

READING AND THE VERY YOUNG DEAF CHILD

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READING AND THE VERY YOUNG DEAF CHILD

In recent years, educators have placed more and more emphasis on the importance of reading. Newton says, "education is built upon words and combinations of words."¹ Naiman states that, for the deaf, "reading is a pathway to an understanding of life."² If reading is this important, especially for the deaf child, why should it be postponed until he begins his formal education? The purpose of this paper is to investigate early reading and its advantages for the young deaf child.

In this paper the writer will discuss the following questions: What is reading? What are the pre-requisites for reading? At what age are children ready to read? What advantages does early reading offer the deaf child? How can reading be taught to the very young deaf child?

What is Reading?

Before reading can be related to the young deaf child, a definition of reading is needed. Though various definitions are available, Chansky states that the definition used depends upon the level of reading development that is being considered.³ When viewed in this light, any of the following definitions can apply.

Smith and Dechant define reading as "the bringing of meaning to rather than gaining meaning from the printed page. . . . We read in order to gain experience, and yet we get more out reading if we have more experience."⁴

In The Teaching of Reading by DeBoer and Dallmann reading is defined as the "comprehension and interpretation of ideas symbolized by written or printed language."⁵ Another author considers reading to be "the identification and recognition of words."⁶

Both hearing and deaf children have experiences from birth and soon after develop ideas and learn to identify.⁷ So far, it would seem that reading (as defined here) should be possible at an early age. However, other factors are involved.

Requisites For Reading

"Reading ability does not suddenly appear; it is based on a number of factors associated with readiness."⁸ Meyer divides these readiness determiners into two categories:

The first category can be labeled "perceptual-motor"; it includes behaviors which are probably related to the mechanics of the reading process. The second category can be labeled "cognitive"; it includes not only conceptual behavior but also the child's mode of approaching intellectual behaviors.⁹

Many authors have listed the requirements to be met before the initiation of learning. Natchez states hers briefly as "sufficient intelligence, physical health, maturation, experience, emotional stability, and care and communication between the child and those who raise him."¹⁰

The following factors are listed by Lassman:

. . . mental alertness, good health, social adjustment and emotional stability, ability to "perceive sequence" and to reorganize ideas, good work habits, ability to concentrate, sensory ability, adequate motor control, and a keen interest in learning.¹¹

Some of the foregoing requisites should not be affected by deafness or age. Those which may be affected--perception of differentiations and sequences, ability to attend, experience background and interest in learning to read--are commented on below:

Perception

Pufall and Furth investigated sequence perception in young children. During their experiments they found that "four-year-old children could match sequences and that for all ages performance improved when sequences were perceptually present."¹²

Similar results were noted by Gibson in a study of "the development of letter differentiation as it is related to those features of letters which are critical for the task" of reading.¹³

The discrimination task required the subject to match a standard figure against all of its transformations and some copies of it and to select only identical copies. An error score (the number of times an item that was not an identical copy was selected) was obtained for each child, and the errors were classified according to the type of transformation. The subjects were children aged 4 through 8 years. As would be expected, the visual discrimination of these letter-like forms improved from age 4 to 8, but the slopes of the error curves were different, depending on the transformation to be discriminated. In other words, some transformations are harder to discriminate than others, and improvement occurs at different rates for different transformations. Even the youngest subjects made relatively few errors involving changes of break or close, and among the 8-year-olds these errors dropped to zero. Errors for perspective transformations were very numerous among 4-year-olds and still numerous among 8-year-olds.¹⁴

Ability

With respect to the young child's ability to attend to reading instruction, a study by Davis proves most interesting:

. . . Subjects in this study were thirteen children, each with the mental age of four years. Chronologically, the children were divided into three-, four-, and five-year-old groups.

For the experiment each subject received ten minutes of instruction every day. At the end of four months, reading tests were administered. The results showed that all the children had learned to read some words; the most successful child identified 269 words, while the least successful read 20 words. Test results also showed that the bright three-year-olds were superior in achievement to the older children.¹⁵

Another principle which must be considered in the intellectual ability of the child is that of challenging him up to the level of his capabilities. This is not to be confused with pressuring him. He must be challenged in hopes of motivating him to act, not pressured into doing what he perhaps does not wish to do.

A child who is not challenged up to his level of readiness tends to lose interest in purposeful endeavor and to develop habits of loafing. What is worse, he is likely to become bored and disgusted, obstreperous, and incorrigible. Many learning situations, then, need to be raised to the child's level of readiness.¹⁶

A four year study conducted by McGee and McClintic comes to this same conclusion. In the study, kindergarten children were selected for the experimental group by their teachers on the basis of maturity and behavior and their interest in working with materials. This group was given experience with the materials--auditory and written--for approximately ten minutes a day. During small-group instruction activities (approximately fifteen minutes daily), time was given to skill instruction and creative experiences. The program was completed by most of the children in eight to ten weeks. As a result of this early challenge, "all have continued to be good readers and this suggests none became 'burned out' or over-stimulated."¹⁷

From this, McGee and McClintic conclude that:

Our knowledge of underachievement suggests that early challenge and success could, especially in light of the relatively small investment of time and materials, set the stage for a continued seeking of intellectual satisfaction.¹⁸

Experience

The experience factor is emphasized by DeBoer and Dallmann.

