Considerations and Implications When Reading Stories to Young Deaf Children. Occasional Paper 133.


Special Education Programs (ED/OSERS), Washington, DC.

Nov 90

Institute for Research on Teaching, 252 Erickson Hall, College of Education, Michigan State University, East Lansing, MI 48824 ($3.00).

Information Analyses (070) -- Guides - Non-Classroom Use (055)

American Sign Language; Classroom Techniques; *Deafness; Difficulty Level; Elementary Education; Evaluation Methods; Interpretive Skills; Prereading Experience; Preschool Education; *Reading Aloud to Others; Reading Instruction; *Sign Language; *Story Reading; Teacher Background; Teacher Education; *Total Communication

*Signability (of Text)

This literature review examines selected variables that may influence teachers' ability to read books to preschool and elementary deaf children in total communication programs. The paper explores the role of signs in reading stories and factors influencing the signability of stories, including reading rate, length of sentences, length of text used to express a thought, imagery qualities of words, complexity and concreteness or abstractness of a passage, ease of articulating words in signs, literary style of reading, and stories that include a play on words. Strategies for reading to young deaf children are listed, including: make liberal use of animated signing; overview selected vocabulary prior to reading; read the same book over and over again; associate signs with print; read at a comfortable pace; help children draw upon their own experiences to understand stories better; allow students to select books they want to have read to them; read what is written; and translate stories to American Sign Language. (42 references) (JDD)

* Reproductions supplied by EDRS are the best that can be made from the original document. *
CONSIDERATIONS AND IMPLICATIONS
WHEN READING STORIES TO YOUNG DEAF CHILDREN

David A. Stewart, Nancy Bonkowski, and Diane Bennett
Occasional Paper 133

CONSIDERATIONS AND IMPLICATIONS
WHEN READING STORIES TO YOUNG DEAF CHILDREN

David A. Stewart, Nancy Bonkowski,
and Diane Bennett

Published by

The Institute for Research on Teaching
College of Education
Michigan State University
East Lansing, Michigan 48824-1034

November 1990

This work is sponsored in part by the Institute for Research on Teaching, College of Education, Michigan State University, and through Research Implementation Grant No. G008730145 from the United States Department of Education, Office of Special Education Programs. The Institute for Research on Teaching is funded from a variety of federal, state, and private sources including the U.S. Department of Education and Michigan State University. The opinions expressed in this publication do not necessarily reflect the position, policy, or endorsement of the funding agencies.
The Institute for Research on Teaching was founded in 1976 at Michigan State University and has been the recipient of major federal grants. Funding for IRT projects is currently received from the U.S. Department of Education, Michigan State University, and other agencies and foundations. IRT scholars have conducted major research projects aimed at improving classroom teaching, including studies of classroom management strategies, student socialization, the diagnosis and remediation of reading difficulties, and school policies. IRT researchers have also been examining the teaching of specific school subjects such as reading, writing, general mathematics, and science and are seeking to understand how factors inside as well as outside the classroom affect teachers. In addition to curriculum and instructional specialists in school subjects, researchers from such diverse disciplines as educational psychology, anthropology, sociology, history, economics, and philosophy cooperate in conducting IRT research. By focusing on how teachers respond to enduring problems of practice and by collaborating with practitioners, IRT researchers strive to produce new understandings to improve teaching and teacher education.

Currently, IRT researchers are engaged in a number of programmatic efforts in research on teaching that build on past work and extend the study of teaching in new directions such as the teaching of subject matter disciplines in elementary school, teaching in developing countries, and teaching special populations. New modes of teacher collaboration with schools and teachers’ organizations are also being explored. The Center for the Learning and Teaching of Elementary Subjects, funded by the U.S. Department of Education’s Office of Educational Research and Improvement from 1987-92, is one of the IRT’s major endeavors and emphasizes the teaching of elementary mathematics, science, social studies, literature, and the arts for understanding, appreciation, and use. The focus is on what content should be taught, how teachers concentrate their teaching to use their limited resources in the best way, and in what ways good teaching is subject-matter specific.

