-3-1-94 id. time cues to the time setting of the story</p> <p>18-3-3-102 recog. time, place and cause/effect relationships</p> <p>18-3-7-120 use information from one episode to make judgement about other situations</p> <p>18-4-1-132 answer questions that check comparison of main idea, details, character traits, setting, historical background and cause/effect relationship</p> <p>19-2-7-84 recog. setting and mood</p> <p>19-3-4-106 recog. place, sequence and cause/effect relationship the author has used to organize parts of an article</p> <p>20-1-8-58 synthesize from several sources ideas related to common topics</p> <p>20-1-8-58 recog. cause/effect and sequence relationships</p> <p>20-3-6-120 recog. sequence and time relationships</p> <p>20-4-5-150 make inference about place relationship from reading about a kidnapping</p> <p>21-1-2-26 recog. plot structure</p> <p>21-2-1-52 recog. time relationship of events and attitudes of the past and those of the present</p> <p>21-2-3-61 use and compare information from different almanacs</p> <p>21-2-3-61 apply general statements in proverbs to specific everyday situations by recog. general/specific relationships</p> | | |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Predicting Outcomes

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|--|--|--|---|--|--|
| <p>--Infer: outcomes details implied in story story theme content from title</p> <p>--Predict: outcome from pictures logical outcomes more than one outcome from a given situation plausible outcome given an implausible one person's actions attitude based on characters actions using life experiences</p> | <p>2-7-197 predict outcomes of a picture story 5-3-136 predict logical outcomes from a given story 5-3-143 predicting outcomes from given situations 7-1-48 inferring outcomes from given situations 8-2-72 predict more than one outcome from a given situation 9-1-12 predict more than one outcome given two situations 10-2-72 predict a plausible outcome given an implausible one 12-2-79 predict outcome based on knowledge of story characters 13-2-81 predict outcome that are influenced by character's behavior 13-4-219 infer story theme 14-2-97 use details to predict outcomes 15-1-42 make inference about events in a story from story details 15-2-98 predict a person's actions after reading details about the person in short passage 15-2-111 infer what certain books are about from their title 15-3-144 predict actions based on brief character sketch 15-4-198 infer outcomes--use life experiences and cues to predict</p> | <p>recog. story problems and solutions: 7-15-151 informal intro. 7-18-176 initial pre-inst. 8-13-148 formal inst. 9-2-44 mastery 10-4-60 maintenance</p> <p>draws conclusions: 5-2-47 informal intro. 8-17-183 initial pre-inst. 9-2-44 formal inst. 9-13-144 mastery 9-8-197 maintenance</p> <p>evaluate solution to story problems: 7-15-151 informal intro. 9-2-44 initial pre-inst. 10-4-60 formal inst. 10-9-100 mastery 10-11-131 maintenance</p> <p>consider appropriate: 9-5-71 informal intro. 12-33-318 initial pre-inst. 13-7-90 formal inst. x x</p> <p>consider accuracy 9-5-71 informal intro. 12-34-328 initial pre-inst. x x x</p> | <p>K-2-20-90 make generalizations K-2-27-104 predict outcomes K-2-27-104 make inferences 1-4-2-110 make judgement 2-2-3-79 recog. story problems and solutions 5-1-1-24 make judgement about story ending 5-5-4-158 make judgement based on textual information to recommend or select books for independent reading 5-5-5-161 make judgement based on personal reaction, interest and values 6-1-11-66 make judgement about why words make sense 9-2-4-84 make inferences based on text and pictures 9-2-6-89 evaluate information and make generalizations 13-1-8-47 make judgement and draw conclusions in response to questions 13-3-4-88 make inference from anti-pollution story 13-3-5-92 make judgement about personal feelings toward pollution 13-3-8-99 develop concepts and make judgement about the disappearance of the dinosaurs 13-3-11-110 infer illustrators purpose 14-1-1-22 make judgement and inferences from story 14-1-2-27 make inferences and judgements about madrowdam 14-1-7-40 use ideas gained from reading to make judgement 14-2-4-71 draw conclusion and substantiate them 14-2-7-79 make judgement about recycling process 14-3-7-112 make inference and draw conclusion from poems 14-4-3-125 preview selection to predict contents 15-1-5-35 make inference and judgement based on experiment 15-1-6-37 choose appropriate exaggeration to complete sentence 15-1-8-46 make judgement about application of bicycle safety rule</p> | <p>A-28a predict probable outcome to a situation presented through pictures A-68a predict probable endings to a story through pictures F-30c predict a probable ending to a story told through a pic. or a combination of pic./text H-49c predict a probable ending to a written selection</p> | <p>A-10 make inference and draw conclusion E-51 predict outcome on basic of content I-29 recog. meanings or relations that are implied but not directly stated</p> |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION
 TOPIC: Inferring Comparison and Relationships (continued)