However limited the child's experience may be, the printed matter he is exposed to must always be within his experiential background.¹⁹

Experiential background as it relates to first-hand acquaintances and concept formation also has a substantial influence on reading readiness and progress in reading skill. Waters has shown that children who receive appropriate preliminary experiences and training make much more rapid progress in reading skill than comparable groups of children without preliminary training.²⁰

Another study, reported by M.C. Almy concluded that the best readers in the group of 106 subjects in the first grade reading class were "children whose experiences in kindergarten, in play, and with adults had in them some elements of reading."²¹

Some of these "elements of reading" are listed by Durkin as "street signs, T.V. commercials, labels on packages and boxes, grocery lists,"²² and are considered "of equal or even greater significance in advancing a skill like reading, probably because the words they displayed were so closely related to the children's everyday experiences and interests."²³

"Numerous studies have demonstrated that our past experiences form a basis for our new experiences."²⁴ The importance of the child's environment and the related experiences cannot be over stressed. Monroe points out:

Pictures as well as printed words derive their meanings from the child's ability to bring to mind relevant associations. At the pre-reading level, as at every succeeding level of reading, a child can interpret content only by relating that content to previous experiences and understanding that he remembers. The new content can then be integrated with post-relevant associations and is held in memory for use in future interpretations.

Interest

Several writers have discussed the young child's interest in reading. Many conclude that the child's genuine interest in the reading task is highly correlated with the success he will achieve. In an experimental study by Argy the Montessori method and the orthodox educational approaches to reading were compared. The experimental classroom (Montessori) contained a vocabulary including such objects as pots and pans, a button frame, a lacing shoe, colored tablets, sound boxes, bells, a touch board, language cards, metal insert rods, bead units, and jigsaw maps. The control classrooms did not include these interesting, but so-called "non-academic" materials. The Montessori students yielded significantly greater improvement than those taught by the more orthodox methods.²⁶

Durkin found from her studies that:

Among boys in the research it was not uncommon to find a beginning vocabulary composed of words like "rocket", "jet", and "Chevrolet". On the other hand, names of food products often had special appeal for girls because of their importance when the girls played house or played store.²⁷

These findings are reinforced by the repeated comments of parents and teachers who have noted such things as: "He can learn what he wants to learn;" or, "I don't know where he picked it up, no one taught him."

Referring to reading interest in hearing children, Monroe asserts that:

Two-year-olds begin to show an awareness of print--they notice that there is something else on a page besides the pictures. . . . At this age the child pays increasing attention to oral language that accompanies the pictures and he tends to memorize verbatim from frequent repetition of stories.²⁸

This same awareness may be found among young deaf children.

The results of another experiment with hearing children, by Durkin, shows that:

1. Some pre-first-grade children are very interested in learning to read. With these children, the interest becomes noticeable at ages ranging from three to five years. The age most commonly associated with the start of interest, however, is four years.
2. Pre-first-grade children who show an interest in reading and who, in turn, are given answers to their questions and are given help in response to their requests for it, do learn to read at home.
3. Over time, the average achievement of those early readers remains significantly higher than the average achievement of equally bright children who are not reading at their entrance into the first grade.²⁹

McCormick points out that the most important thing to consider here is "the attitude the child develops toward reading."³⁰ A strict approach is usually ineffective with very young children. Pushing a child who is not ready or pressuring him beyond his ability can only lead to his loss of enthusiasm for reading. If the child can be enticed by the fun and challenge of reading, it can become an interesting and valuable tool in his education.

At What Age Are Children Ready?

Doman stresses the early encouragement of "neurological organization" which is "teaching the child to read as soon as he seems ready to learn to read."³¹ But just when is a child ready to learn? Is there a specific "reading age"?

Bruner believes that:

. . . any subject can be taught effectively in some intellectually honest form to any child at any stage of development.

