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

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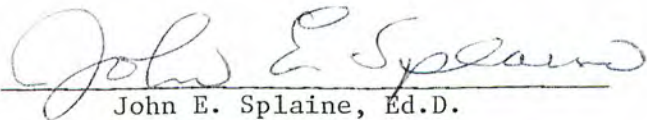degree of Educational Doctoral
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ABSTRACT

A COMPARISON OF READING COMPREHENSION SKILLS TAUGHT IN FIVE ELEMENTARY

SCHOOL READING SERIES AND TEACHER PREPARATION TO TEACH READING:

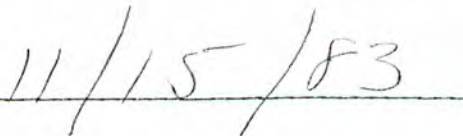IMPLICATIONS FOR PROGRAM PLANNERS FOR THE HEARING IMPAIRED

James Leland Clack, Doctor of Education, 1983

Dissertation Directed by: John E. Splaine, Ed.D.
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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 instruc-
tional 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 ex-
tremely 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:

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[1]Francis 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.

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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

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

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

[3]Ibid., 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

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[1]Carol 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.

[2]Patricia 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.

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

[2] Carol 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.

[3] Philip 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.

[4] Maurice 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]

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

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

[3]W. 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.

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

[1]Thomas 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 inter-viewed. 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 Zintz[1] 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 sterotype 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

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[1]Miles 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

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[1]Robert 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:

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

[2]Quigley and Kretschmer, Education of Deaf, 84.

[3]Robert 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.

[4]David 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 Skills[1] 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

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[1]Bloom, Taxonomy of Cognitive Skills.

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

selecting and planning instructional materials, their attitude toward teaching hearing impaired students, and the general concept of main-streaming. 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.

Congential 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 List[1] to represent the types of textbooks currently used in public education, and LaSasso's[2] 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

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

[2]Carol 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 Hall[1] 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.

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[1]Wilson 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 Hall[3] and Harris and Sipay[4] 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 Stauffer[7] point out the strong relationship between teaching the hearing impaired to read and developing their language skills. Clark and Clark[8] point out in their studies that linguistics is a communication tool that can be used to study how acquired language can

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

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

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

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

[5]LaSasso, "Validity and Reliability."

[6]Quigley and Kretschmer, Education of Deaf.

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

[8]Herbert 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

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[1]Quigley and Kretschmer, Education of the Deaf.

[2]James F. Naas and James M. Coady, "Phonetics, Phonomics, 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 relation-
ship between language development, reading skills, and a systematic
approach to selecting instructional reading materials.

Coley and Bockmiller[1] 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 re-
garding 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

[1]Joan 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.

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

[3]LaSasso, "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
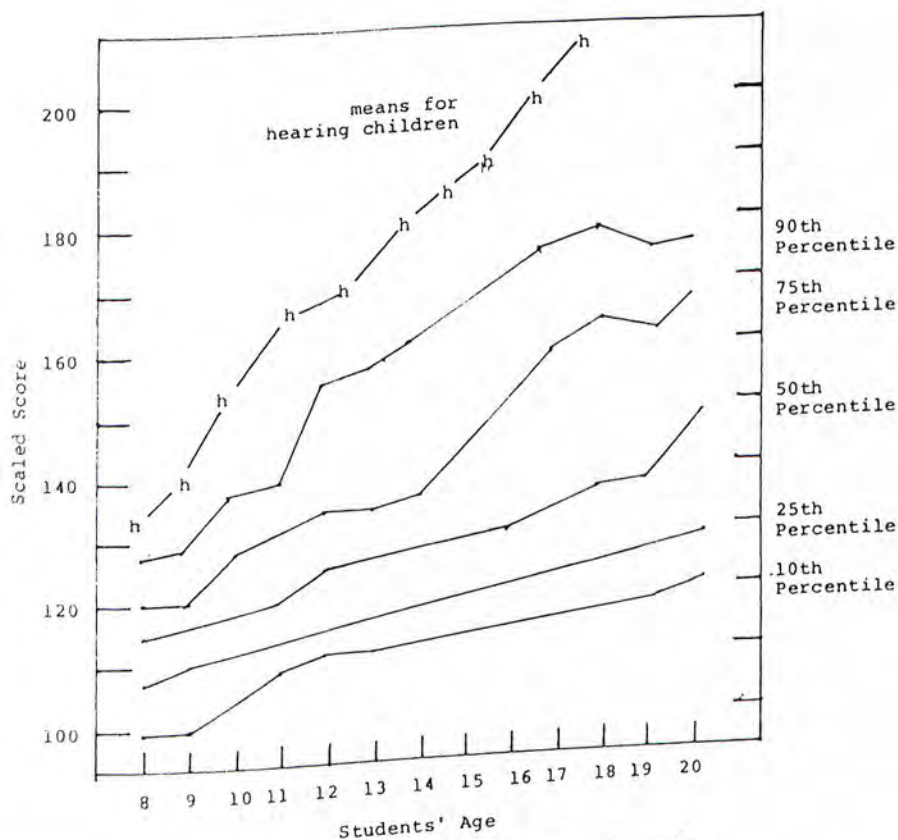
Figure 1. Reading Comprehension Scores National Distribution for Hearing Impaired Students