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|----------------|----------|-------|--|------|------|
| | | | <p>17-3-1-94 id. cues to a mystery story</p> <p>17-3-1-94 use cues in paragraph to decide what is happening</p> <p>17-3-7-122 recog. elements of plot structuring, including foreshadowing, conflict and suspense</p> <p>17-4-2-137 share previous knowledge to develop understanding of story setting and concepts</p> <p>17-4-2-139 consider meaning of friendship and apply generalization to specific incidents in the story</p> <p>18-1-8-57 evaluate information and ideas</p> <p>18-3-1-94 id. time cues to the time setting of the story</p> <p>18-3-3-102 recog. time, place and cause/effect relationships</p> <p>18-3-7-120 use information from one episode to make judgement about other situations</p> <p>18-4-1-132 answer questions that check comparison of main idea, details, character traits, setting, historical background and cause/effect relationship</p> <p>19-2-7-84 recog. setting and mood</p> <p>19-3-4-106 recog. place, sequence and cause/effect relationship the author has used to organize parts of an article</p> <p>20-1-8-58 synthesize from several sources ideas related to common topics</p> <p>20-1-8-58 recog. cause/effect and sequence relationships</p> <p>20-3-6-120 recog. sequence and time relationships</p> <p>20-4-5-150 make inference about place relationship from reading about a kidnapping</p> <p>21-1-2-26 recog. plot structure</p> <p>21-2-1-52 recog. time relationship of events and attitudes of the past and those of the present</p> <p>21-2-3-61 use and compare information from different almanacs</p> <p>21-2-3-61 apply general statements in proverbs to specific everyday situations by recog. general/specific relationships</p> | | |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Predicting Outcomes (continued)

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|----------------|----------|-------|---|------|------|
| | | | <p>15-2-6-68 make judgement about the person who would be best source of information</p> <p>15-2-6-68 use context cues to choose comparative endings</p> <p>16-1-1-22 identify characters of old tales and modern version</p> <p>16-1-2-26 state an inference or judgement and cite supporting evidence</p> <p>16-1-7-45 make inference about story ending</p> <p>16-2-1-58 make judgement about realism of story, character reaction, proposed solution to the problem, and the illu- trators purpose</p> <p>16-2-1-58 identify story problem, explain solution proposed in the story and evaluate each solution suggested</p> <p>16-3-5-119 make inference about the significant of the cues in mystery story</p> <p>16-3-1-96 make judgement and inferences</p> <p>17-1-3-35 choose appropriate exaggeration to complete sentence</p> <p>17-4-3-145 solve problem by find- ing out who lives where, what order of height of three girls, and when reports were given four children</p> <p>18-1-1-22 make interpretation based upon facts in an article</p> <p>18-1-6-49 make inferences based on fact in the selection</p> <p>18-2-4-80 make inference from facts in an article</p> <p>18-2-5-86 draw conclusions from a factual article</p> <p>18-3-4-107 make judgement about things that might be found in Greenfield Village</p> <p>19-1-1-22 make inference about significance of the "coup stick" to the "2 Bull Family"</p> <p>19-1-4-36 draw conclusions by using scientific method</p> <p>20-1-6-48 make judgement and draw conclusions about an issue that has no clear-cut solution</p> <p>20-3-1-98 use details to make inference about a story</p> <p>continued next page</p> | | |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION
 TOPIC: Predicting Outcomes (continued)

