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**SIGN LINGUISTICS AND LANGUAGE EDUCATION FOR THE DEAF:
A STUDY OF RESIDENTIAL AND DAY SCHOOLS FOR THE DEAF
STUDENTS IN SHILLONG**

*Dissertation submitted to Jawaharlal Nehru University
in partial fulfillment of the requirements for the award
of the degree of*

Master Of Philosophy

**By
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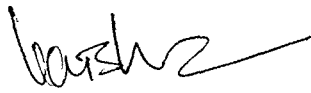


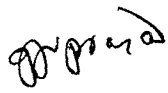
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CERTIFICATE

This is to certify that the dissertation entitled “ **Sign Linguistics & Language Education for the Deaf: A Study of Residential and Day Schools for the Deaf Students in Shillong**”, submitted by Melissa Gracil Wallang, in partial fulfillment of the requirements of the award of the degree of Master Of Philosophy of the University, is to the best of my knowledge an original work and may be placed before the examiners for evaluation.


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DECLARATION BY THE CANDIDATE

This dissertation entitled “SIGN LINGUISTICS & LANGUAGE EDUCATION FOR THE DEAF: A STUDY OF RESIDENTIAL AND DAY SCHOOLS FOR THE DEAF STUDENTS IN SHILLONG”, submitted by me for the award of the degree of Master Of Philosophy is an original work and has not been submitted so far in part or in full, for any other degree or diploma of any university.



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Abbreviations & Notations:

ASL: American Sign Language

BSL: British Sign Language

ISL: Indian Sign Language

MBOSE: Meghalaya Board of School Education

S&CHH: School and Centre for the Hearing Handicapped

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CHAPTER I

Introduction

1. Deafness

The term 'deaf' literally means a person with whole or partial hearing loss. Similarly the term 'hearing impaired' denotes whole or partial hearing loss. Both these terms will be use in this present study. It is generally assumed that once a person is deaf, he/she would be unable to speak. This may be true within the context of profound hearing loss. As Crystal¹ points out that the phrase 'deaf and dumb' is a misleading term as the ability to speak for a deaf person depends on his/ her degree of hearing loss. Deaf people can produce speech depending on degree of hearing loss and some exposure to language and speech. With the advancement of research in the field of science and technology and medical experts, speech equipments for instance the hearing aid, the ear-mould, the speech trainer and the audiometer have been developed. In the field of language and education, speech pathology, linguistics, etc, several materials and methods like lip-reading, speech-reading, facial expressions, gestures, etc have been developed. All these developments have contributed to the deaf in their effort to interact with the community.

Emily Cockayne² described the experiences of the deaf in early modern England, that was based on several evidences, on how being deaf was considered as a disease, a certain deformity that prevents one from enjoying the several functions as a human being in a society. The author discussed the advantageous of the deaf those who are from a wealthy background on their easy access to special education and how those deaf with poor background were left to beg. The author also gives a profile on the laws related to the deaf experiences and how being deaf deprived them from ownership of property, marriage, religious spiritual food and so on so forth. Kudlick³ working on the history of disability point out that deaf history move from thinking about disability as an individual's pathological characteristics to considering it as

¹ Crystal, David (1980): *Introduction to language pathology*. p.134

² Cockayne, Emily (2003): *Experiences Of The Deaf In Early Modern England: The Historical Journal*. Vol. 46,3. pp.493-510

³ Kudlick, J. Catherine (2003): *Disability History; Why We Need Another 'Other': The American Historical Review*. Vol.08. pp. 781-82.

social category, and regarding deafness states that, in many legal, social, medical, political, and personal situations, deafness fits.

Padden⁴ in her review of Baynton's 'Forbidden Signs' points out, that before 1960 definitions focused on deafness as an affliction of the senses, and today definitions also refer to deafness as it expresses itself in the cultures and societies of deaf people. The prominence of one or the other type of definition, or even a mix of the two, is a matter of cultural construction. Baynton explains, deafness is not simply a condition of the senses, it is also a way of life including, of course the use of a sign language.

Often it is found, particularly in Shillong, a deaf person is categorized as the so called 'abnormal' and often distinguished from the 'normal' one. He/ She may be impaired with the disability to hear and consequently results in language delay and development, and speech disorder. But if a deaf person is considered 'abnormal' because of his/her inability to speak, this is a misconception, for they have a language of their own, a form of sign language using facial, the space and hand movements as articulators. Moreover the term 'disability'⁵ suggests a person who falls short of physical fitness preventing one from the fulfillment of certain normal functions as expected from an individual in the society. True deafness means lacking one physical fitness required for normal function, but again, deafness although leads to language and speech disorder does not necessarily mean that the brain stops functioning normally. A deaf person has the same ability similar to any normal hearing human being to rationalize, to learn, to comprehend, to analyze, to interact and exchange belief and ideas, to perceive, and to grow intellectually once he get exposure to language. According to Reed⁶ the direct consequence of deafness is the impact on communication.

Klima & Bellugi⁷ point out however that "the deaf use a system of communication that fulfills the same intellectual expressive and social functions as do spoken languages; but instead of being base on voice and perceived by the ear their

⁴ Padden, A. Carol (1999): Rev: *Forbidden Signs: American culture and the campaign against sign language*: by Baynton, C. Douglas: *Journal of Linguistic Society of America*: Vol.75.1. p.120

⁵ *International Journal of Disability Studies*: Vol-1. Oct-Dec 2000.p. 61

⁶ Reed, Michael (1987): *Educating Hearing Impaired*. p. 82

⁷ Klima, E. S & Bellugi, U (1979): *The Signs of Language*: Harvard University Press. P.1.

systems is base on the signals produced by the hands and perceived by the eye”. Therefore the criteria that set them apart from the hearing world is that they have no oral language, which is a regular mode of communication among the people in the society that can be easily comprehended by everyone in the society, and therefore the deaf cannot be identified with the rest of the majority in the society. To put it in simple words it is like stating that ‘you are deaf and therefore you cannot speak and we do not understand what you are saying’ and naturally is ostracized as ‘abnormal’ or ‘deaf and dumb’. Kyle⁸, et.al states “several studies had established that deaf people’s intelligence was similar and their slight discrepancy in IQ was likely due to culture and language bias in even non-verbal intelligence tests”.

It is about time that the rest of the majority community be made aware of the development of sign language as a native language of the deaf community which is mutually intelligible as any oral language spoken all around the world. We cannot deny the fact that, the deaf community although still a minority group of people is growing and evolving in its culturc, and knowledge and a deaf individual will call a hearing person as handicaps for not knowing his/her language. Just as the hearing world is growing in every sphere of life, so does the deaf community. But we cannot also deny the fact that although the deaf communities have moved forward forming independent groups with their own cultures and languages, they still need the assistance of the rest of the majority of the community.