Research on the intellectual development of the child highlights the fact that at each stage of development the child has a characteristic way of viewing the world and explaining it to himself. The task of teaching a subject to a child at any particular age is one of translation. The general hypothesis that has just been stated is premised on the considered judgement that any idea can be represented honestly and usefully in the thought forms of children. . . . and that these first representations can later be more powerful and precise the more easily by virtue of this early learning.³²

Both Burton and Griffiths stress the importance of the individual child in choosing a time to begin reading instruction: Burton states that the child must be at a stage in his development "when he can learn easily, effectively, and without emotional disturbance."³³ According to Griffiths, "Pre-reading skills are introduced as soon as the individual (deaf) child seems capable (and many times earlier than the 'normal' child)."³⁴

Early Exposure to Reading

Almost all children have been exposed to written symbols long before they are formally introduced. "The child is exposed to words from the time he is first read to from books."³⁵

From her research, Monroe has found:

The earliest efforts at reading do not take place at school in the first grade when children are six years of age. Books, magazines, papers, signs, posters, and reading materials of all kinds are so much a part of our American culture that most children have many experiences with printed materials from early infancy.³⁶

"From the studies of Gesell and other investigators there appears to be a normal drive toward book activities from infancy on. . ."³⁷
In fact, as soon as visual discriminations begin, the child starts to "practice" pre-reading skills. For example, Ort states:

As surely as a child adds new sounds, he also deals daily with visual discriminations. Mother's face comes happily into focus when he is very young, later he recognizes a growing number of persons and objects about him.³⁸

Children learn to READ shapes, sizes, and colors by the age of three or four by picking out their favorite cereal on the shelf at the store, or by telling someone that it is okay to go when the light turns green.³⁹

An Early Beginning for the Deaf

Lassman believes:

The deaf child. . . should be, as early as possible, exposed to a reading readiness program that is directed toward his understanding the spoken language associated with all his experiences--lipreading, speech, sense training, auditory training, creative activities, free play, and activities at home, in nursery school, and in the community.⁴⁰

Both Pitman and Duffy question the possibilities of teaching reading before the age of two, or even before the child is able to use his language in speech;

Is it possible that verballity in print could thus antedate verballity in speech? What are the advantages in aquiring the one before the other? Is learning to speak really easier than learning

to read? If so, why? Is it that the ear is a more delicately discriminating sensory organ than the eye? Is there reason to prefer this supposition to the opposite and more generally helpful other one? What then are the reasons for the fact, which may be observed, that among hearing children listening or talking precede reading and writing and that the ear should thus be made to excel the eye?⁴¹

If the child with normal hearing can, before the age of two years, learn to associate in a meaningful way the fleeting, complex auditory symbols which make up the spoken word to the objects and actions they stand for, why should he not be able to attach meaning to visual symbols, written or printed words, at a comparable age? In fact, the static quality of the visual symbol might be easier to remember as a visual image than the brief, transient auditory image.⁴²

Advantages in Early Reading for the Deaf Child

" . . . the diversity of skills that children acquire, the ease with which they are helped to comprehend, the various subject areas to which they are exposed, the opportunities generated will determine their destiny."⁴³ This is especially true of the deaf child, who is predominantly dependent upon visual methods for his language acquisition and other learning.

Children begin to learn at birth, and those having no sensory impairment acquire incidental learning effortlessly. . . . The lack of language and incidental learning places deaf children at a disadvantage. . . . The amount of incidental learning each child stores up will depend upon his individual learning capacity and how well he has been motivated.⁴⁴

The young deaf child needs a visual, motivating avenue of learning that will help him to "catch up" to the hearing child in his incidental learning. Reading may be this avenue.

Reading can also be a reinforcement of learning attained by other methods. Lack emphasizes the value of "Writing for and by the pupil to make definite and sure the impression made by lip-reading alone

or by lip-reading and partial hearing. . . "45

In her book, Language for the Preschool Deaf Child, Lassman states the following in regard to the importance of early reading:

The printed form, introduced at the "right" time for the individual child, can be a source of stimulation and interest in learning, and although it is essential that language understanding through lipreading and experience come first, this new experience with words can be an accelerating factor in the total language development.⁴⁶

Duffy goes even further in relating the importance of reading to language acquisition:

Assuming that the mind can store visual images as easily as auditory images, it would seem logical that language can be developed through visual means as well as through the auditory sense avenue.⁴⁷

If reading has this potential for helping the deaf child learn about language in his early years, the need for it is evident. Miriam D. Pauls has compared the hearing child's need for reading to that of the deaf child as related to their communication skills:

. . . while reading is a vital tool (for the hearing child), it is not critical to the development of his basic communication skill.

It is an entirely different story for the child with a severe hearing problem. The very nature of his handicap sharply limits his ability to absorb the phonetic and structural patterns of his language through casual repetition in daily living. . . . Since auditory detail is limited, and spoken language is so fleeting, with much detail invisible on the lips, it becomes evident that he needs more tangible support for the acquisition of language forms and meanings.

The obvious support is reading, for a written symbol code is stable. It is printed in its entirety, and the detail can be perceived and absorbed. It can be referred to again and again. It delineates the phonetic system as well as the structural patterns of the language. It is this stability that makes reading the key-stone in the multi-sensory approach to the acquisition of language.