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|----------------|----------|-------|--|------|------|
| | | | <p>20-3-3-109 draw conclusions as well as withholding judgement until more facts are known</p> <p>20-3-4-113 draw tentative, new conclusions, about computers based on an evaluation of new evidence</p> <p>20-3-4-113 read for the purpose of evaluating the importance of new ideas on presently held conclusions about computers</p> <p>20-3-5-118 use textual aids to predict what information is contained in portion of an article</p> <p>20-4-2-136 make inference about a family situation and withhold judgement</p> <p>21-1-3-32 make inference about cues</p> <p>21-2-5-73 draw conclusion and reevaluate on the basis of additional information</p> <p>21-2-8-84 draw conclusions from which a basic can be located in an article</p> <p>21-3-2-93 draw conclusions based on information headlines and advertisements</p> <p>21-3-9-123 evaluate selection in right of section life</p> <p>21-4-3-142 draw conclusions about the difference between news stories and editorial</p> | | |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Cause & Effect

| BASIC CONCEPTS | GINN 720 | SFBR5 | SFRU | ABRP | MLRP |
|--|--|--|---|--|---|
| <p>--Recognize cause/effect relationship and list cause/effect in sentences and sayings</p> <p>--Infer: causes (effects) of given effects (causes) causes/effects from sentences or statements multiple cause/effects using logic (if,then) chain effect [if,then], then</p> <p>--Match cause/effect sentences or statements</p> | <p>6-3-117 infer cause of given effect</p> <p>7-2-79 infer possible causes of given effects</p> <p>8-1-13 infer effects of given causes</p> <p>9-2-69 infer effects in cause/effect sentence</p> <p>10-4-180 infer c/e in c/e statement</p> <p>11-2-82 infer from story facts two causes of a given effect</p> <p>12-3-143 infer and write c/e</p> <p>13-1-26 infer multiple c/e</p> <p>14-3-128 label c/e and individual c/e relationships</p> <p>14-3-135 id c/e relationship in a story</p> <p>14-3-158 infer c/e relationship (logic)</p> <p>14-4-193 infer chains of c/e relationships (twice)</p> <p>15-3-127 recog. c/e relationship in a story and list them</p> <p>15-3-133 recog. c/e relationship in sent. & well know sayings</p> <p>15-3-156 infer c/e given indirectly</p> <p>15-3-156 match sent. expressing causes with sent. expressing effects--also write effects for given causes and write causes for given effects</p> <p>15-4-192 recog. chain of c/e relationship in a story</p> | <p>recognize cause/effect relationships</p> <p>2-3-49 informal intro.</p> <p>6-7-104 initial pre-inst.</p> <p>7-2-44 formal inst.</p> <p>9-3-52 mastery level</p> <p>10-5-72 maintenance</p> | <p>1-7-6-58 recog. c/e relationship</p> <p>5-1-4-40 use c/e relationship in a process</p> <p>8-3-4-87 recog. c/e relationship in two articles</p> <p>13-4-5-132 evaluate c/e relationship</p> <p>15-1-5-35 id. c/e relationship</p> <p>16-1-3-35 recog. c/e in factual article</p> <p>16-2-8-85 id. c/e relationship in a process</p> | <p>A-22a id. causes of situation or events portrayed in pic. (choice between action and reaction)</p> <p>C-17d id. c/e of a situation or event portrayed in pic(s). or combination pic/text</p> <p>H-24c id. c/e of a situation or event when c/e are directly stated in a given written selection</p> <p>K-22a id. causes when effects given</p> <p>K-22c id. effects when causes given</p> | <p>A-22 associate c/e</p> <p>I-94 id. the conclusion in a reasoning presentation</p> <p>K-40 id. the steps in a deductive or inductive argument</p> <p>I-31 recog. or differentiate concrete and abstract relations</p> |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Distinguishing Between Fact & Opinion

