

Chapter 5

Conclusion

Introduction

The discussion in this chapter will be in relation to the four questions that the study addresses based on the findings of the preceding chapter. Implications are then drawn for the application of this mode of communication for hearing-impaired pupils.

The four research questions that the study addresses are:

- 1) Can profoundly hearing-impaired pupils learn to vocalize in order to acquire intelligible speech?
- 2) Can Cued Speech help hearing-impaired pupils to develop adequate speech skills in order to communicate with others?
- 3) Can Cued Speech help hearing-impaired pupils to acquire reading skills at age appropriate level?
- 4) Is Cued Speech a useful tool to adopt for developing reading skills of the hearing-impaired?

Discussions and Implications

Can profoundly hearing-impaired pupils learn to vocalize in order to acquire intelligible speech?

It has long been recognized that the hearing-impaired child's passport to life in society at large is the ability to speak and to understand speech. Chua (1992), commented that many deaf adults in Malaysia sign and fingerspell without voicing or mouthing language. This is very common among hearing-impaired children. For the totally deaf child, teaching speech through the auditory-oral means is difficult but

impossible. "Hearing-impaired children CAN learn to talk! But not all hearing-impaired Children DO learn to talk!" (Calvert, 1984). And even if they talk, often, their speech is found to be choppy, distorted and hard to understand. Children with normal hearing gradually improve their speaking ability until they have mastered all the speech sounds, usually by age seven to nine years (Calvert, 1984). However, children with severe to profound hearing impairment, it is common to see slow or no progress at first. This depends, of course, on special instruction. Through Cued Speech, hearing-impaired children are taught to produce most of the speech sounds of the letters and practices using them until they become automatic. They were first taught the vowels and children were shown the handshapes that go with each vowel. And the same time, the child tries to produce the necessary sounds. With systematic teaching, use of functional sensory aids, and the use of residual audition, (one can only exploit residual hearing, if it is there to exploit), then, perhaps the profoundly deaf child can learn to vocalize and produce intelligible speech.

Work on speech of the hearing-impaired has shown that it is highly encoded. Liberman (1990), stated that the acoustic cues leading to the identification of the spoken word are not strung together serially like letters on a printed page, but are often carried in parallel. This parallel production of acoustic cues results largely from the coarticulation of speech sounds. Thus, vowels not only differentiate between words, but also carry considerable information on the consonants which precede or follow them,

Once speech is established, it is normally used in the short-term and long-term memory storage of verbal materials. Hearing-impaired children who do not have

efficient speech skills develop less efficient mechanisms of storage and rehearsal than normally hearing children (Ling, 1974). Thus, if we used speech in coding verbal information, we develop perceptual mechanisms that focus our attention on speech.

What is the parents' role in Cued Speech? Parents of this group learn Cued Speech with the aim of being able to speak with their deaf child just as naturally and as easily as they are able to do so with their normal children. From the study, it was found that parents readily learn how to cue and then teach them how to vocalize and later produce speech sounds. In this case, Cued Speech provides these deaf children with a verbal language that is coded in exactly the same syllabic form as speech.

During the early intervention programmes, deaf children are taught speech and they learn to lipread the speaker. They are motivated to attempt to produce speech sounds during auditory training and speech teaching and this will help them at developing spontaneous speech later on. In the early stages of acquisition, the hearing-impaired child may not be able to produce the sounds at the required rate needed and this necessitates repetition.

Teachers found it much easier to teach these hearing-impaired children using Cued Speech as it provided them a way to use and able to introduce as many words as possible to them, not only concrete words, but also those with abstract meaning. Furthermore, they do not have to remember the many signs available and it is much simpler to remember the cues and used this tool to teach. Teachers too managed to learn the cues in a short time and consequently, this enable tem to acquire enough basic skills to cue any word whatever that they may wish to say. In a survey on methods of teaching

deaf children, Chua (1992), found that about two-thirds out of 3254 teachers-of-the-deaf surveyed, 68.6% of them would welcome a chance to learn Cued Speech.

As such, Cued Speech is seen as a practical form of the language (Bahasa Malaysia or English) which enables every spoken syllable to be heard as well as seen at the same time, so that the hearing-impaired pupils can pick up the language with ease just merely by watching the speaker's mouth and hands.

From the results collected, it was found that the most parents took a relatively short time to learn the cues, the fastest being two weeks. An average parent can learn the necessary basics of the cues within two weeks. With frequent practice, they can attain a rate of cueing which matches the rate of speech a person normally speak. Tan (1995), supported that it is possible for parents to develop automaticity in the use of Cued Speech that they will be able to speak with their deaf children in the same spontaneous manner as they do with their hearing children, at the same time, these deaf children were able to learn the spoken language in the same natural manner as normally hearing children do.