Because it is the surest inroad for the expansion and refinement of language, reading should be initiated as soon as the child is mature enough to be ready for it.⁴⁸

Besides being a great asset to language acquisition, reading can be a boon to the child's self esteem. Here is one more area where he can meet success on his own level.

Reading is the most useful learning tool so far devised. It will not only aid learning in the formal program but will help the individual to more successfully cultivate his critical facilities, independence of intellect and his abilities of appreciation and creation.⁴⁹

How to Teach Early Reading

According to Monroe, the first step in reading for children (hearing and deaf) and for adults is word perception.

This involves two very closely related phases. First, the reader must be able to identify the printed symbol. Second, he must be able to call up or identify the meaning. . .⁵⁰

How does this occur? It may be interesting to note how children develop an awareness of letter and word differentiation. This was investigated by Gibson, Osser, Schiff and Smith:

The child of 4 does not start "cold" upon this task, because some of his previous experience with distinctive objects and pictures will transfer to letter differentiation.

If we are correct in thinking that the child comes to discriminate graphemes by detecting their distinctive features, what is the learning process like? That it is perceptual learning and need not be verbalized is probable. . . . An experiment by Anne D. Pick was designed to compare two hypotheses about how this type of discrimination develops. One might be called a "schema" or "prototype" hypothesis, and is based on the supposition that the child builds up a kind of model or memory image of each letter by repeated experience of visual presentations of the letter; perceptual theories which propose that discrimination occurs by matching sensory experience to a previously stored concept or categorical model are of this kind. In the

other hypothesis it is assumed that the child learns by discovering how the forms differ, and then easily transfers this knowledge to new letter-like figures.

The results of the experiment infer that, while children probably do learn prototypes of letter shapes, the prototypes themselves are not the original basis for differentiation. The most relevant kind of training for discrimination is practice which provides experience with the characteristic differences that distinguish the set of items. Features which are actually distinctive for letters could be emphasized by presenting letters in contrast pairs.⁵¹

Based on the above results, the following methods will be discussed in this paper: exposure to written materials, careful selection of vocabulary, labeling, kinesthetic experience with the word and the use of the initial teaching alphabet.

Exposure to Written Materials

Children must have reading materials available if they are going to learn about them. As Burton has stated:

Obviously, we cannot simply sit around and wait for readiness to appear. To do so may seriously delay the initiation of learning to read, to compute, to get along with other children, and so on. Children must be given encouragement and an opportunity to demonstrate readiness for every type of learning experience. . . readiness for reading comes only through a succession or accumulation of readinesses, including acquired understandings, attitudes, abilities and skills. This succession of readinesses is developed through such activities as handling books, turning pages, pretending to read the paper as Daddy does, looking at pictures. . . identifying known objects in pictures, trying to identify letters and words.⁵²

In her book, Natural Language for Deaf Children, Groht also notes that the value of early exposure to printed matter is great. She mentions that pre-school deaf children (age 4)

have learned to recognize some printed words, not because they have been taught to read but because they were exposed to them quite casually in simple charts the teachers have made in connection with

nursery activities.⁵³

Others have also mentioned ways of exposing printed or written forms to young children. In her pre-school deaf class Smullen says that "The manuscript printed form is presented together with familiar patterns, but no demands are made on the children to do anything more than look at it."⁵⁴

Choice of Vocabulary

Words should be chosen which will be meaningful to the child. Those words which have a direct interest to the child will be learned much more readily than those which are unrelated to his environment.

Naiman suggests that parents and teachers:

pick reinforcing words to keep the child's attention (for example, "mother", "daddy", "kiss", "frightened" and "ghost")--words which have intense personal meaning and which are already part of their dynamic life.⁵⁵

According to Schonell, early material should also contain:

common words of different visual patterns which will help the young reader in his difficult task of discrimination. If the material is overloaded with small words of similar pattern, such as, an, as, on, no, or, it, at, if, of, for, by, was, saw, are, am, hat, hit, boy, big, day, the means of word recognition is decreased and the possibility of confusion is very greatly increased. All teachers are aware of the inability of less able pupils to distinguish on, no; of, for; was, saw; on, in; boy, big; day, dig. Yet many of these same backward readers can frequently recognize words like Fluff, mother, little and elephant. It is in this aspect that the material of the average phonic reading book not infrequently presents unnecessary difficulties for pupils. For, example, material such as the following:

The pig with a wig did a jig in the bog,
The fox saw a hen in the pen,

although of regular phonic form, loses, not a little of its advantage in this respect through the similarity of the visual patterns of the

words employed, so that some pupils read "pig" as "big", "bog" as "boy" or "big". This disadvantage apart from the obvious limitation imposed by the meaningless nature of the sentences.⁵⁶

When introducing vocabulary to very young children the whole-word approach is usually better than the phonetic method. This is true especially for the deaf. The whole word has meaning attached and is more easily remembered.