| BASIC CONCEPTS | GINN 720 | SFBR | SFRU | ABRP | MLRP |
|--|--|--|--|---|--|
| <p>--Identify --Distinguish facts & opinion statements</p> <p>--Recognize how opinion can be based on facts using: signal words statements</p> <p>--Recognize bias</p> <p>--Recognize propaganda</p> | <p>9-4-168 use signal words to distinguish between statements of an opinion and statements of fact</p> <p>10-3-120 distinguish between statement of fact and statement of opinion</p> <p>12-4-208 infer facts that support an opinion</p> <p>13-2-81 id. statements that support fact or opinion</p> <p>14-4-170 distinguish facts from opinion</p> <p>14-4-175 select the facts that support an opinion</p> <p>15-4-168 distinguish between facts and opinions</p> <p>15-4-173 recog. how opinion can be based on facts</p> | <p>distinguish between fact and opinion</p> <p>x informal intro.</p> <p>12-21-219 initial pre-inst.</p> <p>13-23-236 formal inst.</p> <p>x mastery level</p> <p>x maintenance level</p> <p>recognize bias</p> <p>10-4-60 informal intro.</p> <p>12-30-297 initial pre-inst.</p> <p>13-18-187 formal inst.</p> <p>13-36-339 mastery level</p> <p>x maintenance level</p> <p>recognize propaganda techniques</p> <p>13-18-187 informal intro.</p> <p>x initial pre-inst.</p> <p>x formal inst.</p> <p>x mastery level</p> <p>x maintenance level</p> | <p>6-4-11-184 distinguish between fiction and non-fiction</p> <p>18-3-1-94 distinguish factual events from details added by the author to add interest</p> <p>19-1-4-36 state ways to prove facts</p> <p>19-1-4-36 understand statement of fact</p> <p>20-3-3-109 distinguish fact and opinion and decide how the former could be proved</p> | <p>K-128c id. statements in a written selection as someone's opinion when cue word is given</p> <p>L-261a id. statements in a written selection when no cue word is given</p> | <p>F-20 distinguish fiction and non-fiction</p> <p>I-31 determine validity of a particular argument or point of view</p> <p>I-80 question an assertion based on total inclusion</p> <p>I-88 id. or distinguish between statement of fact, interpretation of fact, and opinion unsupported by fact</p> <p>J-97 understand that two sets of facts can be used to interpret a situation</p> |

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION
 TOPIC: Reality and Fantasy

| BASIC CONCEPTS | GINN 720 | SFBR | SFRU | ABRP | MLRP |
|---|---|---|---|--|--|
| --Distinguish between reality and fantasy | 5-3-108 distinguish between reality and fantasy | distinguish between reality and fantasy x informal intro. x initial pre-inst. 1-1--60 formal inst. 10-13-146 mastery x maintenance | 5-3-1-76 understand meaning of fictionalized biography and id. characteristics K-40-43 distinguish realistic and fanciful content 7-1-4-43 dist. between realistic and fanciful elements in a selection 18-2-2-67 id. realistic and fanciful elements of story | C-10d id. elements of realism and fantasy in plot/setting/character/action of a story told through pic. or comb. pic./text I-119c id. a written selection as one that could not happen when elements of plot/setting/characterization are fantastic | Text did not contain any specific information that could have been separated and included in this section. |

Appendix B

Interview Questionnaire

Survey of the Knowledge and Application of the Basic Reading Skills and Linguistics Applied in the Process of Selecting Remedial and Supplementary Instructional Reading Materials

The purpose of this questionnaire is to determine classroom teachers' knowledge and application of basic reading skills and the importance of the individual student's functional language level necessary to select remedial and supplementary reading instructional materials. This information will be used to identify the criteria necessary to design and develop an inservice training program for an effective reading program for mainstreaming hearing impaired students.

The summary of the results and this questionnaire are part of the project requirements for an Educational Doctoral Dissertation at the University of Maryland.

Description of the six Sections of the Interview Questionnaire

Section 1. Demographic Data. The data will be used to categorize the information obtained in the following sections. This section will provide some insight into the attitude of the teachers toward mainstreaming within a school.