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

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[1]Michael 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 Kretschmer[4] 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

[1]Quigley and Kretschmer, Education of Deaf, 1

[2]LaSasso, "Validity and Reliability."

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

[4]Quigley 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 main-streamed 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 communi-cate 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 class-room, but among the severe and profound, there are few in this category.

Types of Hearing Loss

Myklebust[1] describes four basic types of hearing loss, namely: con-ductive, 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

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[1]Helmer 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

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[1]Ibid, 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, enclogenous and exogenous, are assigned to hearing impairment. Enclogenous 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 corected; 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

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

in educable mentally handicapped classes without the assistance of any-
one 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 Kretschmer[1] summarized a factor analysis project per-
formed 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 paraphasing, using idiomatic
expressions, and the use of varying sentence structures, 4) artistic
and synthetic abilities, and 5) involvement with realistic family mem-
bers and wide array of professional support including trained teachers,
psychologist, and others.

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

Karchmer and Trybus[1] 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 Barrett[2] 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

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

[2]Smith and Barrett, Teaching Reading.
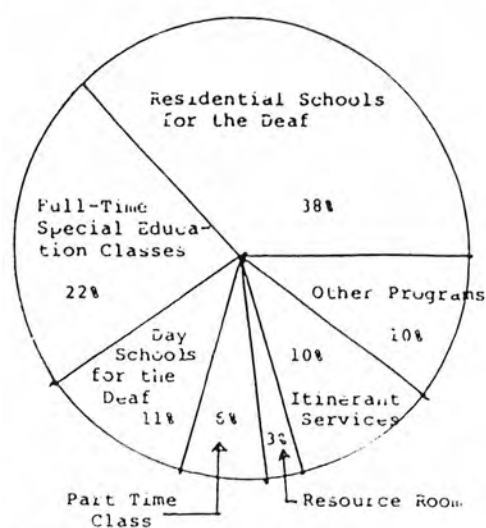
Figure 2. Where Do Hearing Impaired
Children Go To School?
1976, N= 49,427

Residential School
N = 17,795

Day School
N= 5,150

Full-Time Classes in
Local Public Schools
N= 10,314

Integrated Programs
N= 8,794
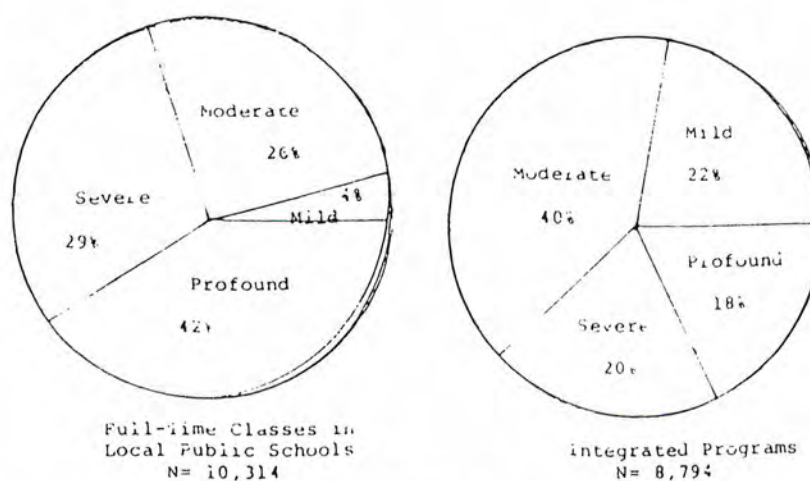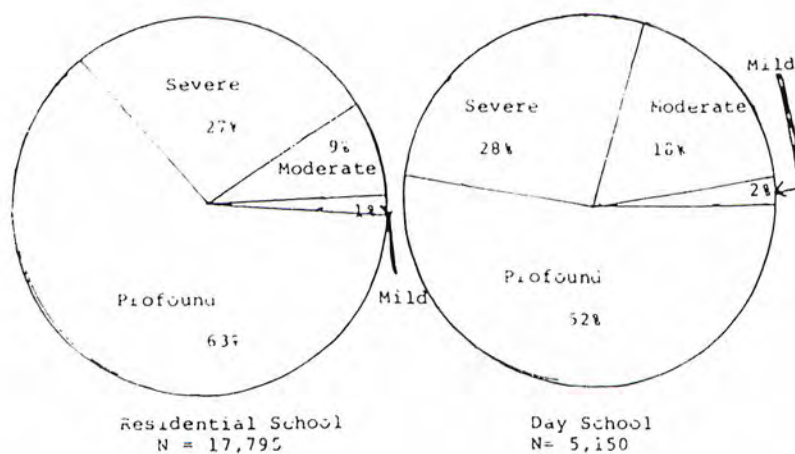
Figure 3.   Distribution of Hearing Loss by
Type of Program