The IRT publishes research reports, occasional papers, conference proceedings, the Elementary Subjects Center Series, a newsletter for practitioners (IRT Communication Quarterly), and lists and catalogs of IRT publications. For more information, to receive a list or catalog, and/or to be placed on the IRT mailing list to receive the newsletter, please write to the Editor, Institute for Research on Teaching, 252 Erickson Hall, Michigan State University, East Lansing, Michigan 48824-1034.

Co-directors: Jere E. Brophy and Penelope L. Peterson


Editor: Sandra Gross

Editorial Assistant: Brian H. Bode
Abstract

Reading to deaf children is an important part of the instructional activities of every preschool and elementary teacher of the deaf. Although there has been much discussion of the benefits of reading activities for deaf children there is virtually nothing relating to the actual process of reading stories to them. This paper examines selected variables that may influence teachers' ability to read books to deaf children in total communication programs. It also presents a list of suggestions for improving teachers' ability to present a story in English through different communication modalities and in American Sign Language.
CONSIDERATIONS AND IMPLICATIONS WHEN READING STORIES TO YOUNG DEAF CHILDREN

David Stewart, Nancy Bonkowski, and Diane Bennett

There are many factors that affect the way teachers read to deaf children. It is helpful for teachers to have an understanding of reading models and an awareness of the linguistic and experiential knowledge of the children to whom they are reading. Teachers also benefit from having a firm grasp of the communication skills and principles involved in the act of reading to others. Current literature on reading and deafness have, for the most part, dealt with reading models and reader-based factors. The practicality of using text-based, reader-based, and integrated approaches that build upon both reader and text-based variables have been discussed (e.g., King & Quigley, 1985; Paul & Quigley, 1990). Others have focused on the process of reading to determine how deaf students approach reading (e.g., Andrews & Mason, in press; Ewoldt, 1981; Wood, Wood, Griffiths, & Howarth, 1986).

More generally, it is widely accepted that reading books to children is a valuable contribution to their education. Children's early experiences with reading increase linguistic abilities, vocabulary, and knowledge about themselves and their environment (Chomsky, 1972; Ewoldt, 1988; McLane & McNamee, 1990; Rogers, 1989). When read to frequently, children develop a strong sense of story and greater awareness of the reading process (Snow &

David Stewart is coordinator of the Total Communication Project (Improving Consistent Linguistic Input in Total Communication Classrooms) and associate professor in the Department of Counseling, Educational Psychology and Special Education at Michigan State University. Nancy Bonkowski is a research assistant with the project and a doctoral candidate in CEPSE. Diane Bennett is a teacher of preschool deaf students in the Lansing School District and one of the participating teachers in the project.
There is evidence to suggest that early reading experiences help develop skills that correlate highly with later achievement in school. For example, studies have shown that early reading experiences enhance comprehension skills (Cochran-Smith, 1984) and correlate positively with the ability to make connections between oral and written language and the ability to learn letters (Dyson, 1984).

As researchers continue to delineate the value of reading to children, educators are becoming increasingly aware of the need to expose deaf children to reading activities. Basically, many of the advantages of reading to deaf children are the same for hearing children; however, given the language needs of deaf children, the potential effects of certain reading activities may be more pronounced for this population. For example, reading to deaf children creates a context for dialogue which provides opportunities for deaf children to gain information about themselves, their families, and their environment. This is critical because while the communication needs of deaf children are great, they often have limited access to this type of information. Moreover, reading activities provide a chance for teachers to monitor deaf children's language, speech, and signing skills. In addition, Scribner and Cole (1981) and Herriman (1986) have suggested that books provide opportunities for children to think about various forms and usages for language and to allow them to check and refine their own language practices. Thus, reading may have implications for the development of language in deaf children.