Section 2. Formal and Informal Training to Teach Reading. The information in this section will define the scope of the formal and informal training to teach reading to regular and/or special education students, especially the hearing impaired, within a school district.

Section 3. Instructional Procedures Applied. The data will describe the current type of procedures applied in a school district. More

Appendix B.

importantly, the data obtained will provide the opportunity to look at the differences existing in how the staff interpret the school system's program and use of it.

Section 4. Procedures for Selecting Remedial and Supplementary Reading Materials. First of two key sections designed to explore individual and group techniques used to select remedial and supplementary reading materials. These questions should identify the need for a system wide policy for selecting instructional materials for any purpose.

Section 5. Linguistics: Formal and Informal Training and Application in Teaching Reading. Second of two key sections designed to identify the type and depth of the teacher's knowledge and use of linguistics in the selection of materials for teaching reading to hearing impaired and other students whose language development is below normal.

Section 6. Criterion-Reference Objectives. Determine teacher's knowledge and training to write and interpret performance objectives. Second, identify the application of this knowledge and skill in the identification and selection of instructional materials.

NOTE: Each section provides the opportunity for the interviewer and the teacher to explore each question to obtain personal interpretations.

Appendix B

Interview Questionnaire

Survey of the Knowledge and Application of the Basic
Reading Skills and Linguistics Applied in the
Process of Selecting Remedial and
Supplementary Instructional
Reading Materials

Section 1. Demographic Data.

Name or Id. _____ Date _____

School District _____ School _____

Age: __21-25__ __26-30__ __31-35__ __36-40__ __41-50__ __51-60__ __60+

Degree, date and Major

___B.S. ___yr. Major: _____

___M.A. ___yr. Major: _____

___Ed.S. ___yr. Major: _____

Certification

___Elem.

___KDG.

___Sp.Ed. (_____)

___Sp.Rdg. (_____)

Rank: I II III

Current Teaching Assignment: Grade _____ Spec. Area _____

___yrs. at ___level

___yrs. as Title I (Math, Reading)

___yrs. at ___level

___yrs. at ___level

___yrs. as Sp.Rdg. Teacher

Mainstreaming: Describe your feelings toward having special education students in your classroom. Discuss EMH, THM, LD, Hearing Impaired, etc.

- ___1. Do not want any at anytime.
- ___2. Will accept, but do not have any idea what to do.
- ___3. Accept without reservations with little or not formal or informal training.
- ___4. Accept and has training and experience with Spec.Educ. Students.

General Comments:

Appendix B.

Section 2. Formal and Informal Training to Teach Reading.

Formal: (Briefly describe each response).

☐ cr.hrs. in teaching elem. rdg. at B.S. level.
☐ cr.hrs. in teaching elem. rdg. at M.A. level.
☐ cr.hrs. in remedial rdg. (☐ B.S. ☐ M.A.)
☐ cr.hrs. in diagnostic rdg. (☐ B.S. ☐ M.A.)
☐ cr.hrs. in teaching reading to spec.students (☐ B.S. ☐ M.A.)

Informal: (Briefly describe each response).

☐ Inservice Training
☐ Workshops
☐ Independent Reading
☐ Other

General Comments:

Section 3. Instructional Procedures Applied.

Current Reading Series used in your school district.

How was this series selected?

☐ teacher committee
☐ adm. selection committee.
☐ sch/pub. selection committee.
☐ tea./adm. selection committee.
☐ other:

How are individual students assigned to their current reading level in your reading program?

☐ indiv. tea. assign.
☐ published guide from text series.
☐ sch. system developed criteria.
☐ pub. mng. system other than text materials.
☐ other

General Comments:

Appendix B.

Section 3 continued.

If you had your choice, what type of student programming would you use?

- ☐ indiv. tea. assign.
- ☐ pub. guide from text series.
- ☐ sch. system developed criteria.
- ☐ pub. mgm. system other than text materials.
- ☐ other

If you had your choice, which reading series would you select and why?

General Comments:

Section 4. Procedures for Selecting Remedial and Supplementary Reading Materials.

(yes, No) Does your district (or indiv. sch.) have stated guidelines and/or procedures that you must follow to select remedial or supplementary reading materials for individual students. Describe either answer.