Although pointed out by Kudlick as mentioned above, the fact also remains that the deaf are still struggling to function as other non-disabled members in the society, but it is also a fact well known for their inability to speak but yet they never cease to struggle for their acceptance and reaching out for recognition of their language to fully function as the rest of the community in many social, political economic and personal situations. It is also a fact that parents whether hearing or non-hearing parents, scholars and linguists and others who are trying to create a positive outlook on deafness through their experiences and research have continuously pointed out that deaf people functions quite normally as the rest of the society, their limitation is

⁸ Kyle, J. G., Woll, B & Deucher, M (1931): *Perspective on British Sign Language and Deafness*. P.10.

speech, which place them behind the rest of the society and this does not make them any less human. It can be raised here with the deaf slogan⁹ “The Deaf Way is *We Can Do Anything Except Hear*”, the main issue is the acceptance and recognition of their language to allow the deaf to function as any hearing people. Kyle (1991) & Lane (1995)¹⁰ states that deaf people argue that, “the deaf community forms a culturally and linguistically discrete group, defined by a common culture, beliefs, experiences, rules of behavior, and most centrally the use of sign language as its natural vernacular. Thus the deaf community can be seen as a cultural and linguistic minority, existing within a dominant hearing culture”.

1.1 Causes of Deafness

From the various researches in the field of deafness several etiological factors were found to be responsible for deafness. Other than inherited, common diseases like problems of ear infection, smallpox, fever, jaundice, maternal rubella (German measles), meningitis, etc, are also the common and most prevalent causes of deafness. These diseases can occur either during pregnancy or acquired after birth at any age or is acquired with the onset of old age. Depending on the type of deafness prevention can be given. Prevention is usually by providing counseling to parents on health education, treatment of the mother by providing sufficient nutrition, surgery, provisions of hearing aids, rehabilitation, special education, etc.

1.2 Types of Deafness

Deafness can be categorized in terms of degree of hearing loss. Fig1.1¹¹ below represents the relationship of speech sounds to hearing level.

⁹ Deshmukh, D (2002) *Sign Language And Bilingualism In Deaf Education*: In Immanuel, (eds.) *Listening to Sounds and Signs*. P.61.

¹⁰ From Mesthrie, R., Swann, J., Deumart, A & Leap, L. W (2000) *The Sociolinguistics of Sign Language: In Introducing Sociolinguistics*. p. 425

¹¹ Bench, J R (1992): *Communication skills in Hearing-Impaired*: in Crystal, (eds.) *Studies in Disorders of Communication*. p.22.

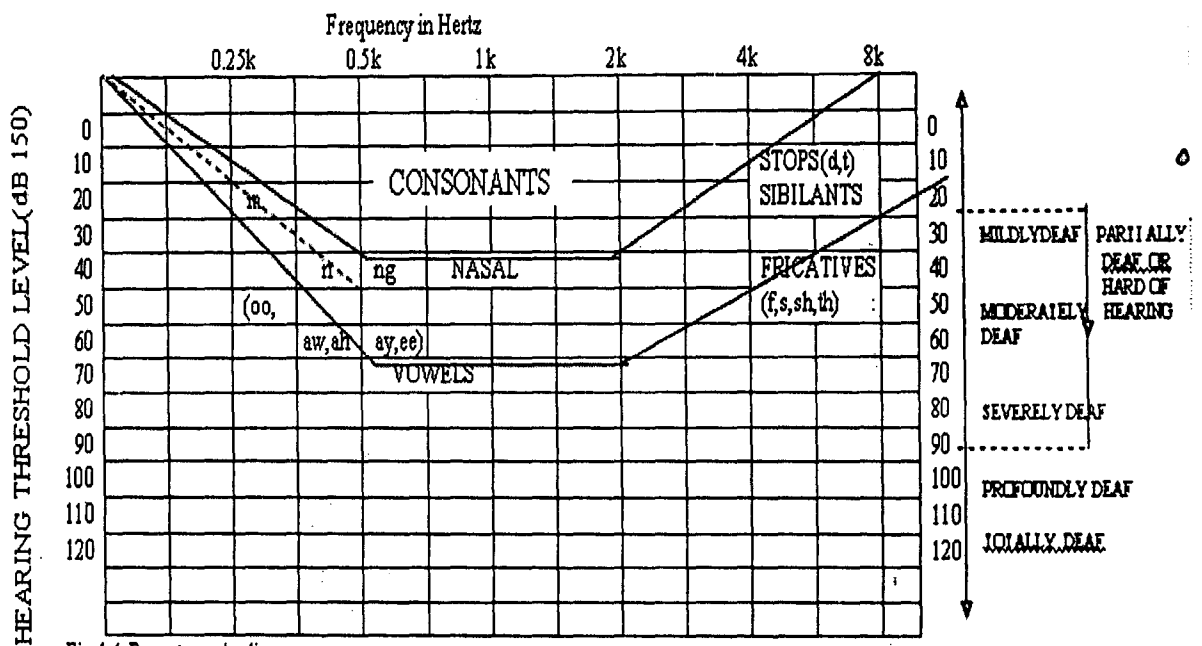


Fig-1.1 Pure- tone Audiogram.

The pure tone audiogram given above in fig1.1 also indicates the audibility of some of the different classes of speech sounds viz, vowels and semivowels, sibilants and fricatives, and stops consonants. On a dB scale hearing up to 30dB is considered mildly deaf, up to 50/60dB moderate/ partial or hard of hearing. 80dB is considered severely deaf, 100dB as profoundly deaf and 110-20dB is totally deaf.

1.2.1 Deaf-Blindness

Literally this type of deafness meant people having hearing loss either unilateral or bilateral with additional visual disability. Vacha¹² categorized deaf- blind persons as follows:

- (1). Congenitally deaf-blind (from Birth) who may never develop speech.
- (2). A deaf person who subsequently loses sight who may or may not have good speech. These are mostly conditions of Usher's Syndrome, muscular degeneration, diabetic retinopathy, cataracts and glaucoma.
- (3). A blind person who subsequently loses his hearing (who will possess speech in most cases, but due to his deafness will have to receive manual communication).

¹² Vacha, B. N (2002) *Total-communication And Communication With Deaf Blind*. In: Immanuel, (eds.) *Listening to Sounds and Signs*. p. 89-90

(4). The adventitiously deaf-blind in adult life (who will have language and speech) will need manual communication for receiving information, depending on the degree of deafness.

1.2.2 Profoundly Deaf

The degree of hearing loss that is greater than 90dB is considered as profoundly deaf. For a profoundly deaf there is still some degree of hearing capacity known as residual hearing. In early intervention and treatment programme for speech development, this degree of residual hearing is utilized for training deaf children to be familiar with the environmental sounds. Familiar sounds like the sounds of a whistle, the sounds of thunder, the sounds of a slamming door; the sounds of a ringing bell, etc are supplied to the children so that they can distinguish between the various sounds.

1.2.3 Hard of Hearing

Riper & Emerick¹³, state that the cut-off points that distinguish the profoundly deaf from the hard of hearing is the hearing loss of 90dB or more at several frequencies say between 250-2000Hz. Even though occasionally they may be able to hear a few extremely loud sounds they cannot rely on their hearing for communicative purpose. They can hear the frequencies higher than 2000Hz sometimes in the 30-50 dB ranges. Based on these differences they can be classified as mildly deaf and moderately deaf. Severely deaf are those who can hear within the range of 60- 80 dB (ref. Fig 1.1. Pp 5).

1.2.4 Conductive / sensorineural deafness

In the context of anatomical, physiological and neurological conditions, Crystal¹⁴ distinguished the following types of deafness based primarily on where the lesions occur in the auditory pathway:

¹³ Riper, V.C & Emerick, L (1990) *Speech correction: An Introduction to Speech Pathology & Audiology*. p. 458

¹⁴ Crystal, David (1980) *Introduction to Language Pathology*. p.131

Conductive Deafness- refers to any interference with the transmission of sound to the inner ear.