Beyond discussions and research on the benefits of reading there is little if any literature dealing with the actual logistics of reading to deaf children either in a single modality or multimodality fashion. This is unfortunate because there are indications of a relationship between mode(s) of
communication used by students and the type of internal mediating system used to code reading material (Paul & Quigley, 1990). Thus far, the evidence suggests that the use of a speech-based code is associated with better reading ability than the use of nonspeech codes such as fingerspelling, signs, and print (Conrad, 1979; Hanson, 1985). Yet, many severely and profoundly deaf students rely upon the sign modality for much of their communication, a fact which raises the question of how signs might best be used within an instructional framework. Despite this reliance, many teachers have had little preparation in signed communication (Moores, 1987) and likely do not possess the communication skills necessary to be good story presenters.

In this paper, considerations for the act of reading to deaf children that are mainly related to signing are discussed. This discussion is based on work in the Lansing School District and a number of other school districts throughout the state of Michigan where language and communication policies stipulate that a simultaneous presentation of signs and speech be used as the primary instructional medium, with American Sign Language (ASL) used as an intervention tool. Within this paradigm, concerns and strategies have been identified to facilitate the process of reading to deaf children. It should be noted that a focus on the aforementioned communication scheme does not imply that other communication strategies are inferior. Indeed, many of the suggestions made here can assist other districts in meeting the challenge of providing a comprehensive reading approach with a concerted effort to help teachers become more effective as story presenters.

**Background**

When deaf children's ability to comprehend messages through the auditory and speechreading modalities is restricted, the importance of print and signs...
as a source of linguistic information increases. This importance has been highlighted in the past decade as educators and researchers have stressed the value of reading for deaf children (e.g., Andrews, 1988; Ewoldt, 1982, 1988; LoPiccolo, 1989; Paul & Quigley, 1990; Rogers, 1989). Further impetus for emphasizing the importance of reading comes from research showing that reading achievement among deaf students lags far behind the achievement of their hearing counterparts (Allen, 1986).

One suggestion for addressing the reading skills of deaf children is to direct more attention to early intervention techniques that focus on prereading skills. Andrews (1988) identified four such skills as fingerspelling, book reading, story retelling, and word recognition. Other than the fingerspelling aspect, these prereading skills parallel those that are also necessary for hearing children. However, reading presents an added challenge to deaf children in that many of them are in the process of learning fundamental English skills while they are being asked to listen to stories being read or to actually read for themselves.

In addition to the language proficiency of deaf children, communication modality and language choice represent another dimension of reading to deaf children. Teachers have the option of reading stories using speech, an English sign code, or both speech and signs. Some teachers skilled in the use of ASL also have the option of translating stories to ASL. The option used will depend on the communication skills of the teacher and student, and the language and communication policy of a total communication program. Furthermore, without adequate preparation, access to any of the options may be limited. It is likely that, in the event that there is no policy or directive available, teachers may resort to using a form of pidgin signing that combines
elements of English and ASL but does not provide complete linguistic coding of
either language.

Another important consideration is that many severely and profoundly
deaf students do not obtain sufficient information in the speech modality
only; therefore, reading in speech alone may not be practical. Attempting to
code English in a visual/gestural medium requires much training and practice,
two conditions for efficient signing that the field as a whole has neglected.
Finally, ASL is an intricate language that is not readily learned by many
hearing individuals. Thus, reading to deaf children in total communication
programs requires special attention to the pragmatics of signing stories.

The Role of Signs in Reading Stories

Reading stories using signs presents a number of logistical concerns.
These concerns mainly relate to the mechanics of conveying stories in signs
and speech, the translation of stories to ASL, lack of sign equivalents for
many English words, and the basic language proficiency of deaf children. It
is perhaps unreasonable to expect teachers, a vast majority of whom use speech
as their primary means of communication, to determine how best to code English
stories in a visual/gestural mode or how to translate these stories to ASL if
they have not been trained to do so. Thus, ASL instructions on how to read
stories to deaf children should take into account the signing skills of
teachers.