What criteria do you use to select remedial materials?

- ☐ tea. decision
- ☐ check list
- ☐ textbook
- ☐ Ach. Test
- ☐ other

What criteria do you use to select supplementary materials?

- ☐ tea. decision
- ☐ check list
- ☐ textbook
- ☐ Ach. Test
- ☐ other

General Comments:

Appendix B

Section 4 continued.

Describe the procedures that you would prefer to use to select remedial and/or supplementary materials.

What type of instructional materials are you currently using for remedial/supplementary work?

- ☐ Hayes
- ☐ Supplementary Text Materials
- ☐ Inst. Kits (describe)
- ☐ tea. made materials
- ☐ other

General Comments:

Section 5. Linguistics: Formal and Informal Training and Application in Teaching Reading.

Describe your concept of Linguistics.

- ☐ no knowledge of term.
- ☐ knowledge of term, but can't apply
- ☐ knowledge & limited experience in applying
- ☐ excellent knowledge and consistent use. .

Describe your concept of the connection between linguistic and teaching reading on individual student basis.

- ☐ no connection.
- ☐ recog., but do not use.
- ☐ recog., limited use.
- ☐ imperative, constant application.

General Comments:

Appendix B

Section 5 continued.

Formal Training:

☐ cr.hrs. in linguistic studies.
☐ inservice training
☐ workshops
☐ other:

Informal Training:

☐ lectures
☐ reading
☐ research
☐ independent study

General Comments:

Section 6. Training and Application of Criterion-Reference Objectives.
(Describe each response).

☐ part of a course in college
☐ full course in college (☐ cr.hrs.)
☐ inservice training (☐ total hrs.)
☐ workshops
☐ other

Application:
(yes,no) Do you use criterion-reference stated objectives to identify
and select remedial and/or supplementary reading materials? (Describe
either answer).

General Comments:

BIBLIOGRAPHY

- Babbie, Earl R. Survey Research Methods. Belmont, CA: Wadsworth Publishing Company, 1977.
- Baird, Hugh, et.al.. A Behavioral Approach to Teaching. Dubuque, Iowa: William C. Brown Co., Publisher, 1972.
- Banghart, Frank W. Educational System Analysis. London: MacMillian Co., 1969.
- Barbe, Walter B. Educator's Guide to Personalized Reading Instruction. Englewood, NJ: Prentice-Hall, Inc., 1961
- Barrow, Mary Evelyn. "An Academically Structured Program in Reading and Language for Disadvantage Children." dissertation, St. Louis University, 1974, 74-24040.
- Beck, Isabel and Karen Block. An Analysis of Two Beginning Reading Programs: Some Facts and Some Opinions. Pittsburg: U. of Pa. Learning Press, 1976.
- Berdie, Douglas R. and John F. Anderson. Questionnaire: Design and Use. Metuchen, NJ: Scarecrow Press, Inc., 1974.
- Best, John W. Research in Education, 4th.ed. Englewood, NJ: Prentice-Hall, Inc., 1981.
- Birch, John W. Hearing Impaired Children in the Mainstream. Reston, VA: Council of Exceptional Children, 1975.
- Bloom, Benjamin S., et.al.. Taxonomy of Educational Objectives Handbook I: Cognitive Domain. New York, NY: David McKay Co., 1971.
- Chippendale, Ene-Kaja Harm. "Psycholinguistic Model of Reading Comprehension Based on Language Competence: Reading Proficiency and Discourse Analysis." dissertation, Columbia: U. of Missouri, 1979, 4008-4569A.
- Clark, Herbert H. and Eve V. Clark. Psychology and Language: An Introduction to Psycholinguistics. New York, NY: Harcourt Brace Jovanovich, Inc., 1977.
- Coley, Joan D. and Patricia Bockmiller. "Teaching Reading to the Deaf: An Examination of Teacher Preparedness and Practice." American Annals of Deaf, V. 125, N. 7, (October, 1980), 909-915.