Sensorineural deafness- refers to the interference arising from the inner ear itself, or in that part of the auditory nerve as far as its first synapse in the brain stem. Sensorineural deafness is further divided into common sensory (or cochlear) deafness, due to inner ear damage, and the unusual neural deafness due to nerve disease, typically a tumor (acoustic neuroma).

1.2.5 Pre-Lingual / Post-Lingual Deafness

Another type of classification generally in terms of speech and language development is as follows:

Pre-lingual –Deafness that occurs before the development of language, i.e. those who are born deaf and have no language input at all.

Post- lingual- Deafness that occurs before the development of language, i.e. those who acquire deafness after certain period after birth who also have a certain amount of language input.

1.3. Deafness based on the Nature of Input

Jackson¹⁵ states “that hearing impaired is faced with the task of learning a spoken language on the basis of degenerative input allowing us to test the relative role of well-formed input in models of language acquisition”. Receptive nature of input relies on the mode of communication (oral/manual/total) which is used between the child and the parent which is again depending on children having hearing /non-hearing parents.

1.3.1. Hearing parents and The Nature of Problems

As soon as parents detect that their child has a hearing problem, they realize that the only mode of communication with their child remains is a sign language with the help of gestures. For instance, it was observed how one father taught his daughter

¹⁵ Jackson, C. A (1988): *Linguistics & Speech Language Pathology*: In. Newmeyer (ed) *Linguistics: The Cambridge Survey*. pp 260-261.

how to say the word 'pa' (father) by constant drilling for the correct articulation. Another parent testifies that he is convinced that deaf people can speak, with the support of the technique of lip-reading. Since English is the medium of instruction in schools, parents interact with their children in English, and training their children to be familiar with the English vocabulary. It was observed, that parents still use the signs like gestures for where?, sleep, smile, eat, drink, wash, etc that developed out of the need to communicate. These eclectic gestures can be termed as home signs. Deaf children in communicating and interacting among themselves in the school initially rely on these home signs.

1.3.2 Deaf Parents and The Nature of Problems

It always follows that children would acquire the language of their parents and the others in their home environment. Accordingly, deaf children with deaf parents would naturally acquire the language of the parents, which is sign language. Deaf children with deaf parents would possess quite an amount of feedback on sign language compared to those having hearing parents.

The deaf community as pointed out earlier is not a homogeneous group of people where the only shared criterion that binds them together is their impairment. It varies firstly from one's degree of hearing loss, which determines individual level of speech and language development. Secondly a deaf child may be born to hearing/non-hearing parents who determines the nature of the child's first language, i.e. oral or sign language. Thirdly based on preference and aspiration the system of education that will suit the child's nature of deafness has to be decided which correlates to the nature of input received by the child. Fourth what method of teaching should be used in teaching the deaf? Fifth how to facilitate learning of the first language to a profoundly deaf?, and lastly how to relate sign language to a normal spoken language at least in its written form?.

Success and overall development of the deaf children will therefore depend on the degree of hearing loss, nature of language input, early detection and treatment. These are crucial for language development and student's aspirations where a suitable educational programme could be selected for a particular child and also assemble

similar cases together. It is also necessary to have schools categorize learners according to the degree of deafness rather than including all in one group. Efforts should be made by the government, NGO's, Rehabilitation centres, etc, not only to help in terms of finance and education but social integration with the rest of the society. As Kyle and Woll¹⁶ had pointed out that "the goal of integration is not to rise up but to accept, not to educate but to share knowledge with".

2. Deaf Education: Approaches

2.1 Fingerspellings

Fingerspelling was another means artificially developed that is still use as a method for teaching the deaf students. Dalgarno¹⁷ (1661) devised a means of communication through fingerspelling, which was argued as the ideal way to teach deaf people; where Dugald Stewart, the Scottish philosopher, rediscovered his ideas in 1815. At present fingerspelling is use to introduce proper nouns, new lexical items, etc and word formation process for the deaf.

2.2 Oral Approach

Previously with the idea that deaf people have perfect vocal mechanisms and the only limitation that they have is the inability to hear deaf education in the past had been concentrating on speech development that came to be known as the oral approach. This method employed the techniques of lip-reading initially started by Samuel Heinecke¹⁸ (1727-90) and the oralist approach gained strength in the 19th century from the conference in Milan in 1880. There are deaf people who have a remarkable proficiency in lip- reading for instance a woman¹⁹ at the age of 4 became profoundly deaf, and due to her lip- reading skills, she has been able to provide her services in solving and preventing crimes and major destruction. This reveals that in order to be excellent in lip- reading one has to have an idea of how spoken language

¹⁶ Kyle & Woll (1985): *Sign Language: The study of Deaf People and their language*. P. 269

¹⁷ Kyle & Woll (1985), *Sign Language: The Study of Deaf People and their Language*. P. 37

¹⁸ Mesthrie. , Et.al. (2000) *Introducing Sociolinguistics*.p.429

¹⁹ Palmer, A (Dec, 2002) *Lip Service: in Reader's Digest*: p.134-138

is articulated. Several cases²⁰ have also been reported regarding the attitudes of deaf student's toward spoken language. Students were forced and constantly asked to produce speech where sign language is not encouraged at all. Similar is the case in Shillong and according to the speech therapist profoundly deaf children do not show interest in speech development. It is like asking the students to produce meaningless sounds in the air for it is not at all comprehensible or intelligible to the listener's ears as compared with the ability of those having unilateral (affecting one ear) deafness.

2.3 Manual Approach

Another approach in the 18th century known as the manualist approach²¹ combining signing (primarily, manual sign codes) was developed in Paris by the Abbe Charles-Michel de L'Epee (1712-89). William C Stokoe in the United States provided the first linguistic description of sign language (ASL), and linguists like Tervoot in Holland and Klima & Bellugi in the 1960's & 70's have also conducted research in the field of sign language exploring its nature and how sign language is formulated, structured and produced by deaf signers. At present the use of sign language is increasing, where educators are more aware of the importance of sign language and consider it as a tool for language learning and teaching, although the oral and manual approach is still a controversial issue. However all these depend on student's attitudes towards sign language and goal of learning and it will be further discussed in detail in later chapters.

In India, the development of sign language and its recognition by the majority of the society and the deaf educators as a language in its own right and its use as the medium of instruction in schools specifically meant for the deaf, still have a long road to go. Gopalakrishnan²² states that, "a deaf person finds it better to communicate in sign language, a language that has in the past often been neglected and misunderstood. This is particularly true in India today. Even professionals working

²⁰ Mesthrie, , Et.al. (2000): *Introducing Sociolinguistics*. p.430

²¹ Mesthrie, , Et.al. (2000): *Introducing Sociolinguistics*. Edinburgh. p. 429

²² Gopalakrishnan, V: *Sign Language: A Deaf Person's hopes and vision for the future*: In Immanuel, (eds.) *Listening to Signs and Sounds*. P. 81.

with deaf children often do not recognize the richness of vocabulary and grammar that exists in the sign language used within the deaf communities of India”.