One attempt to improve teachers' ability to read stories to deaf
children occurred in a demonstration total communication project in Lansing
School District and a number of other school districts in the state of
Michigan. Teachers were prepared to be efficient in their coding of English
in signs and to use ASL as an intervention tool (Stewart, in press). The
project's duration was for a four-year period and began in the Fall of 1987. Teachers learned to use a form of English signing that incorporates ASL features (e.g., verb directionality--I MET HIM; incorporation of numbers in pronouns--TWO-OF-US; sign contractions--THREE-WEEKS-AGO). This type of signing allowed teachers to be more fluid in their coding of English in signs.

Teachers were also introduced to ASL, which they used to supplement or clarify instructional materials presented in English. In certain subject matters, such as discussions of Deaf culture and teaching ASL, teachers have the option of using ASL as the primary language of instruction. The work of the preschool teachers in this project provides the basis upon which a number of suggestions for reading stories to deaf children were made.

**Signability of Stories**

For most teachers of the deaf there are many stories that are difficult to read in signs, in signs and speech, or render into an ASL translation. Thus, selection of a book to read involves more than just considering topic and language appropriateness. Teachers need to identify books that are compatible with their ability to sign and which will still be fitting for their students' levels of interest and knowledge. In doing this, variables that warrant attention are the following: (1) reading rate, (2) length of sentences, (3) length of text used to express a thought, (4) imagery qualities of words, (5) complexity and concreteness of a passage, (6) complexity and abstractness of a passage, (7) ease of articulating words in signs, (8) literary style of reading, and (9) stories that include a play on words.

**Reading Rate**

Although there is little research in this area, it has been noted that when exposed to "speech rates of less than forty words per minute our
comprehension starts to break down" (Wood et al., 1986, p. 106). Furthermore, Blackwell, Engen, Fischgrund, and Zarcadoolas (1978) suggested that when reading to deaf children it was important to maintain the rhythm of written passages such as nursery rhymes. Thus, although we do not know if there is a threshold reading rate for deaf children, the 40 words a minute could be used as a starting point. This is not to say that teachers must read at least 40 words each minute--here are other variables that influence reading rate. Books that might not require attention to a reading rate include those that are focused on the development of concepts such on counting, color, size, and family. Therefore, teachers must determine how the syntax, vocabulary, and the general nature of books might affect their ability to read stories and their students' comprehension.

**Length of Sentences**

It is likely that shorter sentences are easier to sign. They also give teachers more opportunities to pause during their reading. These pauses help refresh the teacher and allows the teacher time to think about how they are going to convey the next sentence. The following passage taken from *Hello, Cat You Need a Hat* illustrates the element of simplicity that short sentences bring to reading:

"Oh, look. 
Just look! 
Your head is bare. 
I have some hats that you can wear. 
Come over here. 
I'll give you some."

"I do not want one. Hats are dumb." (Gelman, 1979, p. 4)

On the other hand, there are stories that incorporate long sentences. These stories require readers to read entire sentences without any breaks. Fluidity in signing becomes critical as teachers must maintain students' attention.
The need to read a sentence without significant pauses is seen in the following passage from *Eco* which is designed to evoke a strong visual image:

She foo-ed a kiss to the moon. The moon liked it so much, it followed her home and hung in the branches of a tree outside her window, waiting for another. (Thompson, 1988)

**Length of Text Used To Express a Thought**

Pauses during a story presentation are going to be affected by the content or the message that is being read. Disrupting a story in the middle of a message may cause students to lose interest, forget the content of the earlier part of the passage, or experience difficulty in comprehending what is being read. The continuity of a passage and the necessity of reading from the beginning to the end without stopping is demonstrated in the following passage taken from *Love You Forever*:

But at night time, when that teenager was asleep, the mother opened the door to his room, crawled across the floor and looked up over the side of the bed. If he was really asleep she picked up that great big boy and rocked him back and forth, back and forth, back and forth. While she rocked him she sang:

I’ll love you forever,
I’ll like you for always,
As long as I’m living
my baby you’ll be. (Munsch, 1986)