Can Cued Speech help hearing-impaired pupils to develop adequate speech skills in order to communicate with others?

Speech is an invaluable asset for hearing-impaired children and hence its development merits high priority. Therefore, one of the major considerations in the education of the deaf is to achieve a level of speech competence such that the individual can make himself understood to the "person-on-the-street" (Gold, 1980). Various investigations in research have indicated that only about 20% of the speech output of the deaf is understood by inexperienced listeners. He reported that in each of the studies

carried out, severely to profoundly deaf children in the range from 6 – 15 years were asked read test materials or to speak spontaneously about an event or picture. Recordings were made of their verbal output and a score was calculated from the number of intelligible words relative to the numbers of words produced. This lack of speech intelligibility has been associated with some frequently occurring segmental and suprasegmental errors, the former being articulatory problems such as errors in voicing and omission of consonants as well as vowel substitutions. Supra-segmental errors are associated with problems of timing, intonation and voice quality. Monsen (1978) cited in Gold (1980), observed that there are some very good speakers who speak rather slowly, even though slow speaking rate is generally associated with poorer intelligibility. He further suggested that improvement in control duration might have a beneficial effect in intelligibility for speakers who have good articulation skills.

There is no disputing the value of practicing Cued Speech. Children following this approach, on the average, tend to develop good quality and speech output and to make good use of residual hearing in communication. In a pilot study done by Beth Dowling, involving two teachers and two parents using Cued Speech to teach 20 Spanish words to four prelingually, profound hearing-impaired preschool children accustomed to Cued Speech. These children were tested on their ability to identify each of the 20 words, all nouns, by choosing the correct one of four pictures, when the word was presented through audition and it was found that the average score was 79%. Then, they were tested with aural-oral presentation and all the children scored 100%. Thus, the results of the pilot study indicated the rapidity of words learned through Cued Speech

(Cornett, 1990). About 72.7% of the subjects were able to produce intelligible speech that can be understood by others.

Since speechreading is an essential part of Cued Speech reception, all children who use this mode of communication will automatically become good speechreaders. Furthermore, although auditory intelligibility is not essential for the efficient communication of language through Cued Speech, nevertheless, voiceless mouthing is being adequate for this purpose. Hence, these children are being motivated to develop good articulation skills.

With appropriate hearing-aids and adequate training, nearly all children with minimal levels of measurable residual audition can use hearing to tell when they or others vocalize, control their voice patterns and identify at least some vowels. These children were aware of the usage of hearing-aids as a means of amplifying sounds. Those with more than minimal levels of hearing can usually be expected to do considerably more than this (Ling, 1978).

When children cannot directly perceive the nature of the sound patterns one wishes to develop, either through audition, vision or a combination of the two, thus some form of visual form should be use. The child, first has to learn to associate phonemes with graphemes and it is reasonable to use the written form as a prompt to inform the child what sound one wants him to produce. In this way, the child is taught the many- to-one relationship of allophones to grapheme if he is to speak naturally. This is the advantages of Cued Speech where it assist the child to elicit speech sounds.

In general, hearing-impaired children need to experience many examples of each word or unit of speech in order to have models to imitate and remember. They need

clear examples of speech in order to imitate it accurately, and very likely, their speech is often of poor quality, distorted and even confusing. They are not able to monitor their speech as they are not able to hear their own speech sounds and cannot compare them with that of others through hearing. And lastly, they need to hear and see many examples of spoken language in order to associate words with meaning and to understand grammar. They will not develop understanding and use of the language naturally. His ability to use language influences how well he understands speech. So, increase in speech production will increase the power to grasp the language.

Can Cued Speech help hearing-impaired pupils to acquire reading skills at age appropriate level?

It is clear that the child must be able to analyze the sounds of the spoken words if he is to master reading (Tough, 1980). Even if he is not deliberately building up words phonically at first, he needs to look for clues that the initial letter of the word can give and he needs to begin to recognize the signs that represent particular sounds. Helping the child to focus on what are the essential features of words and sounds can only be done through talking with him, to help him understand what it is he must listen for, so that he may discriminate between sounds.

Hart (1978), pointed out that the cause of low reading achievement has been caused by early language deprivation which is considered the critical period for language development in young children. Without the ability to hear during this time (age 1 to 5) and without some means of communication with others, deaf children will typically arrive at age five with much lower skill levels in functional language than hearing

children. This is because language skills provide the foundation on which reading will eventually develop. Thus, the early language deficits of deaf children will result in reading difficulties later on.