Printed forms must make their appearance as whole words rather than as single letters of the alphabet, just as whole words must be used in beginning lipreading and speech. The whole word, spoken or printed, can be illustrated, while a letter of the alphabet cannot, and in reading readiness, as in other phases of training, the deaf child must be given a concept which he can understand in relation to living.⁵⁷

Also, for the deaf, variety and repetition of vocabulary are essential.

A deaf pupil will master those words which come up most frequently and with the greatest impact. He is likely to learn those words which, even if then are not repeated, come up in such a way as to leave a vivid impression. The more varied the associations, the richer the clues, the more likely is the new word to be remembered.⁵⁸

Labeling

The approach used most often for the deaf is labeling. In this method, pictures are used to depict objects and actions as references to words or phrases introduced. When available, real objects can be used for the child to label.

"Labeling objects" is a game that the deaf child loves to play. At the same time, this "game" increases reading readiness skill. The older the child, the more definite the labels become. (For example, in

the beginning the object is labeled "chair". Later on, several labels will denote "seat", "legs", "back", and "arms".) ⁵⁹

Both Smullen and Pauls agree that labeling is a great aid to language acquisition and reading development for very young deaf children. As Smullen states, in her pre-school ". . . everything in the room that they use or that might interest them is labeled, named, and explained." ⁶⁰ Pauls has found that "Many four-year-olds have learned to read by means of labeling and the use of carefully developed experience chart stories." ⁶¹

Children unconsciously learn to sight read words in their environment. As noted by Barbe:

An early stage in learning to read is when the child develops a basic sight vocabulary. His name is very likely the first word he learns to read in such a manner. He recognizes it as his name because it has certain bumps in it, and because it is a certain length. Basic sight words are ones that the child always knows, without help from the teacher or without having to look carefully to see if he recognizes any familiar elements within the words. ⁶²

As early as 1908 these comments were made by Huey:

The child makes endless questionings about the names of things, as every mother knows. He is concerned also about the printed notices, signs, titles, visiting cards, etc., that come in his way, and should be told what these "say" when he makes inquiry. It is surprising how large a stock of printed or written words a child will gradually come to recognize in this way. ⁶³

If a child can inadvertently learn a number of words just from casual experience with them, it would seem that a great amount of words could be learned if they were purposefully presented in the same manner. Children readily make this connection between word and object or word and action. For the deaf, this method has been most successful.

Usually, by the time the child is ready for Grade I, he understands that everything has a name that may be put down on paper or on the blackboard, just as everything has a name that is recognizable on the lips. He may also realize that actions and activities may not only be spoken of, but may be printed about.⁶⁴

Kinesthetic Experience

Schonell has found that a kinesthetic approach in early reading can be a great aid in developing a "reading memory":

It is not too much to say that a considerable amount of early experience with word forms and word ideas can come through the drawing/writing or play/writing situations in a natural and therefore effective manner. The feel of the word to the child as he traces or writes it is of great value in cementing the visual and the auditory aspects of the word into a meaningful whole. With young children word recognition may be consolidated through tracing and writing. The somewhat slower child who is still a little uncertain of new words, may be helped considerably by workbook exercises which include tracing and writing. . . . The kinesthetic process has the effect of producing maximum concentration of attention, at a rate of perception and in a sequence that is needed to impress the word form on the child's mind. Presentation of the visual pattern is often too fleeting or insufficiently pointed. Moreover, as. . . exercises in tracing and writing reveal, the young reader's attack on the perception of words, particularly in developing a systematic left to right perception, is considerably strengthened.⁶⁵

i/t/a

Burton notes that:

Plentiful scientific evidence exists to show that the child learns best and achieves the best outcomes when learning situations are adjusted to his level of readiness, to his level of maturity and experience.⁶⁶

Educators of the deaf have had a difficult time finding the child's "level of readiness" which has often resulted in the deaf child's potential being underestimated.

Duffy has made this observation:

. . . Dr. Margaret Mead, the noted anthropologist, remarked in a speech that in Russia young deaf children are taught to read beginning at the age of two years. . . why don't we start teaching the child. . . to read beginning at the age of two?

. . . in terms of learning to read, the Russians have a great advantage over those who must learn to read English. Russian is a "phonetic" language. Each letter symbol has its own individual sound. If you sound out the letters and blend them together, you say the word and it can be recognized. . . . Russian is easy to learn because the letter symbol and its sounds are always the same. No sound has more than one letter symbol and not letter symbol has more than one sound. This, of course, is not true of English where one letter symbol may have several sounds.⁶⁷

"The more complex a thing is, the more difficult to learn; the simpler the easier."⁶⁸ On this premise Sir James Pitman developed his initial teaching alphabet.

. . . We can now teach the child to associate one, and only one, sound to a symbol. He can thus learn to read and to write, knowing that the sounds he can say have a letter symbol which he in turn can read and write. It means that his auditory perception and spoken language are interchangeable with his visual perception through reading and the visual-motor act of writing; each enriching and reinforcing the other.