- Connell, Philip J., Joseph E. Spradlin and Leija V. McReynolds. "Some Suggested Criteria for Evaluation of Language Programs." Journal of Speech and Hearing Disorders, V. 42, N. 4 (November, 1977), 563-567.
- Davis, Hallowell and S. Richard Silverman, ed.. Hearing and Deafness. New York, NY: Holt, Rinehart and Winston, 1970.
- Durkin, Doris. Teaching Them to Read, 3rd.ed. Boston, MA: Allyn and Bacon, Inc., 1978.
- Edwards, Allen L. Experimental Design in Psychological Research, 3rd.ed. New York, NY: Holt, Rinehart and Winston, Inc., 1968.
- Furth, Hans. Piaget for Teachers. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1970.
- Godfrey, Lorraine Lunt. "A Study of Second Grade Learning of Oral Concepts Expansions and Its Effects on the Learning of Reading Comprehension." dissertation, U. of San Francisco, 1978, 79-15115.
- Goodman, Yetta M. and Carolyn Burke. Reading Strategies: Focus on Comprehension. New York, NY: Holt, Rinehart and Winston, 1980.
- Hall, Elizabeth. "A Conversation with Jean Piaget and Barbel Inhelder." Psychology Today, (3 May, 1970), 25-32.
- Hamel, Clara, ed.. Guide to the Language Curriculum. Rhode Island School for the Deaf, Providence, RI:, 1971.
- Harris, Albert W. and Edward R. Sipay. How to Increase Reading Ability. New York, NY: Longman, 1980.
- Heilman, Arthur W. Phonics in Proper Perspectives. Columbus, O: Charles E. Merrill Co., 1968.
- Heilman, Arthur W. Principles and Practices of Teaching Reading. Columbus, O: Charles E. Merrill Co., 1972.
- Herzog, Virginia. Preschool Curriculum Guide. Dallas, TX: Callier Hearing and Speech Center, 1972.
- Hoffman Educational Systems, Inc. Hoffman's Systems Approach to Reading. Elmonte, CA: Hoffman Publishing Co., 1977.
- Humphrey, Jean Melroy. "Performance of Deaf Children on Test of Cognitive, Linguistic and Academic Achievement." dissertation, U. of Huston, 1976, 76-28898.
- Inhelder, Barbel and Jean Piaget. The Early Growth of Logic in the Child. New York, NY: Holt, Rinehart and Winston, Inc., 1967.

- Karchmer, Michael A. and Raymond J. Trybus. Who Are the Deaf Children in 'Mainstream' Programs? Washington, DC: Office of Demographic Studies, Gallaudet College, (October, 1977).
- Karthwohl, David, Benjamin S. Bloom and Bertram B. Masia. Taxonomy of Educational Objectives Handbook II: Affective Domain. New York, NY: David McKay Co., 1956, 186-193.
- Kendall Demonstration Elementary School for the Deaf. Curriculum Guide: Language Arts Skills. Washington, DC: Gallaudet College, 1972.
- Kendall Demonstration Elementary School for the Deaf. Language Curriculum Guide. Washington, DC: Gallaudet College, 1983.
- Kentucky Department of Education. 1979-85 Approved Reading Adoption List. Frankfort, KY: 1979.
- LaSasso, Carol. "National Survey of Materials and Procedures Used to Teach Reading to Hearing Impaired Children." American Annals of the Deaf. V. 123, N. 1 (Jan., 78), 22-30.
- LaSasso, Carol. "The Validity and Reliability of the Close Procedures as a Measure of Readability for Prelinguistic, Profoundly Deaf Students." American Annals of the Deaf, V. 124, N. 4 (August, 80), 559-563.
- Layton, Thomas L., Karla J. Schumucker and David W. Holmes. "Vocabulary and Syntactic Structures in Adapted 'Classics' Readers for Deaf Children." American Annals of the Deaf, V. 123, N. 4 (August, 79), 433-443.
- Mager, Robert. Preparing Instructional Objectives. Belmont, CA: Fearon Publishing, Inc., 1975.
- Mair, Henry W. The Cognitive Theory of Jean Piaget: Three Theories of Child Development. New York, NY: Harper and Row Pub., Co., 1965, 75-143.
- Marks, Carolyn Beth. "Reading Comprehension, Structural Organization and Generator." dissertation, U. of CA, 1974, 74-24599.
- Marshman, Kay Francis. "A Descriptive Study of Reading Instruction for the Deaf in Residential and Public Schools in the United States." dissertation, U. of Georgia, 1975, 75-02620.
- Miller, Maurice and James F. Naas. "Perspectives on Research: Sailing to Windward." (scheduled to be published by Contemporary Education in 1983).
- Mouly, George J. The Science of Educational Research. New York, NY: Grune and Stratton, 1964.