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 prob-
lem 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 appreci-
ation so that the individual knows what is being communicated and can
make use of the materials of ideas being communicated without neces-
sarily relating it to other materials or seeing their fullest implica-
tions.

Application. This level of knowledge relates to the use of
abstractions in particular, as well as concrete situations. The abstrac-
tions may be in the form of general ideas, rules of procedure, or
generalized methods. The abstractions may also be techniques, princi-
ples, 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 ele-
ments 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 continum.

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[1]Virginia 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 List[1] and LaSasso[2] 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

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

[2]LaSasso, "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 kindergarter 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 Skills[1] 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:

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[1]David 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.

[2]Barbel Inheler 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 Babbie[1] and Berdie and Anderson[2] 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.

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

[2]Douglas 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

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 elemen-
tary 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 defini-
tion 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 consid-
ered 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 con-
tains 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 objec-
tive statements used to define the comprehension skills to be developed
in each series vary widely. As illustrated in Table Three, some cate-
gories 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 im-
plies more emphasis for that category. Generally, this could be true,

but one must analyze the differences not only quantitatively, but quali-
tatively, 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 con-
cept 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	Ginn 720 Reading Program	Scott-Foresman Basic Rdg. Series	Scott-Foresman Reading Unlimited	American Book Reading Program	Merrill 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 delinates 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	SFBRS	SFRU	ABRP	MLRP
--Identify: picture/text relationships paragraphs containing main idea of story parts --Distinguish: main idea from pictures between main idea and supporting details --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	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	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)	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	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	A-6 id. main idea of selection

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 lin-
guistic 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 pre-
sented in Appendix A. The differences discussed in the previous state-
ments 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		3
Elementary Education	5	1
Secondary Education	0	1
Deaf Education	0	
Graduate Degrees		1
Elementary Education	3	0
Library Science	1	0
Guidance	1	1
English	0	1
Learning Disabilities	0	2
Deaf Education	0	

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 deal-
ing 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 train-

ing 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 read-

ing, 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 the 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 Ruddell[1] 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.
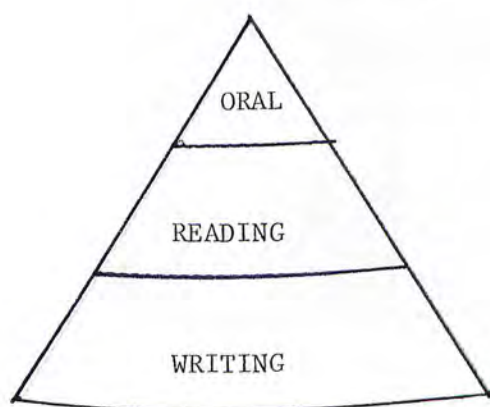
ORAL

Oral or T/A (through-the-air
using voice, signs, and/or
gestures) communications.

READING

Reading--reading comprehension
printed materials at appro-
priate levels.

WRITING

Writing--ability to express
one's ideas in a written
message.

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

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[1]Ruddell, _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 & comprend 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 con-
trolled 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-berbal 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,   Indicates a defined developmental levels of grammar skills
etc.   (linguistic).

A,B,C,... Indicate linguistic developmental stages, i.e., A = preschool;
B = 1st.-6th grades; C = 5th. plus (note overlaping 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 Deaf[2] 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 Development[3] or Piaget's Theory of Child Development[4] 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.