With the i/t/a there is no doubt that very young hearing impaired children can learn to associate meaning to words printed in i/t/a, can learn to write these words, can learn to say these words, and can learn to articulate the individual sounds for which the letter symbols stand.⁶⁹

. . . The fact that the child can, from the outset, learn to read and to write the thoughts that he can express verbally, gives the child an immediate sense of accomplishment and power. He is thus motivated and activated. Both are basic to learning and to personal growth and development.

. . . if intensive formal language, reading, writing, and speech training using i/t/a are instituted at the age of two years, or soon after two, and carried on by well trained, competent teachers, the hearing impaired child will achieve levels of language and speech competence never before thought possible.⁷⁰

Conclusion

The findings cited in this paper indicate that young deaf children should be able to read by three or four years of age. Through more research and new methods educators may find that deaf children can read even earlier than this. Such findings would have a great impact on the language development of young deaf children.

This writer feels, as Duffy, that reading can be the key to language acquisition:

Assuming that the mind can store visual images as easily as auditory images, it would seem logical that language can be developed through visual means as well as through the auditory sense avenue.⁷¹

Even at three or four years of age, if the reading material is presented at the child's level of understanding, reading can be a great avenue of learning. There are several ways to present reading to young deaf children. Those which the present writer feels are most effective have been mentioned here. No one method will be in itself the "best way" to teach reading. The combinations of these methods (at the discretion of parents and teachers) is suggested for the most effective results.

FOOTNOTES

¹Mary Griffen Newton, "Readers, Not Leaf-Turners," Volta Review, LXVI (February, 1964), 68.

²Doris Naiman, "A Different Emphasis on Reading for Deaf Children," Volta Review, LXVII (November, 1965), 632.

³Margaret Rasmussen (ed.), Reading (Washington: The Association for Childhood Education International, 1956), p. 8.

⁴Henry P. Smith and Emerald V. Dechant, Psychology in Teaching Reading (Englewood Cliffs: Prentice-Hall, Inc., 1961), p. 22.

⁵John J. DeBoer and Martha Dallmann, The Teaching of Reading (Rev. ed. New York: Holt, Rinehart and Winston, Inc., 1966), p. 17.

⁶Donald Calvin Richardson, "Children's Pre-School Reading Experiences and Related Success in Beginning Reading," Journal of Reading, IX (May, 1966), 392.

⁷Helmer R. Myklebust, The Psychology of Deafness (New York: Grune and Stratton, 1964), p. 59.

⁸Stanley Krippner, "Evaluating Pre-Readiness Approaches to Reading," Education, LXXXVII (September, 1966), 12.

⁹William J. Meyer, Developmental Psychology (New York: The Center for Applied Research in Education, Inc., 1966), p. 9.

¹⁰Gladys Natchez, "From Talking to Reading Without Really Trying," The Reading Teacher, XX (January, 1966), 339.

¹¹Grace Harris Lassman, Language for the Preschool Deaf Child (New York: Grune and Stratton, 1950), p. 68-69.

¹²Peter B. Pufall and Hans G. Furth, "Recognition and Learning of Visual Sequences in Young Children," Child Development, XXXVII (1966), 827.

¹³Eleanor J. Gibson, "Learning to Read," Science, CXLVIII (May, 1965), 1067.

¹⁴Ibid.

¹⁵Dolores Durkin, "The Achievement of Pre-School Readers: Two Longitudinal Studies," Reading Research Quarterly, I (Summer, 1966), 9.

¹⁶William Henry Burton and C.B. Baker, and G.K. Kemp, Reading in Child Development (Indianapolis: Bobbs-merrill, 1956), p. 170.

¹⁷Robert T. McGee and Jean M. McClintic, "Early Instruction in Readiness: Who Speaks for the Children?" The Reading Teacher, XX (November, 1966), 124.

¹⁸Ibid.

¹⁹DeBoer and Dallmann, The Teaching of Reading, p. 62.

²⁰George G. Thompson, Child Psychology (2nd ed.; Boston: Houghton Mifflin Company, 1962), p. 133.

²¹Durkin, "The Achievement of Pre-School Readers," p. 10.

²²Dolores Durkin, "Teaching Reading to Young Children," Education, LXXXVII (September, 1966), pp. 38-39.

²³Ibid., 39.

²⁴Smith and Dechant, Psychology in Teaching Reading, p. 22.

²⁵Marion Monroe, Growing into Reading (New York: Scott, Foresman and Company, 1951), p. 174.

²⁶Krippner, "Evaluating Pre-Readiness Approaches to Reading," 14.

²⁷Durkin, "Teaching Reading to Young Children," p. 38.

²⁸Monroe, Growing into Reading, pp. 13-14.