Still, pauses in a story may well be appropriate and quite natural depending on the instructional goals for reading a story. Those engaged in storybook reading may desire to stop in order to initiate a discussion of a story or concept (Andrews, 1987; Taylor & Strickland, 1986). However, research has demonstrated that teachers of deaf children pause frequently during stories to ask questions about or to clarify difficult vocabulary and language (Wood et al., 1986). Thus, teachers should be aware of the implications of stopping during a story to ensure that they will not break up a thought that is being expressed.
Imagery Qualities of Words

Some reading passages are intended to stimulate strong emotional or visual images in the reader. With hearing children, a reader helps to convey the appropriate images of a passage by controlling various aspects of speech and by using facial expressions. Critical aspects of speech are tone, intensity, and pitch of voice. Reading to deaf children requires expertise in bringing words alive in the visual/gestural medium. Facial expression, body movement, eye gazing, force of a sign, and control of the speed at which a sign is executed are some of the reading skills teachers of the deaf must develop. The success of the message being conveyed in Where the Wild Things Are will rely to some extent on how well a teacher is able to transmit the theme embedded in the description of the behavior of the “wild things” and the nonchalant response of Max to this behavior:

The wild things roared their terrible roars and gnashed their terrible teeth and rolled their terrible eyes and shoved their terrible claws but Max stepped into his private boat and waved good-bye. (Sendak, 1983)

Indications of the success at which images embedded in a text are conveyed can often be found in the facial expressions of children listening to and/or watching a story presentation. During the reading of the above passage, our preschool teacher noted that her deaf students would anticipate and mimic her facial expressions.

Complexity and Concreteness of a Passage

Teachers may hesitate to read complex passages because they fear that their deaf students will not understand what is being read. However, for a skilled communicator, the challenge of complex passages can often be met by establishing a spatial relationship between objects, people, and even events
in the visual/gestural medium. In the Lansing project, teachers are encouraged to use ASL linguistic features in their English signing. Hence, for example, in a passage from Amos's Sweater shown below, a teacher might begin to shift his/her body to the right while signing "TABLE" then keep this position until "THE DOOR WAS OPEN" has been signed. By doing this the teacher is indicating that the house is on the right side of his/her signing space. "THE MOON WAS FULL" could be signed with the teacher facing straight ahead. When signing the last sentence, "AMOS" and the barn would be placed to the left of the teacher who could have "AMOS" look across the body to the right side where the sweater had been established.

One night, Uncle Henry left the sweater on the table in the back kitchen of the house. The door was open. The moon was full. Amos could see the sweater from his stall in the barn. (Lunn, 1988)

Complexity and Abstractness of a Passage

Passages that are both complex and abstract present a stronger challenge to teachers. Localization of objects, people, and events in the signing space is still a concern, however, comprehension is dependent upon teachers' ability to convey abstract ideas in a manner that can be readily perceived by the children. In some instances, comprehension will be enhanced with an ASL translation preceding the English reading or with appropriate pictures. Pictures play a critical role in The Magic School Bus Inside the Human Body. This book attempts to describe the many biological functions of the human body, as in the following example:

It wasn't exactly quiet in there. The walls of the stomach moved in and out, churning and mashing the food into a thick liquid. The bus was turning round and round, and digestive juice splashed the windows. Now we knew how it felt to be a hamburger. (Cole, 1989)
Ease of Articulating Words in Signs

Teachers of the deaf frequently note that many English words do not have a sign equivalent. Their option then is to fingerspell the word if they desire to convey the exact content of a book, to use ASL linguistic features (e.g., classifiers) to depict a particular object, or to create a sign. Creating a sign is usually discouraged because of concern that the created sign is not functional in the Deaf community. Still, it is an option for teachers who might desire to create their own sign, have their students create a sign, or create a sign with assistance from a deaf adult. Whatever sign is used, pictures can be used to further strengthen children's understanding of what is being read. Another factor affecting ease of articulation stems from the fact that English is an auditory/temporal language and coding it in a visual/gestural medium may slow down the rate at which a passage can be read. The Butter Battle Book illustrates how individual words (e.g., "Eight-Nozzled," "Kick-a-Poo," "fritz") influence articulation in signs:

Well... We didn't do. And we didn't die. But we sure did get worsted, poor Daniel and I. VanItch was there too! And he said, the old pig, "The boys in my Back Room invented this rig called the Eight-Nozzled, Elephant-Toted Boom-Blitz. It shoots high-explosive sour cherry stone pits and will put your dumb Kick-a-Poo kid on the fritz!" (Suess, 1984)

In contrast there may well be words for which there are no signs available but are critical to the cadence of a story. A prime example of this is seen in the story The Piggy in the Puddle:

See her brother, silly billy, silly billy, silly billy. "Do not waddle, willy-nilly, willy-nilly, willy-nilly. You are much too plump and little to be in the muddy middle. Mud is oofy, mud is poofy, mud is oh so oofy-poofy. What you need is lots of soap." (Pomerantz, 1974)
Handling nonsense words presents a problem for some teachers reading stories to their deaf students when they do not know how to present the words in signs or fingerspelling. The preschool teacher involved in the Lansing project solved this problem by creating her own signs or body movements to match the cadence of the nonsense words.

**Literary Style of Readings**

Mother Goose and other poems offer a different kind of challenge for teachers. Rhyming and pacing are often critical to the appreciation of poems. Reading poems in a nonfluid manner may defeat the purpose of reading in the first place. Moreover, poetry must not be ignored simply on the basis that some deaf children might not fully appreciate its cadence. Nursery rhymes and poems help preschool children develop "an awareness of the differing forms of language . . . and an awareness that these forms can serve different functions" (Blackwell et al., 1978, p. 53). Teachers might initially select poems that do not totally rely on the acoustic awareness of words although rhyming is present. This quality is demonstrated in the following plea of a child for an Alligator Pie:

```
Alligator pie, alligator pie,
If I don't get some I think I'm gonna die.
Give away the green grass, give away the sky,
But don't give away my alligator pie. (Lee, 1974, p. 8)
```

**Stories That Include a Play on Words**

Some authors add a twist to their stories by playing on the meaning of words, or using puns, riddles, and nonsense words (Taylor & Strickland, 1986). This may present a special concern to teachers who are overtly concerned with using signs that are conceptually correct or who hesitate to challenge their students to play with language. Yet, one of the reasons for reading stories
to deaf children is to expose them to various functions of language. Furthermore, learning English requires an understanding that many words have multiple meanings.

Therefore, language play during story time may be a good opportunity for introducing students to the multiplicity of meaning connected to a single word and its sign equivalent. Background information and pictures can be critical to the understanding of some stories that play on words as is illustrated in A Chocolate Moose for Dinner:

Mommy says she had a chocolate moose for dinner last night. And after dinner she toasted Daddy. . . . Mommy says we need a new wing on the house but Daddy says he will sleep on it. . . . Daddy says there should be more car pools. (Gwynne, 1976).

Stories that rely on a play on words are examples of stories during which interruptions may be appropriate in order to allow teachers to discuss the multiple meanings involved in a word or phrase.

The foregoing list of variables illustrates the complex nature of selecting books that are suitable not only for deaf children but which are also compatible with the ability of teachers to sign. In addition to exposure to stories read in English, it may be beneficial for some deaf children to have stories translated into ASL. Translating stories requires a firm command of both ASL and English, and there are few teachers who are highly proficient in ASL. This situation presents teachers with a number of options. They could use what limited ASL skills they have to offer students ASL translations of selected passages from stories. Alternatively, arrangements can be made to have a deaf adult translate and read stories to the class. Or they could continue to read in English only, while incorporating ASL features in their...
signing in order to improve their ability to sign in English and convey the meaning of the stories being read.