The learning of a language, e.g. Bahasa Malaysia or English and the teaching of reading in this mode of communication, is that, it capitalizes on the automatic use of language structures that children have internalized. Hart et.al. (1977, p 16), state that, "as beginning readers, the children must 'identify 'chunks' of graphics symbols and relate them to corresponding semantic 'chunks' which originate on the organized interpretation of their life-space." In addition, the word lists for each year and word sequence lists of language units from the National Curriculum Syllabus, which can be incorporated into pragmatic situations and written language for the hearing-impaired.

This also supports Halliday's (1973) contention that children learn spoken language as they use language functionally. It provides more meaningful structure than traditional-language-experience and their traditional materials unrelated to real language usage.

Finally, because of the phonological structure of Cued Speech, children who use this particular mode of language communication should experience little difficulty in learning reading skills through the letter-sound method, especially in the Malay language, (Bahasa Malaysia), which is regular in its orthography. In this regard, the regularity of spelling in Romanised Bahasa Malaysia should make reading skills acquisition by Malaysian Cued Speech users especially easy. Tan (1995) agreed that all the children in the programme, were able to read Bahasa Malaysia very well and would readily read a book given to them.

Results from the Burt Reading Test indicates that the children were able to read words shown to them. About 32% of the children were found to be reading at the age equivalent to their chronological age and a majority of 55% were actually reading at age above their level. Meanwhile, a record of 68% of them achieved a reading age that is higher than their actual age in the Holborn Reading Test. Both the test showed that these children were able to acquire an reading age that is at least equivalent to their hearing peers.

Is Cued Speech a useful tool to adopt for developing reading skills of the hearing-impaired?

Infants spend much of their first year communicating without formal language. It is such communication that both gestural and spoken language have their roots. Therefore, parents have realized the importance of early language programme for the optimum development of many skills at such an early age. Undue delay in starting can hinder long-term development, however, for as Black, Rose and Berlin (1978), cited in Ling (1984) point out when children are not given a language at an appropriate age, they are being shown that it is not important and are therefore, learning to do without it.

There is now a considerable amount of evidence to support the view that the development of language makes an important contribution to the course of cognitive development. Vygotsky (1962) in Tough (1980), showed how using word helps stimulate the development of those concepts that cannot be abstracted from concrete experiences and so are dependent on the use of language with adults. He also showed the part language plays in helping children gain control over their actions. Furthermore,

children use language to analyze and reflect on present and past experiences, to reason and justify, to predict and consider alternatives possibilities, to talk about events in the future, to project into the lives and feelings of others and to build up scenes, events and stories in the imagination (Vygotsky, 1962 in Tough, 1980).

Studies of parent-child interaction by Halliday (1973), show how early holophrases gradually emerge into differentiated grammatical elements. Then, studies by Snow have shown that on the whole parents provide a well formed model from which children learn language, but tend to reduce the complexity of their utterances when talking with younger children (Snow & Ferguson, 1977).

Amongst studies of language in the home, there is some reference to reading books. For example, mother's speech was more complex in free situations, which included playing, chattering after a meal and reading a book. Snow and his associate also found that reading books stimulated the most complex speech (Snow & Ferguson, 1977). In this regard, most of the children tested possess a habit that encourages them to read. About 82% of the children enjoyed reading and would at least read a book a day.

Far too often, teachers of hearing-impaired pupils' present reading stories that lead to frustration for those who lack the experience and knowledge of the language structures. Moreover, the teachers may confound the problem by asking questions about the story in different and probably unfamiliar, language for the pupils to test their understanding of the story. It is no wonder that hearing-impaired pupils generally turn away from reading in confusing and boredom.

The teacher who has failed to grasp the essential understanding that reading is language and that the two must be merged, contributed to the child's total educational

failure. Young readers must gain sufficient satisfaction in reading in the short term that will lead to competence and satisfaction in a lifetime. Only through the integration of listening, communication, reading and writing can hearing-impaired pupils achieve such success.

The importance of language and literacy skills, is that, it is central to learning throughout the curriculum. Education in the early years should not only be concerned with helping children to become literate and numerate, but also must be concerned with developing personal qualities, general skills of communicating and the abilities to think and reflect on experiences. The promotion of children's skills of using language should create the impetus for the child to seek further understanding and to acquire new skills and knowledge, that is, to develop self-motivated learning. The development and use of language should not, therefore, be seen as one curriculum objective to be realized but as a major means through which most other objectives for the child's education will be reached.

Implications of the Study

Parents of hearing-impaired children, who themselves are often hearing, were more distressed by their child's inability to speak than by his inability to hear. There will be a break-down in mother-child communication and hence, language deprivation. Despite their deafness, most of the parents would thankfully want their hearing-impaired children to talk. When parents were informed of the existence of visual language based in the visual-gestural mode, and which their child has no handicap in learning to use to express, they regain their status as parents in the anticipation of the communicative

possibilities. The parents then come back to the priority of engaging the child in language.