- Myklebust, Helmer R. The Psychology of Deafness. New York, NY: Grune and Stratton, 1964.
- Nass, James F. and James M. Coady. "Phonetics, Phonemics, Phonics: A Look at Similarities and Differences." Journal of the Michigan Speech and Hearing Association, V. 15, N. 1 (Fall, 79), 136-141.
- Nix, Gary W. ed.. Mainstreaming Education for Hearing Impaired Children and Youth. New York, NY: Grune and Stratton, 1976.
- Pavlik, Robert Andrew. "An Assessment of Undergraduate Preparation for Teaching Reading in the Elementary School." dissertation, U. of Northern Colorado, 1974, 74-24502.
- Piaget, Jean. The Language and Thought of the Child. London: Routledge and Kegan Paul, Ltd., 1959.
- Quigley, Stephen P. and Robert E. Kretschmer. The Education of Deaf Children: Issues, Theory and Practice. Baltimore, MD: University Park Press, 1982.
- Ribovich, Jerilyn. "Cognitive Development: An Area Worth Studying for Teachers of Beginning Reading." Paper: International Reading Convention, International Reading Association, (May, 1980)
- Ruddell, Robert B. Reading-Language Instruction: Innovation Practices. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1974.
- Russell, W. Keith and Stephen P. Quigley. Linguistic and Deaf Children: Transformation Syntax and its Application. Washington, DC: A. G. Bell, 1976.
- Schiamberg, Lawrence B. "Piaget's Theories and Early Childhood Education." Children, (March, June, 1970), 114-116.
- Smith, Frank. Understanding Reading: A Psycholinguistic Analysis of Reading and Language to Read, 2nd.ed.. New York, NY: Holt, Rinehart and Winston, 1978.
- Smith, Richard J. and Thomas C. Barrett. Teaching Reading in the Middle Grades. Reading, MA: Addison-Wesley Pub., Co., 1976.
- Short, Edmund C. and George D. Marconnit. Contemporary Thought on Public School Curriculum. Dubuque, Iowa: William C. Brown, Co., 1968.
- Staffer, Marian. "Comparative Effects of a Language Arts Approach and Basal Reading Approach to First Grade Reading Achievement." dissertation, U. of Delaware, 1974, 74-08748.
- Taba, Hilda, Curriculum Development: Theory and Practice. New York, NY: Harcourt, Brace and World, 1972.

- Tomlinson-Keasey, C. and Ronald R. Kelly. "Development of Thought Processes in Deaf Children." American Annals of the Deaf, V. 119, N. 6 (December, 1974), 693-700.
- Woods, Morris Wistar. "Teaching Reading to Deaf Children." dissertation, U. of Pittsburgh, 1973, 74-01366.
- Wilson, Robert M. and Maryanne Hall. Reading and the Elementary School Child: Theory and Practice for Teachers. New York, NY: D. Vonn-Neumann Co., 1972.
- Worthy, Dianne Hudson. "A Comparative Content Analysis of Three Basal Reading Series (3rd grade only) and Two Standard Achievement Test." dissertation, U. of South Carolina, 1979, 79-20070.
- Zilles, Bette B. "An Investigation of the Relationship Between Language Performance and Different Reading Strategies Used on Poor Readers." dissertation, Athens, Ohio: Ohio University, 1978.
- Zintz, Miles V. The Reading Process: The Teacher and the Learner. Dubuque, Iowa: William C. Brown, Co., 1970.