Strategies for Reading to Young Deaf Children

Just as children feed off the words and pictures of books and the story reading abilities of readers, teachers feed off the responses of the children to whom they read. No one book can guarantee an unqualified favorable response from all children and no teacher can be expected to make all books accessible and enjoyable to all children. But solid preparation prior to reading and providing sound techniques for the act of reading should help all teachers and their students enjoy reading. The following are suggestions for reading to deaf children enrolled in a total communication program:

1. Make liberal use of animated signing. Be visually expressive when reading a story. Readers must help children create visual images representative of a story. Pictures obviously help in this direction but an enthused reader enriches the linguistic awareness involved in reading. Given the low English proficiency of many deaf children, a reader is an important link to their comprehension of English and their desire to learn it.

2. Overview selected vocabulary prior to reading. Deaf children appear to have difficulty in learning the meaning of words through reading alone (Paul & Quigley, 1990). Thus, activities that introduce children to new words prior to reading them in stories is critical. However, it is unrealistic to expect a teacher to introduce all new vocabulary prior to reading if the list of words is quite large. Hence, it may be necessary for teachers to strike a balance between introducing new words prior to reading stories and during the process of reading a story.
3. **Read the same book over and over again.** All children like to hear their favorite book read many times. Repeated readings allow deaf children to internalize a story and the information provided in pictures. Consequently, with each reading these children can devote more attention to the reader and use their metacognitive skills to reflect upon the language that is being synthesized in the visual channel. Repeated readings was one of the strategies used in a bedtime reading project for children aged five-nine years living in a dormitory of a school for the deaf (Rogers, 1989). Books can be reread over a period of days or weeks depending on the interest of the children. Books that repeatedly use similar language patterns should also be read. They provide multiple opportunities for a child to apply their metacognitive skills to analysis of various syntactic and semantic patterns.

4. **Associate signs with print.** Just as deaf children learn the relationship between signs and their referents (Paul & Quigley, 1990), they must also learn to associate signs with their printed equivalents if they are available (Andrews, 1988; Andrews & Mason, 1986). However, there are questions concerning the time for introducing deaf children to the process of word identification. Wood et al. (1986) found that in one school that had successful readers, the children were introduced to reading when they were about eight years old. It was suggested that children should be engaged in formal instruction in print only when they are able to handle the demands of text.

5. **Read at a comfortable pace.** Interruptions to reading may be costly in terms of comprehension and interest. Pacing is therefore important to ensure that children maintain attention and that teachers do not become frustrated in their attempts to communicate information in a visual/gestural
medium. A comparison of the reading techniques of deaf and hearing children showed that teachers of deaf children were more prone to correct deaf children's errors in reading (Howarth, Wood, Griffiths, & Howarth, 1981). Our teachers also noted that they tended to interrupt their own reading to clarify the meaning of words and passages. Efforts to reduce this tendency, usually by devoting more time to prereading preparations, resulted in greater interest in reading on the part of the teacher without noticeable negative effects on children's attention. On the other hand, as noted earlier, it is understandable that in some instances interruptions may be warranted to discuss certain aspects of a story, such as words with multiple meanings.

6. Help children draw upon their own experiences to understand stories better. It has been suggested that because deaf students have poorly developed bottom-up skills (e.g., phonemic coding) they will rely more heavily on their top-down abilities (e.g., own experiences and knowledge) during reading (Paul & Quigley, 1990). This does not imply that deaf students have highly developed top-down processing abilities. Rather, it reinforces the importance of tapping prior experiences and knowledge to make sense of books whether they are presented in the print or the sign and speech modalities. Hence, teachers should develop students' abilities to draw upon their own experiences to help make inferences, anticipate events, and, in general, better understand stories.

7. Allow students opportunities to select the book they want read to them. One of the goals of reading to young deaf children is to foster an interest in reading. To this end, the type of book read should be guided, in part, by the interest a child has in a particular book. Ideally, the need to stimulate and maintain interest will be balanced with the need to expose
children to certain concepts and values. However, the amount of interest a child invests in listening to or reading a story will likely influence what they will learn from a story. Therefore, allowing young deaf children to select the books they want read may be a useful teaching strategy. This strategy carries with it the additional benefit of developing children's ability to make choices (which is a basic preschool goal).