Parents of deaf children often fail to develop even an average proficiency in signing, at least during the important early development period, thus it become a hindrance while trying to talk to their deaf children. In a study of twenty mothers using a form of manual communication for one to six years, Crandall (1974) found that 75% of the hearing mothers' signed utterances were grammatically incorrect according to the rules of English. Likewise, mothers usually gave up when the signing tends to be limited to only those of basic signs. But when they were able to cue, they could cue any words they want, and it became much easier to 'talk' to their children. And secondly, the sentences formed contained correct grammatical structures, rather than just merely broken phrases.

One obvious visual substitute for acoustic input is the appearance of the speakers' lips. A major problem with lipreading, is that, the phonemes of English are greatly under specified by lip movement (Campbell, 1972), cited in Gray (1955). In Cued Speech, the attempt to minimize the demands of the extra input by making the disambiguating signs as close to the lips as possible. Such is the advantage of Cued Speech.

Teachers using Cued Speech found that teaching became much more simpler in giving explanations and pupils were encouraged to participate in discussions and explorations. The spontaneous responses from the pupils showed understanding on the subject and an active learning took place most of the time. Teachers were able to express meanings of vocabulary relatively easy as they were able to introduce many difficult words. This was an improvement form when they were often frustrated and unable to

deliver the lessons efficiently. Usage of words, especially scientific terms was not a problem to them anymore.

From the pupils' feedback, using Cued Speech made them more confident as they felt their speech and language abilities were much improved. A child's ability to use language influences how well he understands speech. Once they have mastered the structures and rules of the language they can use them automatically, then their speech is likely to improve. According to some pupils, they were not vocalizing at all at aged four, but after using Cued Speech continuously, they were happy that their speech has improved to the extend that other people were able to understand them now.

Secondly, they enjoyed reading and happy to be able to read a variety of books. In this way, they were able to get information and knowledge and thus expand their vocabulary. They were also glad that the did extremely well in the tests set by the school. As such, their academic performance showed an overall better results.

Thirdly, they found that their spelling abilities were much improved. They were able to spell long words and were able to take part in the school spelling competition. Generally, their performance in reading and writing skills has increased through the years with more practice and new experiences.

Conclusions

Hearing-impaired children to a greater or lesser degree, are at risk in acquiring adequate communication skills and are likely to have difficulty understanding what is going on around them. They may exhibit language deviance and delay; speech that is difficult to understand, inappropriate vocal patterns and a lack of comprehension of

speech. Their communication problems overlay areas of development, especially in academic performance and the effects must be minimized if the child is to realized his potential.

Learning to read is not an easy task for deaf children. They are not only just beginning to learn to read, but they are also learning a new language at the same time. Deaf children do not learn and use language naturally, instead they must be taught language deliberately. Thus, when hearing-impaired children begin the process of learning to read, often their linguistics skills are generally quite limited. Their vocabulary is, on the whole, small, highly concrete and deficient in function words. They are only at the beginning stages of experimenting with and generalizing the morphological and syntactic rules of the language. This means that there is almost inevitably a gap between the deaf child's actual language level and the reading material that the child is attempting to interpret (Hart, 1978). In order to bring the gap closer, Cued Speech can provide the means of helping these prelingually deaf children acquire speech, i.e. to read aloud, possess a reading age that is about equivalent to their peers and eventually competency in language skills.

In summary, the results from the study indicates that most of the children tested, possess good speech skills that enables them to produce speech sound accurately and most off them are able to engage in conversations with either hearing or non-hearing peers using speech. Secondly, they possess reading ages that is equivalent to their hearing peers, and able to read the words with ease. In fact some of them acquired reading ages that is one or two above their actual age. Thirdly, they enjoy reading and show interest by reading materials that are available to them. They would initiate also

reading without having to ask them. Generally, their parents were satisfied on their academic achievement in general exams in school.

There is no single correct way of teaching the hearing-impaired pupils. Considering Cued Speech have many advantages over other methods, it is hoped that parents consider using this means of interacting with deaf children. Finally, this study suggest that teachers and other professionals involved in the education of the hearing-impaired look into their own practices to see how their teaching using this alternative tool can affect their students' process of learning. In this way, they may discover the effectiveness of this special tool for teaching the hearing-impaired.

Cued Speech is not a language, method or philosophy. Cued Speech is a tool. It is the view of this, that, there should be more serious, organized efforts to promote the use of Cued Speech with various population in need of a supplemental assistance in learning spoken language as well as to present Cued Speech as the valuable tool and a viable option in the education of hearing-impaired.