²⁹Durkin, "The Achievement of Pre-School Readers," p. 35.

³⁰Nancy McCormick, "The Countdown on Beginning Reading," The Reading Teacher, XX (November, 1966), 118.

³¹Krippner, "Evaluating Pre-Readiness Approaches to Reading," p. 15.

³²Toby Talbot (ed.), The World of the Child, "Readiness for Learning" (New York: Doubleday and Company, 1967), pp. 424-425.

- 33Burton, Reading in Child Development, p. 167.
- 34Ciwa Griffiths, Conquering Childhood Deafness (New York: Exposition Press, 1967), p. 37.
- 35Grace Harris Lassman, Language for the Preschool Deaf Child (New York: Grune and Stratton, 1950), p. 71.
- 36Monroe, Growing into Reading, p. 3.
- 37Ibid., 7.
- 38Rasmussen, Reading, p. 14.
- 39Ibid.
- 40Lassman, Language for the Preschool Deaf Child, p. 71.
- 41John K. Duffy, "i/t/a and the Hearing Impaired Child," Volta Review, LXVIII (February, 1966), 151.
- 42Ibid.
- 43Verna Dieckman Anderson, Reading and Young Children (New York: The Macmillan Company, 1968), p. 11.
- 44Hazel S. Smullen, "Beginning Functional Language," Volta Review, LXX (September, 1968), 496-8.
- 45Agnes Lack, The Teaching of Language to Deaf Children (London: Oxford University Press, 1955), p. 70.
- 46Lassman, Language for the Preschool Deaf Child, p. 75.
- 47Duffy, "i/t/a and the Hearing Impaired Child," p. 151.
- 48Miriam Pauls, "Development of Language Through Reading," Volta Review, LX (March, 1958), 106.
- 49J. O. Miller, Jr., "Getting Ready to Read," School & Community, LIII (January, 1967), 16.
- 50Monroe, Growing into Reading, p. 171.
- 51Eleanor J. Gibson, "Learning to Read," Science, CXLVIII (May, 1965), 1068-9.

- 52Burton, Reading in Child Development, pp. 168-9.
- 53Mildred A. Groht, Natural Language for Deaf Children (Washington: Alexander Graham Bell Association, Inc., 1958), p. 19.
- 54Smullen, "Beginning Functional Language," p. 499.
- 55Doris Naiman, "A Different Emphasis on Reading for Deaf Children," Volta Review, LXVII (November, 1965), 632.
- 56Fred J. Schonell, The Psychology and Teaching of Reading (New York: Philosophical Library, 1961), pp. 14-5.
- 57Marjorie E. Magner, "Reading: Goals and Achievements at Clarke School for the Deaf," Volta Review, LXVI (September, 1964), 465.
- 58Naiman, "A Different Emphasis on Reading for Deaf Children," p. 634.
- 59Newton, "Readers, Not Leaf-Turners," p. 69.
- 60Smullen, "Beginning Functional Language," p. 498.
- 61Pauls, "Development of Language Through Reading," p. 106.
- 62Rasmussen, Reading, p. 18.
- 63Dolores Durkin, Children who Read Early (New York: Teachers College Press, 1966), p. 6.
- 64Lassman, "Language for the Preschool Deaf Child," p. 73.
- 65Schonell, The Psychology and Teaching of Reading, pp. 22-3.
- 66Burton, Reading in Child Development, p. 169.
- 67Duffy, "i/t/a and the Hearing Impaired Child," p. 152.
- 68Frank Zeitz, "i.t.a. and the Below-Average Child," The Reading Teacher, XIX (1966), 515.
- 69Duffy, "i/t/a and the Hearing Impaired Child," p. 152.
- 70Ibid.. 153.
- 71Duffy, "i/t/a and the Hearing Impaired Child," p. 151.

BIBLIOGRAPHY

Books

- Anderson, Verna Dieckman. Reading and Young Children. New York: Macmillan Company, 1968.
- Ausubel, David P. The Psychology of Meaningful Verbal Learning. New York: Grune and Stratton, 1963.
- Bond, G.L. and Wagner, E.V. Teaching the Child to Read. New York: Macmillan Company, 1931.
- Burton, William Henry, Baker, C.B., and Kemp, G.K. Reading in Child Development. Indianapolis: Bobs-Merrill, 1956.
- DeBoer, John J. and Dallmann, Martha. The Teaching of Reading. Rev. Ed. New York: Holt, Rinehart and Winston, Inc., 1966.
- Doman, G.J. How to Teach Your Baby to Read. New York: Random House, 1964.
- Downing, J.A. The i.t.a. Reading Experiment. London: Evans Bros., 1964.
- Durkin, Dolores. Children Who Read Early. New York: Teachers College Press, 1966.
- Fries, Charles C. Linguistics and Reading. New York: Holt, Rinehart and Winston, Inc., 1963.
- Griffiths, Ciwa. Conquering Childhood Deafness. New York: Exposition Press, 1967.
- Groht, Mildred A. Natural Language for Deaf Children. Washington: Alexander Graham Bell Association, Inc., 1958.
- Lack, Agnes. The Teaching of Language to Deaf Children. London: Oxford University Press, 1955.
- Lassman, Grace Harris. Language for the Preschool Deaf Child. New York: Grune and Stratton, 1950.
- Meyer, William J. Developmental Psychology. New York: The Center for Applied Research in Education, Inc., 1966.