As has been pointed out by several scholars the history of deafness previously interested most writers just to find out whether language can exist without speech. Now however deafness is an area of interest for most people belonging to diverse fields. Within the field of linguistics, deafness has emerged as an area of immense interest, which serves as an insight for a better understanding of human language. Linguist today have studied various areas of deafness, concerning acquisition of sign language and contrasting it with spoken language and studies revealed similar stages of acquisition of sign language with that of the spoken language. Kyle, ²³ et.al states that in the field of language teaching and learning concerning deaf education studies revealed that deaf students were geared to normal school curriculum, with no emphasis on teaching language as a separate discipline. An ongoing field of new interest has been the creation of dictionaries of sign languages and a considerable amount of literature on the development of sign language grammar has been produced.

The present study is concerned with the problems and prospects of language education for deaf students in Shillong. As oralism is the main method followed aiming at integration in most of the schools, therefore deaf students are exposed to a bi-cultural- bilingual setting, a term used to refer to situations where children are exposed to both deaf and hearing culture and to both sign language and spoken language. The schools and the rehabilitation institutes need to reconsider and review the situation at hand, where you cannot suppress the need to communicate in a mode different from the majority of the community.

2.4 Bilingual Vs. Monolingual

Striving towards the fulfillment of the educational rights to all sections of the community, several schools apart from the underprivileged had been set up in the country in general and in Shillong in particular. For these purposes several

²³ Kyle, J. G., Woll, B & Deucher, M (1981): *Perspective on British Sign Language and Deafness.* p.45

educational training centres and rehabilitation centres had been set up dealing with various types of disabilities in consistent with governmental policies. Teacher's training program includes classroom procedures, presentation of ideas, materials, evaluation and assessment, physical therapy instruction and so on and so forth. Concerning deaf education, the idea had been to cater the deaf students with spoken language, with the hope and intention not to impoverish the deaf from experiencing the substantial stimulus- the sounds of speech and prattle to intellectually advanced and function along with the hearing world. Schools had been established that is specifically meant for the deaf that brought the deaf in unison, which contributed to the natural outgrowth of a language of the deaf. Within the context of education the deaf has been described as stated by Streng, et.al,²⁴ as one whose hearing is non-functional for purposes of educational performance and the hard of hearing as one whose impairment, whether stable or fluctuating adversely affect his educational performances.

Deaf education had become a mutual and correlative processed, for instance to teach spoken / written language, one has to learn the signs use by the deaf and try to correlate these signs to spoken language to develop grammatical words and endings. Similarly, the deaf has to learn the meanings of words in the spoken language and convert these in the form of signs as it had been carried out by De 'L Epee and Thomas Hopkin Gallaudet and others.

Materials and methods on monolingual bases have been developed for the education of the deaf. The oralist insists on spoken language ignoring sign language, the result being low- proficiency level in both spoken and written language. According to Gibson, et.al²⁵, "deaf people have had little say in their education and hearing professionals have directed their attention to helping deaf students succeed as semi-hearing people". With the failure of oralism, after the congress in Milan in 1880, the creation of bilingual education began. As stated in Mas²⁶ the name of the

²⁴ Streng, A H., Kretschmer, JR R.R & Kretschmer, W.L (1978) *Language, Learning, & Deafness: Theory, Application & Classroom Management*: p. 08.

²⁵ Gibson, A, Small & Mason, D (1997): *Deaf Bilingual Bicultural Education In Encyclopedia of Language & Education*: in Cummins, (eds.), *Bilingual Education*.Vol. 5. p. 231-240

²⁶ Mas, C (1994) *Bilingual Education for the Deaf in France*: In. *Bilingualism in Deaf Education*, Ahlgren, (eds.), *Deaf Education*. P. 74.

association “ two languages for an education clearly designates its objectives: its initials (2LPE), when spoken sound quite close phonetically to de L’ Epee, and when signed look similar to a weapon either a (revolver or a sword) one draws and points at recognized enemies”. Deshmukh²⁷ working on bilingualism in deaf education points out that by bilingual approach it means that deaf children have sign language as their primary language. Later on they will learn the spoken language as their second language, which will be taught using the principles that is similar to teaching a foreign language/ second language. In this approach, sign language is use as a medium of instruction in teaching the spoken language.

Further, the evidence that deaf children with deaf parents proved to be far better off, educationally, socially and culturally than those having hearing parents prompted deaf educators to review the potentialities of sign language as an alternative approach to alleviate the educational learning difficulties. Also with the impressions that if the deaf were depending only on signs, this would delimit them from fulfilling the ideal societal functions, and therefore spoken language seems to be essential. In order to ensure both oral and manual proficiency, deaf educators have adopted the method of total communication whereby combination of spoken, sign language, fingerspelling, visual- aid and other augmentative alternative communicative methods are used. But the sign employed in the total communication method is not the native sign language but a form of Signing Exact English (SEE)²⁸ a modification of ASL to resemble English words, with sign markers to denote English grammar, and Pidgin Sign English (PSE)²⁹ a communication system using signs or fingerspelling in the word order of English.

²⁷ Deshmukh, D (2002): *Sign Language and Bilingualism In Deaf Education*: In Immanuel, (eds.) *Listening to Sounds and Signs*. p. 59.

²⁸ Bench, R.J (1992) *Communication skills in Hearing-Impaired*: in Crystal, (eds.) *Studies in Disorders of Communication*: p. 265.

²⁹ Bench, R.J (1992): *Communication skills in Hearing-Impaired*: in Crystal, (eds.) *Studies in Disorders of Communication*. p. 265.

2.5 Speech Therapy Programme in the Schools

Speech therapy is provided with the following goals:

- (a). Long term goal- to improve communication skills.
- (b). Short-term goal- to encourage expressive skills and receptive skills for nouns, verbs, adjectives. Normally if the child is at the vocalization stage, the therapist will persuade the child to babble /baba/, /papa/, using imitation and using residual hearing as part of their auditory training program, visual-tactile and vibro-tactile (using touch to sense vibrations) quite commonly known as verbotonal method. This is achieved using flashcards of the target words and real objects, picture- object matching, picture-picture matching.

Another program known as the Activity- Based language Intervention: the speech therapist designed activities that promote the production of the words and sentences. Activities are planned around a theme if appropriate like a birthday party and asking questions about the information presented. The speech therapist intentionally forgets to give required objects during activities so that the child appeals for them. The therapist will pause during verbal or non-verbal actions so the child will request to continue the sessions. Normally these are the steps that a speech therapist will perform in speech therapy sessions.

A speech trainer and an audiometer are available in the school, which is used by the speech therapist for individual therapy sessions. Apart from the speech trainer and the audiometer, other speech kits are also available. These are as follows presented according to the information obtained from a teacher:

1. Mirror: To show the mouth position and the articulation, to be able to correct the mouth position of the student.
2. Ball: To differentiate between the high and the low pitch sounds.
3. Cotton & Dettol: Cotton & dettol used for cleaning purposes while cotton can be used to show the plosives.
4. Tissue Paper bits: To show how air escapes in plosives, non-plosives and fricatives sounds.
5. Torch: To show clearly the oral cavity and the articulators.
6. Feathers: Used for explaining the plosives and to show the breathing exercises.