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[1]Hamel, Guide to the Language Curriculum.

[2]Kendall School, Curriculum Guide.

[3]Bloom, Taxonomy of Educational Objectives.

[4]Inheler, Early Growth and Logic.

Criterion Objectives.

Staff members need to have the ability to write and employ crite-
rion or performance objectives to develop and implement instructional
programs for individuals or groups of learners. Most teachers, supervi-
sors, 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 Objectives[1] 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-

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[1]Robert 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 Teaching[1] provides, then working through a book like Mager's[2] could possibly be used to establish a minimum base.

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

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

[2]Mager, 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.

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[1]Bloom, Taxonomy of Cognitive Skills.

[2]Inheler, Early Growth and Logic.

[3]Kendall 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

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[1]Quigley, 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, lingusitics 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

BASIC TEXT INFORMATION:

CATEGORIES	GINN 720	SFBRS	SFRU	ABRP	MLRP
Reference Information	Pub. Ginn and Company Text: GINN 720 RAINBOW READING SERIES, 1976 ed. Levels: K-6 Authors: Theodore Clymer, Ned B. Daniels, Helen Wardeberg Structure: Defined instructional levels Supplementary Materials: Basic word vocabulary card set, picture maps, skill paks, reteaching materials Evaluation: Placement test, pretest [lv. 2-13], Evaluation Criterion Exercises [lv. 2-13], and Level Mastery Test [lv. 1-13] Management aids. Population: all inclusive	Pub. Scotts, Foresman and Company Text: BASICS IN READING SERIES, 78 ed. Levels: 1-8 Authors: Ira E. Aaron, Dauris Jackson, Carole Riggs, Richard G. Smith, Robert Tierney Structure: Basal Reader Supplementary Materials: workbooks, duplicating masters Evaluation: Skill test (all books above readiness), End-of-Book Test, placement test Population: Average-- "designed for pupils who are considered by most standards average in their rates of learning and in their reading achievement." TE	Pub. Scotts, Foresman and Company Text: READING UNLIMITED SERIES, '76 ed. Levels: K-6 Authors: Katherine B. Wingert, Barbara A. Pearson Structure: Defined instructional levels--skill devel. Supplementary Materials: Independent Practice Books, ditto masters Evaluation: 4 Tests-- Initial placement [gr. 1-4] Pre-Test [gr. 1], Skill Assessements tests, and End-of-Level. Management Aids: Population: Not defined	Pub. American Book Company Text: AMERICAN BOOK READING PROGRAM, '77 ed. Levels: K-6 Authors: Majorie S. Johnson, Roy Kress, John D. McNeil Structure: Language experience approach to teaching reading combined with the structure of a Basal Reading Program Supplementary Materials: Skill Books, duplicating masters, picture cards, word cards Reteaching Materials: Sound and Structure for word-recognition, and message and meaning for comprehension skills Evaluation: Placement Test and Check-up Tests each level Population: Average with a broad concept of all students.	Pub. Charles E. Merrill Publishing Company Text: MERRILL LINGUISTIC READING PROGRAM, '75 ed. Levels: 1-6 Authors: Wayne Otto, Richard Smith, etc. Structure: Series of Text Supplementary Materials: reinforcement materials, linguistic word pattern program, and word practice kits. Evaluation: Placement (1-2) and Summary of Skills 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.
Authors' Definitions of Comprehension	"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:33	No clear statement was provided in the teacher guides that defined their philosophy or objectives for comprehension.	"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	"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.	"Program is based on the principles of structural linguistic set forth by... Dr. Fries." p. 5 "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

BASIC TEXT INFORMATION					
			SFRU	ABRP	MLRP
CATEGORIES	GINN 720	SFBRS			
Reference codes used to identify information obtained from the texts. Note: all references are to teacher's edition.	1-2-3 └ page number └ lesson number └ Book or Level Number	1-2-3 └ page number └ lesson number └ Book or Level Number	1-2-3-4 └ page number └ lesson number └ section of level └ level	A-1 └ page number └ Book Identification	A-1 └ page number └ Book Identification