- Monroe, Marion. Growing into Reading. New York: Scott, Foresman and Company, 1951.
- Myklebust, Helmer R. The Psychology of Deafness. New York: Grune and Stratton, 1964.
- Rasmussen, Margaret. (ed.). Reading. Washington: The Association for Childhood Education International, 1956.
- Schonell, Fred J. The Psychology and Teaching of Reading. New York: Philosophical Library, 1961.
- Smith, Henry F. and Dechant, Emerald V. Psychology in Teaching Reading. Englewood Cliffs: Prentice-Hall, Inc., 1961.
- Talbot, Toby. (ed.). The World of the Child. New York: Doubleday and Company, 1967.
- Thompson, George G. Child Psychology. 2nd Ed. Boston: Houghton Mifflin Company, 1962.

Magazine Articles

- Ballbach, Betty L. "Visualized Language," Volta Review, LX (March, 1958), 108-109.
- Craig, William N. "Effects of Preschool Training in the Development of Reading and Lipreading Skills of the Deaf Children," American Annals of the Deaf, CIX (May, 1964), 280-296.
- Duffy, John K. "i/t/a and the Hearing Impaired Child," Volta Review, (February, 1966), 150-153.
- Durkin, Dolores. "Teaching Reading to Young Children," Education, LXXXVII (September, 1966), 38-39.
- Durkin, Dolores. "The Achievement of Pre-School Readers: Two Longitudinal Studies," Reading Research Quarterly, I (Summer, 1966), 5-36.
- Faustman, Marion Neal. "Some Effects of Perception Training in Kindergarten on First Grade Success in Reading," Dissertation Abstracts, XXVII (1966), 951.
- Gibson, Eleanor J. "Learning to Read," Science, CXLVIII (May, 1965), 1066-1072.
- Krippner, Stanley. "Evaluating Pre-Readiness Approaches to Reading," Education, LXXXVII (September, 1966), 12-15.

- Liddicoat, Elizabeth K. "A Comparative Study of Beginning Reading Achievement After One Year of Instruction When Two Different Alphabets are Used," Dissertation Abstracts, XXVII (1966), 1266-1267.
- Magner, Marjorie E. "Reading: Goals and Achievements at Clarke School for the Deaf," Volta Review, LXVI (September, 1964), 465.
- McCormick, Nancy. "The Countdown on Beginning Reading," The Reading Teacher, XX (November, 1966), 115-130.
- McGee, Robert T. and McClintic, Jean M. "Early Instruction in Readiness: Who Speaks for the Children?" The Reading Teacher, XX (November, 1966), 121-124.
- Miller, J.O., JR. "Getting Ready to Read," School & Community, VIII (January, 1967), 16.
- Naiman, Doris. "A Different Emphasis on Reading for Deaf Children," Volta Review, LXVII (November, 1965), 632.
- Natchez, Gladys. "From Talking to Reading Without Really Trying," The Reading Teacher, XX (January, 1966), 339-342.
- Newton, Mary Griffen. "Readers, Not Leaf-Turners," Volta Review, LXVI (February, 1964), 68.
- Pauls, Miriam. "Development of Language Through Reading," Volta Review, LX (March, 1958), 106.
- Pitman, Sir James. "The Future of the Teaching of Reading," The 28th Education Conference (November, 1963).
- Pufall, Peter B. and Furth, Hans G. "Recognition and Learning of Visual Sequences in Young Children," Child Development, XXXVII (1966), 827-836.
- Pugh, Bessie. "Utilizing Research in Teaching Reading," Volta Review, LXIV (September, 1962), 379-387.
- Richardson, Donald Calvin. "Children's Pre-School Reading Experiences and Related Success in Beginning Reading," Journal of Reading, IX (May, 1966), 391-392.
- Smullen, Hazel S. "Beginning Functional Language," Volta Review, LXX (September, 1968), 496-498.
- Williams, Gertrude H. "What Does Research Tell Us About Readiness for Beginning Reading?" The Reading Teacher, VI (May, 1953), 34-40.

Withrow, Margaret, S. "The Augmented Roman Alphabet--Can It Be Used For Teaching the Deaf?" Volta Review, LXVI (September, 1964), 540-543.

Zeitz, Frank. "i.t.a. and the Below-Average Child," The Reading Teacher, XIX (April, 1966), 515-518.

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