7. Handkerchief: To dry hands when washed with dettol and to display the blowing of the nose.
8. Balloon: To show the control of breathing. To show the different position of the blowing and post blowing cheeks.
9. Rubber band: To show the mouth positions while producing vowels.
10. Sponge: To show the amount of stress by feeling.
11. Spatula: To show the differences between the nasal and non- nasal sounds, placing it near the nostrils.
12. Tongue depressor: To depress the tongue to get the velar sounds.
13. Candle&matchbox: To display the plosives sounds and to give breathing exercises.
14. Whistle: To practice breathing exercises (inhale and exhale)
15. Thread: To show the central groove while producing fricatives like [s] sounds.
16. Rubber bangle: To show the mouth position while saying the vowel [o].
17. Straw: For blowing and breathing exercises.

3. Handling Deafness in Shillong: An overview

Shillong, the capital of Meghalaya is a place located in the North Eastern part of India. The deaf population in this place is increasing day by day. However the deaf people in Shillong do not have a community of their own, they exist and identify themselves with the hearing world. It's only within the confinements of the schools premises, that is, only for those who are fortunate enough to be in school that they fulfill their social lives, which allow them to freely communicate and interact amongst themselves. Besides those who are in school there are several deaf people that live in several part of the state. Firstly the reason, probably was a lack of advertisements through the media on the part the schools meant for the hearing impaired and secondly the lack of attention on the part of the parents or simply their ignorance. Moreover there is no contact between the deaf children residing in one school with children residing in another. This is probably the reason that they do not have any sort of association or a community of their own.

The present scenario of deaf population in Shillong, which I came into contact, comprises of a number of young children. As mentioned earlier that there is no deaf community or deaf association that prevails, and it is only within the school premises that they came in contact with each other. Therefore what is interesting is to find out how these deaf children learn sign language in the first place. It was Sister Merley who was the first to introduce sign language in Shillong. Based on the information gathered from her, the type of sign language used was British sign language (BSL) along with the American Sign Language (ASL). It is only with the advent of Indian Sign language (ISL) since 2001 that movement is towards using more of ISL has started to take shape. At present there is only one deaf student with remarkable parental efforts, having other disabilities as well who has completed her higher secondary school and at present doing her graduate course under IGNOU. Now she is also teaching at the School & Centre of the Hearing Handicapped. Her ambition is to complete her graduation and take up B.Ed for her future institute for the disabled which she and her parents are planning to set up. Her success and sincere work has given hope to many deaf students in Shillong.

3.1 Efforts Of The Government of Meghalaya

The Government of Meghalaya has taken up a number of programs for the rehabilitation of disabled person. They have already started the rehabilitation centre in Tura, Shillong and it is in the process of training the community based rehabilitation workers and multi-purpose rehabilitation workers. Their main objectives are prevention of disabilities by providing the population in rural areas supplementary nutrition to children and pregnant mothers. Another objective is early detection and early intervention where by the ill effects of disabilities can be prevented. The Government also aimed at economic independence for each and every disabled person, by providing vocational training centre and job reservations. It also provides financial assistance and scholarships to meritorious students, book grant, uniforms, allowance, and unemployment allowance, issuing of ID cards, etc. The government has set up expert committee and a commissioner for handling the problems of the hearing impaired including the disabled.

However, the government should handle each and every disability differently as one disability differs from the other in so many ways relating to its cause and its effects. The government sees the problems concerning the hearing impaired only on the surface, thereby assuming that financial assistance will solve all the problems. However the government should set up a proper school with a more conventional type of a curriculum suitable for the hearing impaired. Moreover the government should provide a proper training centre for sign language for the teachers, the parents and others associated with the hearing impaired.

Majority of deaf children whether acquired or inherited have hearing parents and mostly conversation is directed orally and sign language is not used at all and for those who claim to know sign language are under the impression that sign language is a form of gestures. At present there are three schools dealing with the hearing impaired in Shillong whether severe or with partial hearing loss as well as hard of hearing students are group together in the same schools. All these schools are in favour of oralism, and a brief introduction of each one of the three is given below:

3.1.2 Ferrando Speech and Hearing Centre

It was started in April 16,1996 at Mawlai Mawroh and shifted to Umniuh-Khwan a place which is located around 23 km from the city. It was founded and managed by the Missionary Sisters of Mary Help of Christians. The school comprises of the project director Sr.Merly Tom Kizhakayil and the administrator of the school is Sr Mercy Luke. The school also has a speech therapist/audiologist Sr.Shalay, Special educators/trained teachers from Montford training centre, Non- teaching staff and Volunteers. Students residing in the school are mostly from the areas in East and West Khasi Hills, Jaintia Hills in Meghalaya and parts of Mizoram and Assam. Students comprises of both pre-lingual and post-lingual deafness and the total number of students is 108, from which 6 of them are integrated into normal schools, 52 in academics and 12 in vocational center. From the information gathered from the teachers and Sisters of the school, the students come mostly from the interior villages of the state. The school is located in one of the scenic surroundings of the state in Umiam Lake.

The medium of instruction is English and the main approach followed is the oral approach with its main emphasis is on teaching both the prelingual and the postlingual deaf students how to speak English through the technique of lip-reading and other visualization techniques. They also provide counseling to the parents of the students for acceptance and provide guidelines to the parents regarding their children's behavior and how to encourage communication skills in their children. In Ferrando the main focus is teaching the children through lip reading and other techniques of visualization for development of speech.

(a) Curriculum

Ferrando School on the 46th World Deaf Day celebrations on the 25th of September 2003 presents the following programme.

(a). The school has the following programme:

1. Early intervention
2. Audiometry
3. Newborn Hearing Screening: Early detection of hearing impairment in young children.
4. Making of Ear moulds: Fully functioning Ear mould lab available at the centre.
5. Hearing aid fitting
6. Auditory training is mainly for the play group section where by the children using their residual hearing capacity are trained for the awareness of various sounds like the tinkling of bells, a whistle blow, etc.
7. Speech therapy, the strategy of lip-reading along with the help of a speech trainer where sounds are amplified is available for the development of speech. The audiometer is also available for the speech therapy sessions. Pure tones are transmitted through the audiometer.
8. Parent counseling. The school provides educational assistance to the parents, counseling the parents for acceptance of their child's disability. The school provides quarters for parents to reside during their training period.
9. Parent and infant training are also available where by parents brings their infant for screening. The school has a baby screener for this purposed.

(b). The school has the following educational programme: The medium of instruction is English language and the school follows the normal school curriculum and syllabus prepared by the Meghalaya Board of School Education (MBOSE).

1. Residential cum day school for the speech and hearing impaired
2. Pre-school
3. Preparation for integration
4. Integrated education
5. Special school
6. Individual speech therapy
7. Extra curricula activities like sports, etc
8. Other activities.

(c-i). Vocational training cum production center

1. Candle making
2. Greeting cards
3. Rosary
4. Dry flower arrangement

5. Future plans of the school are as follows:

1. Proceeding school
2. Introduce computer education
3. Training of grass root level workers/ barefoot technicians for the identification of disabled persons in the rural areas.
4. Foundation course on education of children with disabilities, distance mode
5. Refresher course for the teachers of the deaf
6. Diagnostic cum awareness camps in the rural areas
7. Introduce sign language
8. Training of the teachers of the deaf
9. Study and research in the field of deafness.