CATEGORIES	GINN 720	SFBRS	SFRU	ABRP	MLRP
TEXT MAJOR ORGANIZATIONS	Three Core Areas: --Vocabulary --Comprehension (Literal & Inferential) --Decoding	Four Major Areas: --Word Identification --Comprehension (Literal/ Implied/Evaluative) --Study & Research --Literary Understanding & Appreciation	Four Major Areas: --Word Identification --Comprehension (Literal/ Implied/Evaluative) --Study & Research --Literary Understanding & Appreciation	Two Major Categories: --Word Recognition Phonic & Structural Skills --Comprehension Comprehension, Literary, Vocabulary, Study Skills, & Language/Mechanics	Eight Categories: --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
TEXT GRADE LEVEL EQUIVALENTS (Preschool-K) 1 2 3 4 5	K 1. Ready for Rainbows 2. A Pocket Full of Sunshine 3. A Duck is a Duck 4. Helicopters & Ginger-bread 5. May I Come In? 6. One to Grow On 7. The Dog Next Door & Other Stories 8. How It Is Nowadays 9. Inside Out 10. A Lizard to Start With 11. Tell Me How The Sun Rose 12. Measure Me, Sky 13. Mountains Are For Climbing 14. To Make A Difference	K. Hello, Sunshine 1. First Feathers 2. Puppy Paws 3. Jumping Jamboree 4. No Cages, please 5. Dragon Wings 6. Calico Caper 7. Daisy Days 8. Hootenanny 9. Ride a Rainbow 10. Step Right Up! 11. Flying Hoofs 12. Fins & Tales	1. Higgledy Peggledy 2. All in Row, etc. 3. Rub-A-Dub-Dub 4. To Market, To Market 5. On Your Mark 6. Take a Giant Step 7. You're It 8. All In Fun 9. A Hundred Eyes 10. Taller Than Trees 11. Golden Treasures 12. Catch A Spoonful 13. Window 14. Doorways 15. Bridges 16. Passport 17. Excursions 18. Discoveries	Away Begin Care Dream Enjoy Find Grow Hopes Images Jewels Keystones Lanterns Moments Networks	A. I Can B. Dig In C. Catch On D. Get Set E. Step Up F. Lift Off G. Take Flight H. Break Through I. Making Choices J. Looking Around

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

GENERAL CONCEPTS: LITERAL COMPREHENSION					
TOPIC: Recognizing the Main Idea			SFRU	ABRP	MLRP
BASIC CONCEPTS	GINN 720	SFBRS		A-2a id. main idea on book cover	A-6 id. main idea of selection

BASIC CONCEPTS	GINN 720	SFBRS	SFRU	ABRP	MLRP

--Identify:
  picture/text relation-
  ships
  paragraphs containing
  main idea of story
  parts
 	
--Distinguish:
  main idea from pictures
  between main idea and
  supporting details
 	
--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
	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
		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)
			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
				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
					A-6 id. main idea of selection

GENERAL CONCEPTS: LITERAL COMPREHENSION

TOPIC: Recognizing and Recalling Details

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

GENERAL CONCEPT: LITERAL COMPREHENSION

TOPIC: Sequence

BASIC CONCEPTS	GINN 720	SFBRS	SFRU	ABRP	MLRP

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

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Supporting Details

BASIC CONCEPTS	GINN 720	SFBR S	SFRU	ABRP	MLRP

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

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION TOPIC: Inferring Main Idea and Details			SFRU	ABRP	MLRP
BASIC CONCEPTS	GINN 720	SFBRS			

--Infer details:
  from pictures
  implies
 	
--Infer main idea;
  expressed in Title of a story
    or story part
  from story details
  from paragraph, story
 	
--Infer both main idea and
  supporting details in a
  passage given limited infor-
  mation
	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
		Text did not contain any
		specific information that
		could have been separated
		and included in this section.
			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
				J-121d id. main idea of a written
				  selection when the main idea is
				  not directly stated in the
				  selection
					A-22 predict subject matter from
					  title, 1st. paragraph, or
					  or stanza and/or typographic
					  cues

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Inferring Character

BASIC CONCEPTS	GINN 720	SFBRS	SFRU	ABRP	MLRP
--Infer and predict character: traits, feelings, and qualities from paragraphs, stories and sentences	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	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 story elements character 8-6-84 informal intro. 11-35-341 initial pre-inst. x formal inst. x mastery x maintenance	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 continued next page	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 L-90c compare and contrast the attitudes, emotion or traits of characters whose actions are described in a written selection	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