8. Read what is written. Communication considerations may lead some teachers to avoid reading various parts of a book, to substitute certain narratives with simpler sentences, to only use those signs that are already known by a child, and/or to avoid reading books completely. When we read to hearing children we do not expect them always to understand everything that is read. Instead, we seek to nourish an interest in reading, an understanding of most of a story, and a chance for incidental learning of new concepts and values. Teachers should continue to read even if a deaf child does not understand everything being read. Understandably, if a child understands little and also shows no interest, then a book is inappropriate.

Alternatively, the ease of signing short sentences may make books containing many short sentences attractive selections for teachers of the deaf. Moreover, some teachers may resort to rewriting stories prior to reading them to their students. Stories are frequently rewritten to control for vocabulary, length of sentence, and syntax structure. However, although rewritten texts are seemingly simpler, the changes in text structures can actually eliminate important cohesive features, resulting in a reduction in story comprehension (Beck, McKeown, Omanson, & Pople, 1984; Bonkowski & Akamatsu, 1990; Ewoldt, 1984).
9. **Translate stories to ASL.** Some teachers may have adequate ASL skills that will allow them to translate English stories to ASL. Translation to ASL should also follow the text as closely as possible. One benefit of exact translations is that they expose children to different ways of relating similar stories. For example, there are many variations of folk tales such as "Puss 'n Boots." An ASL translation of a folk tale should depict an author's style for story telling and not merely a teacher's interpretation of important concepts.

**Conclusion**

In a review of the literature, Prinz and Masin (1985) noted that there is evidence that "regular and controlled exposure to linguistic input can serve to accelerate language acquisition in young children" (p. 358). Reading is one way deaf children can be systematically exposed to linguistic input, whether it is in English or ASL. Teachers of the deaf are becoming increasingly concerned about the students' comprehension of English when it is presented manually. Yet, in our project, the improvement of teachers' signing skills in English and ASL improved their ability to read to deaf children. When reading, our teachers used a simultaneous presentation of complete English in signs and speech or in signs only. When observing our teachers reading stories we found the deaf children to be keen listeners irrespective of the language in which the stories were presented. Furthermore, the teachers reported that their students were able to understand much of what they had signed.

However, we do attach one condition to these observations; that is, teachers must take measures to prepare themselves prior to actually reading to their students. Included in this preparation are the incorporation of ASL
features in English signing behavior and the use of ASL translation techniques for whole stories or just parts of a narrative. It is suggested that teachers experiment with reading in front of their students. Experimentation will allow teachers opportunities to refine their signing as well as providing them with information on how best to position a book when reading and arrange students listening to the story. As teachers continue to read and reread books, they should develop a repertoire of stories that they are particularly adept at reading to their students. Good teachers will always refine their story presentation methods as they obtain feedback from their students and others over time.

Finally, all teachers should resolve to practice signing a story prior to reading it to their students. Initially, teachers might practice only in the sign modality as this removes the necessity of coordinating signs and speech in a simultaneous presentation. This will improve their ability to read a story and hold students' interest while simultaneously studying a story for new vocabulary and complexity of syntax. As the signing aspect of reading a story improves, teachers should feel comfortable adding speech to their presentations. Teachers should also watch others read stories in signs in order to study a range of reading techniques. Sign Media has videotapes of fairy tales and fables told in ASL. Sign-A-Vision has a series of videotapes of stories signed in Signed English and ASL by Billy Seago, former member of the National Theater of the Deaf. These stories include "The Magic Pot," "Village Stew," and "The Greedy Cat." The Signed English version demonstrates various ways in which ASL can be incorporated into English signing. Teachers involved in the present project commented that watching these stories gave
them ideas of how to tell stories better in English and introduced them to some ASL story telling schemes.

Thus, reading to deaf children need not be a solo affair. Deaf adults and other teachers should be invited to read to a class. There is much that needs to be learned about how we read to deaf children. Collaboration among teachers and between the school and community will help facilitate this learning process. Ultimately, deaf children have much to gain by having enthusiastic and competent people read stories to them.
References