3.1.2 School & Centre for the Hearing Handicapped (S&CHH)

The school is situated in the city itself and is a unit of the Society for the Welfare of the Disabled (SWD). The school has an administrator, trained teachers,

special educators, non-teaching staff, audiologist/ speech therapist and volunteers. Observing the annual reports the school has grown in the number of students, between 1998&99-2003 the number of students has grown from 50-to 91. The school has a playgroup, Kindergarten, class 1 to class 9 which comprises of two sections. Section A comprises of slow learners and less advance students and section B comprises of more advance students.

Based on the annual report given the school has the following objectives: that is special education is imparted to children with delayed speech and hearing impairment of various type and degrees through such self-help skills as language training, speech therapy and speech reading. In all of this process efforts are made to keep the parents of the children informed and to counsel them on ways and means of continuing in the home the procedures being followed at school. Apart from its main objectives of educating the children, the school also aims at their rehabilitation and their integration in family and society through the teaching of functional communication skills. The medium of instruction is English and the school follows the normal school curriculum and syllabus prepared by the Meghalaya Board of School Education (MBOSE) for all the subjects. Promotion of the students is granted annually on the basis of computerized cumulative monthly tests. In exceptional cases the students are promoted at anytime in the course of the year on the basis of ability and performance.

The school receives a grant from the social welfare, adhoc donations, individual stipend from the district social welfare towards the purchase of hearing aids, etc, however contributions from the government is less reassuring. They continued to live in hope and their main aim is to prepare their students to become intellectually, morally and useful, independent citizens.

(a) Curriculum

Gathering information from the school records the S&CHH has the following programme for the playgroup: The programs start with the teaching and recognition of alphabets. The method employed for the teaching and recognition of the alphabets for the playgroups is the Play-Way method. Apart from teaching alphabets the school

also has a programme for articulation through activity method, which can be presented as below:

Activity one-Deep breathing exercises prior to articulation of each one of the five vowels.

Activity-two- Graded progression to the consonants: labials, dentals, etc.

Activity three- Pronunciation of simple words, syllables of familiar words.

Activity four- Enunciation of the first simple sentences: "my name is..." "I am a boy/girl".

Activity five-Identifying objects & people (actual & in pictures), first spelling each word in sign language and gestures, then naming each object or person. An imaginative and resourceful teacher will introduce variations according to the children's moods and ability.

Another programmed called Movement: The introduction 'doing' words or verbs with appropriate movement and gestures is most important. Once the concept is understood regarding each verb, spelling may be introduced. During this process, attention must be given to the lip movement of the children, recognition of letters, and the reproduction of the 2-handed sign for each, accompanied by attempts at pronunciation, lip reading and appropriate movement whenever applicable. Here the teacher introduces the Imperative Mood: *Come, Go, and Sit, Stand, Walk, Run...* and the children individually respond with the Continuous Present: "*I am coming... going...*" Use movement, gestures, spelling, lip-reading in dramatized form as far as applicable, and concentrating on individual's efforts rather than on group movement and class responses.

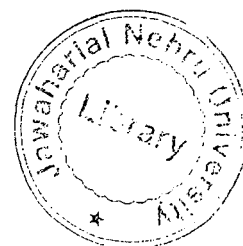
Word Formation programmed:

Activity one-Association of letters with well-known objects Example, a for *apple* b for *ball* ... using concrete objects whenever possible.

Activity two- Association of letters with pictures of several objects.

Activity three- Learning the 2- handed signs for each letter.

Activity four- Using the letter signs in spelling simple known words, that is, *ball, cat, dog, apple, etc.* Since the present study is mainly concerned with language therefore only the English syllabus will be presented in the appendix.



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3.1.3. Asha school

'Asha' meaning hope is a school sponsored by the Ministry of Social Justice and Empowerment, Government of India and managed by the Army personnel. It is a school for the disabled and at present they have only 6 students who are specifically hearing impaired combining them with other children who have different types of disabilities. They also have trained teachers and a speech therapist and students are still below the age of 7 years and all are under the nursery class. Therefore mostly the school programme at present is focusing mainly on training children firstly to learn the basic skills, behavioral modification programme, and teaching them to learn the manual alphabets. Each teacher are assigned with at least two students, to teach them, and the teacher has to keep records of their students history, relating to age of parents, student's cause of hearing loss, and to provide assessments of each student's progress.

From the information gathered the main objectives of the school for the hearing impaired are:

1. To strive towards development of speech to facilitate integration in regular schools and the extent of efforts would be the index for performance of the project.
2. To identify the need for and to provide for appropriate therapeutic services in the area of speech and hearing.
3. Day- care management
4. To involve parents through counseling as an integral part of the preparatory intervention and ensure their participation in the programme to be developed for early intervention.
5. Strength of beneficiaries for the pre school intervention units is from 15-20 disabled of a particular category.

4. Background of the Students

Gathering information from the schools directors and administrators, overall number of deaf students at present is 205. There are those students who have left school in- complete due to several circumstances. Students are very hardworking and sincere in their efforts and very much willing to learn. Children also aspire to go forward and to continue in their education. High school students are restless for they

cannot wait any longer to compete in board exams conducted by MBOSE. The school atmosphere is filled with love and affection since the elder students always have a good sense of responsibility and consideration for the young ones and are always ready to assist any one who comes to the school and to a great extent respect their teachers.

The majority of the students are born to hearing families where the usual cause of deafness is either inherited or acquired. Causes of deafness in these children vary from one to the other. Some students acquired deafness after the first few months after birth, for instance 1-3 months on account of fever, meningitis, small-pox, jaundice, ear infection, etc. Some acquired deafness around 2-4 years of age with similar reasons and also through tragic accidents, etc. Those who were born deaf, several reasons are responsible depending on pre-natal history where mothers are because of over medication, or due to over stress, accidents, other common diseases prevalent during pregnancy, and also due to unsuccessful abortion etc.

4.1 Students' Attitude towards Sign Language

Depending on the degree of hearing loss children's attitude towards spoken language and sign language can be described. Post-lingual deaf students usually attempt to speak rather than sign, but the pre-lingual deaf students are always at ease in sign language although a small amount of vocalization is produced which is distorted and unintelligible. Students responded to their parents and their teachers either by attempting to speak or sign or both, during interaction in school and at home, but the students never attempt to speak amongst themselves. It was found out that pre-lingual deaf students however produced sounds of familiar words that are commonly use in their daily life, whether words in English or in the regional language. For example in the regional language which is Khasi 'um' (water) is produced / m/, in English 'school' is produced as /khu:l/, etc. other common words are mama, papa, thait (tired) in Khasi and dada in Hindi, etc which will be discuss in detail in later chapters.

4.2 Students' Common Mode of Communication

Students have excellent knowledge in fingerspelling for instance, they usually fingerspelled to a person for each and every word if the person are not able to understand neither their sign nor their speech. If communication failed, they finally make used of the written mode. The common mode of communication prevailing in Shillong between teachers and students is the simultaneous use of fingerspelling and speech commonly known as the Rochester Method³⁰.