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION TOPIC: Inferring Character continued			SFRU	ABRP	MLRP
BASIC CONCEPTS	GINN 720	SFBRS			
			13-3-9-104 recog. authors delineation of character 15-1-2-26 infer feelings of character 15-1-7-40 draw conclusion and make judgement about the characters in the story 15-3-6-95 id. traits of character (JFK) 15-5-1-128 note character delination (hero vs villian) 15-5-1-128 id. conflict between characters 1-5-4-146 id. climax of conflict between characters 16-1-2-26 id. traits and justify choice 16-1-7-45 note change in characters traits and motives 16-1-7-45 id. emotional reaction of character 16-1-7-45 id. types of conflict in story 16-1-9-53 find examples of methods of character delination in stories read earlier 16-4-2-135 recog. conflict 17-4-1-134 answer questions about characterization by finding appropriate examples in the story 17-4-2-137 contrast characters and id. them as individual rather than sterotypes 18-1-2-27 id. traits of characters 18-2-2-67 recog. traits of characters 18-3-1-94 infer traits and motives of main character 18-4-5-171 recog. types of conflicts in story 19-2-4-66 compare two characters presented in two bibographic sketches 20-1-2-26 recog. 1st. person narrative point of view as a means of delinating character 20-2-1-64 recog. both personalized and sterotyped traits in characters 20-4-3-141 use postscript to increase knowledge of a character 20-4-6-153 make inferences about characters 20-4-8-161 draw conclusions about persons and situations 21-4-4-144 id. changes in traits, motives and actions of characters		

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Inferring Comparison and Relationships

BASIC CONCEPTS	GINN 720	SFBRS	SFRU	ABRP	MLRP

--Identify and compare the relationships of: time place size opposite part/whole analogous classifications
 	
--Infer likeness between: two people two things
 	
--Compare & contrast character, story elements
	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
		Recognize relationships:
		
		size
		  x
		6-9-125 pre-instruction
		  x
		7-8-189 mastery
		8-3-52 maintenance
		
		place
		  x
		8-15-166 pre-instruction
		5-2-55 formal inst.
		9-4-59 mastery
		12-6-77 maintenance
		
		time
		7-4-71 informal intro.
		10-18-183 pre-instruction
		11-2-48 formal inst.
		13-4-65 mastery
		  x
		
		opposite
		1-50-167 informal intro.
		4-4-214 pre-inst.
		3-2-119 formal inst.
		6-2-49 mastery
		7-12-131 maintenance
		
		analogous
		7-B-50 informal intro.
		10-8-92 pre-inst.
		11-12-142 formal inst.
		13-1-38 mastery
		  x
		
		part/whole
		  x informal intro.
		5-11-142 pre-inst.
		3-10-180 formal inst.
		6-3-59 mastery
		7-8-87 maintenance
		
		classification
		1-50-167 informal intro.
		2-6-70 pre-inst.
		5-1-36 formal inst.
		7-4-61 mastery
		8-B-16 maintenance
			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
				Text did not contain any specific information that could have been separated and included in this section	A-56 id. points of passages of comparison/contrast
					A-8 relate story theme to a personal experience
					1-125 recog. ideas associated in a selection
					1-64 distinguish categories of people or things

continued next page

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION (continued) TOPIC: Inferring Comparison and Relationships			SFRU	ABRP	MLRP
BASIC CONCEPTS	GINN 720	SFBRS			
			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		

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

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Predicting Outcomes

BASIC CONCEPTS	GINN 720	SFBRS	SFRU	ABRP	MLRP
--Infer: outcomes details implied in story story theme content from title --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	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	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 draws conclusions: 5-2-47 informal intro. 8-17-183 initial pre-inst. 9-2-44 formal inst. 9-13-144 mastery 9-B-197 maintenance 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 consider appropriate: 9-5-71 informal intro. 12-33-318 initial pre-inst. 13-7-90 formal inst. x x consider accuracy 9-5-71 informal intro. 12-34-328 initial pre-inst. x x x	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 dinosours 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	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 story told through a pic. or a combination of pic./text H-49c predict a probable ending to a written selection	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

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

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

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

BASIC CONCEPTS	GINN 720	SFBRS	SFRU	ABRP	MLRP

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

GENERAL CONCEPTS: INFERENTIAL COMPREHENSION

TOPIC: Reality and Fantasy

BASIC CONCEPTS	GINN 720	SFBRS	SFRU	ABRP	MLRP

--Distinguish between reality and fantasy	5-3-108 distinguish between reality and fantasy	distinguish beteen 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

<u>Interview Questionnaire</u>

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

<u>Section 1. Demographic Data.</u>

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   Certification
__B.S. __yr. Major:_____   __Elem.
__M.A. __yr. Major:_____   __KDG.
__Ed.S. __yr. Major:_____   __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:

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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. mgm. 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 supplemen-
tary 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).

Genearl Comments:

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