4.3 Students' Aspirations

Student's aspirations and ambitions also differ from one to the other depending on the type of family background. Some aspire to excel in academics for good jobs, while others are interested in developing skills in computers and so on and so on so forth. From the information gathered from the teacher non-residential students have more exposure and are more encouraged, and therefore advanced since they receive their parent's attention and support they needed, and similarly from other family members. But for residential students, parent's love and affection, moral support is less accessible and students were left under the care of a warden who is the only mother figure available to them. During holidays these children are sent home and most of them live a difficult life where they had to work in the fields with their parents and after returning to school from the holidays students were found to be disoriented with their life and thereby disturbing their studies. Some students cannot returned anymore to school due to several reasons where their physical ability to work is preferred than their mental ability for education. Students are also found to be happy and content within the confinements of the school premises rather than at home for they can understand each other although for some, the first few months in school are quite strange and lonely, but slowly the children learn to adapt to the school environment and according to the teachers and other people working in the school, these residential students were found to be more happy living in the school rather than

³⁰ Bench, R.J (1992) *Communication skills in Hearing-Impaired*: in Crystal, (eds.) *Studies on Disorders of Communication*. p.265

in their own homes and during parental visits these children do not show any enthusiasm on seeing their parents or their relatives.

5. Background of the Parents

Parents of the deaf students encompasses both educated and uneducated having at least one hearing impaired child, and for those who have at least two deaf children the cause is usually unknown and the disease is hereditary pass on from one generation to the next. Parent's occupation varies from government servant to miniature businessmen, army personnel and the majority are farmers and daily laborers, and most of them are from the rural areas as well as other remote areas.

Parental efforts towards their children's education are usually their contribution in terms of financial and moral support. From the answer to the questionnaire regarding their immediate remedial steps for their children, the majority responded that the first step was medical treatment and those who can afford expensive treatment have undergone treatment in most well known and reputed hospital in the country. Realizing that hearing loss is permanent the next step is placing their children in special schools and rehabilitation centres meant for the hearing handicapped.

5.1 Parents' Attitude towards Sign/ Spoken Language.

The inquiry whether they know sign language?, and do they communicate with their children in sign language?, most of them responded yes, with the impression that sign language is a form of gestures. For those who does not know sign language and do not communicate with it, it is simply because they do not want their children to sign but rather encouraged their children to speak so that their children could be accepted by the society as the so called 'normal'. No response from the parents was obtained regarding the importance of sign language, but there are also those parents who realize the value of sign language as important in knowing how to speak and therefore welcome the idea of the use of sign language as the medium of instruction that could improved learning. Inquiring on their preference for which language would they prefer for their children to learn?, most common responses are

learning the mother tongue for the reason they gave that it will be easy to communicate with the family members if their children know how to speak in his/her mother tongue, and another reason they assumed that learning the mother tongue would be easy than learning any other language.

Other parents who prefer their children to learn the English language, mainly it is because it is the medium of instruction in school and that English is the language spoken all around the world which can be easily understood by all, and it would paved ways for the future career opportunities. Still there are those parents who preferred learning both the mother tongue and English as well as learning sign language, and those parents who preferred learning sign language for their children, the reason they explained is because their children could be of some assistance to others having similar hearing loss difficulty.

5.2 Parental Expectations from the school

Parental expectations from the school also vary from one to the other which again depend on the type of family background. Some parents expect that the school should prepared their children for higher education and some parents prefer that their children should know how to learn, how to read and write English. Parent's aspirations for their children are basically academic skills and computer skills, while others aspire to equip their children for a self- supporting system of business.

From the teacher's point of view, there is no parents- teachers association, because more than 98% of all deaf children are born into hearing families with no previous knowledge of deafness, parents usually asked 'Will my child talk?' teachers simply could not answer. They also point out that parents are not co-operating at all towards their children's education, everything has to be taken care by the teachers which according to them is quite a load of work for them and quite an exhaustive daily routine in the classroom, and teachers also suggest that for overall successful learning achievements of the students first and foremost, parents should be encouraged to interact with their child through a natural parent- child relationship. Some parents from the rural areas to which I came into contact with, are under the false impression that the schools will help their children to hear again and hearing

loss would be cured permanently, and consequently their children will be able to speak.

5.3 Parental Expectations from the Government

Inquiring the parents regarding the support from the government, parents feel that the government should make all possible efforts for their children in terms of financial assistance, provision of hearing aid, and speech therapy equipment, medical expenses, and funds to be granted to the NGO's. Parents also stress on the government for the full implementation of the disability act of 1995, that deals with both prevention and promotional aspects of the rehabilitation such as education, employment and vocational training centre, social security etc.

Some of them who are well acquainted with the various complication of deafness, point out that the government should provide services in terms of parent's education and training in the field of deafness, by conducting sign language training course, training course in the technique of speech-reading and lip-reading. The government therefore is expected to set up institute within the vexed of the city itself where everyone can afford to participate in spite of having other responsibilities toward their other children and their work.

6. Background of the Teachers

6.1 Training background

Teachers employed in these schools include both having previous experience with the normal hearing children and those with no experienced at all, and teachers are mostly graduated with diploma in special education for the hearing handicapped from Montford rehabilitation centre in Tura in Meghalaya and also from Ali Yavar Jung National Institute of the Hearing Handicapped (AYJNIHH) in Mumbai. Teachers are hard working and are totally dedicated towards the student's success and development, in spite of getting low salary. Based on the information, the teachers are trained for handling basic classroom procedures and basically how to introduce a lesson following certain steps like firstly how to develop motivation in the students, secondly introduction of the lesson, presentation of material, recapitulation of the

lesson, assessment of learning and lastly reinforcement using the aid of flash cards and drawing chart, etc.

Teachers were also trained on how to facilitate the development of speech and language, how to develop receptive and expressive language ability in the students. Teacher's training also includes preparation on acoustic and articulation of speech sounds, speech reading, lip-reading, was also prepared by the teachers etc. The teachers who had their training from Montford centre had no knowledge of sign language since sign language was not a part of the course, and it is until recently that sign language is introduced as part of the teacher training course. Therefore competence level of the teachers in sign language is below average, which is probably the reason that it is not formulated as a method of teaching in the classroom. However with the development of ISL, a team from Coimbatore has provided a two-week training programme in ISL, which the teachers had participated. Teachers commonly used the oral approach in the classroom and consequently dependable on fingerspelling as a strategy of teaching. Mostly teachers are under the impression that sign language is only a form of pantomime gestures and that fingerspelling is sign language, and it was observed that during classroom sessions, teachers used a type of sign language that is directly translated from English, a manually coded form of the English language.

6.2 Teachers' Objectives & Methods of Teaching

Teachers of the deaf mostly favored the bilingual approach and the method of total communication as the best approach and the best medium of instruction for teaching the hearing impaired as they feel that having two languages is necessary for a deaf student to be able to function both in the hearing and non-hearing world and thereby the main goal of the teachers is to develop communication skills in their students and to prepare them for higher education. Teachers are of the opinion that visual aid is the only aid which serves both as a good learning and teaching strategy for the students and the teachers respectively, and point out that that visual aid apart from flash cards, pictures and paintings on a chart should be further enhanced to make the teaching strategy more effective and consequently increase interests in the

students to learn. To achieve these purpose, they point out that dramatization of lexical items, dramatizations and anything that can be developed visually will be effective for the deaf students, that is, excluding deaf- blind students in this context. Since vision is the only technique available for them to pick up information, the more the students observe the more they develop in vocabulary and language and thereby improve learning.

6.3 Teachers' Attitude towards Sign/spoken Language

Teachers observed that sign language is a language of the deaf and therefore point out that it should be implemented as the medium of instruction for the deaf students, and to learn the spoken language as a second language. Although teachers are not fluent signers themselves but are keen to learnt sign language in order to help and improve learning, however ignorance of sign language is still indebted in their minds and mainly the overall goal is to develop spoken and written English in the students. They also pointed out that for successful learning, the parents, the government, the NGO's and all members of the society should contribute and co-operate with each other for deaf children' successful learning and progress.

CHAPTER II

Sign Language

2.1. Sign Language Situation in Shillong: An Overview

One of the main objectives of this present study, is to highlight the importance of sign language as a language of the deaf that has every right to exist and be accepted by the major section of the society in Shillong. There is a need to create an awareness of the significance of sign language, and to elevate the unknown and underlying educational problems of the deaf to the surface, for the current scenario had always seen deafness as a condition of abnormality and educational institution had been concentrating on assisting this abnormality by training the deaf in spoken language.

This present study also intends to highlight the social issues regarding the situation of the deaf in Shillong. At present the educational institutions are imposing on the deaf to learn a spoken language as their first language disregarding deafness as a culture and ignoring their native language prohibiting the deaf to grow and converse in their language which is rightfully their own, and it has always been of interest by those concerning the deaf, to integrate them into the so-called majority of the society.

Linguistics had always been concerned with spoken language as having systems of rules and principles governing its structure, the same for sign language was investigate and conferred by the American linguist William Stokoe (1960) whose works on ASL has contributed to the development of the field of Sign Linguistics. Research had also been carried out on other sign languages like BSL (Kyle, Woll, Deuchar, Spence, et.al) and in India research and comparative study on ISL (Vasishta, Woodward and Wilson 1978) is continually advancing to new heights, as pointed out by Tesni¹ which results in the publication of a dictionary (1980), and the grammatical regularity of Indian Sign language indicates a highly structured language. He also pointed out that most signs use by deaf people in India does not relate to European sign languages, and whilst many signs are common to the whole of India, several regional differences exist.

¹ Tesni, Sian (2000) *Service Provision for Children with Deafness and Hearing Impairment in South India and Srilanka*: in Immanuel. (eds.) *Listening to Sounds and Signs*. p. 187.

Sign language, a channel of communication of the deaf offers quite an intriguing experience, into the world of silence for linguists, to find out how it is formulated and structured and used by the deaf within their linguistic community with their unique culture of their own. It makes linguists, to review again about the human innate capacity for language advocated by Chomsky, to study again the existence of a critical age period of learning language advocated by Lenneberg, and to question the modality of how we communicate, and therefore it makes us ponder once again, on how valuable is language to humans as often language is usually taken for granted, (as pointed out by Crystal and several other scholars) it is only when something goes wrong with speech or language that we realize the importance of language as it allows us to express our thoughts, our feelings, and to share with others our ideas and our opinions. Generally several questions emerged that linguist all around the world had often worked upon. Is sign language natural; does sign language fulfill the same range of meanings as spoken language; and does sign language have the same functions as spoken language that is species-specific? Pettito² in her article affirmed, “all the scientific study of the linguistic status of signed languages has demonstrated that complete human languages are not restricted to the speech channel. Signed languages possess all of the linguistic features that have been identified as being the essential, universal features of the world’s spoken languages”.

All humans in general communicate through the spoken language, this is why speech is considered a unique feature of human beings, whereby we can convey message vocally, and human has the ability to play and converses with words, to use words appropriately in all situations, to express our thoughts, to talk about the past, the future, and so on so forth. It can be quoted here from Descartes³ “human beings who are born deaf and dumb are deprived of, as much as even more than beasts of the organs that are used by other people to speak, yet are accustomed to inventing some signs themselves by which they make themselves understood to those who are usually

² Pettito, Laura Ann (1993) *Are Signed Languages 'Real languages'*: <http://www.dermouth.edu>

³ Descartes, R (1999): *Discourse on Methods & Related Writings* 1687: Trans, Clarke M Desmond: Penguin Books:

in their company and have the time to learn their language, and this shows not only beasts have less reason than human beings, but also they have none at all”.

Out of several researches conducted on sign language, another feature of human's aptitude or ability for language had emerged or in other words, sign language had confirmed that for humans who couldn't hear make use of another modality to communicate, similarly as communicating verbally. Therefore language to human does not necessarily implies that it is utilized through the oral modality only but also through the manual form of signing. This is what makes *language* a unique human phenomenon where research on various chimpanzees on their sign language ability, had also confirmed that chimpanzees do not have the same aptitude for sign language as a deaf child. As Fischer⁴ points out, whatever language deaf children produced is presumably a product of the innate capacity for language. Acquisition studies on sign language have also provided ample evidences on deaf children acquiring their native language at the same rate as any normal hearing children would acquire spoken language, and this all depends on the availability and access of linguistic input. Studies have also shown that deaf children developed their own system of signs, gestures that as mentioned earlier are commonly termed as home signs.

Therefore the main reason for a deaf child's inability to speak or to sign is that the stage of acquisition of language within the puberty stage is crucial a determining factor for language competence. Teachers of the deaf (based from the interview) usually comment that 'deaf children have no language' however this is a negative attitude on the part of the teachers. The concept *language* needs an in-depth study in the context of deafness, language as cited above is solely specific to humans, and deaf persons are also humans. In contrast the deaf cannot speak but they do have the same capabilities as any hearing human to acquire language competence, but their language is a form of manual and non-manual signing, and therefore on this basis, they do have a language that fulfills the same functions as spoken language. Just as Chomsky had

⁴ Fischer, D. S (1994): *The Study of Sign Languages and Linguistic theory: In. Noam Chomsky; Critical Assessments: Otero, P.E (ed) Vol. IV: From Artificial Intelligence To Theology: Chomsky's Impact on Contemporary Thought*: London, Routledge. p. 584

pointed out that every human being has the capacity for language, the same pertain to the deaf, and their inability to produce verbal language or for instance, English is because their language structure is different from the English structure. This is probably the reason they usually produced ungrammatical sentences and phrases when asked to write any sentence in English.

Sign language includes a system of structural features of its own parallel to spoken language composing of syntactic, semantic features as well as the phonological and morphological features. Stokoe⁵ (1960) described three parameters for ASL: the location of the sign in space (the Tab), the handshape used in making the sign (the Dez) and the type of movement made by the hands (the Sig). Kyle & Woll⁶ added a fourth parameter in their study of BSL that is the orientation (the Ori) of the hands relatively to the body. Each of these components derives its importance from the existence of 'minimal pairs' where the meaning of the sign is altered by change in only one of the components.

Kyle & Woll⁷ also mentioned further components in the articulation of signs that are recognized as the building blocks of signs; these are the features of facial expression, lip patterns, signer's eye -gaze, the body postures, the shoulders and the head. Just as spoken words can be broken into component parts, so signs can be shown to have similar complex systems. Researchers (Baker, et.al) have classified the articulation of signs in the following manner:

- (A). Manual signs- are signs articulated by the hands looking into the hand configuration, orientation, movement and location.
- (b). Non- Manual- are signs articulated with anything other than using the hands as articulators. Non-manual signs included the position and movement of the head, facial expression, the body position, eyebrow and position of the forehead, eye gaze, eye blink, nose position, and movement of the mouth, the tongue and the cheek.
- (c). Multi-modality – that is using both the manual and non-manual articulators.

⁵ Kyle & Woll (1985) *Sign Language: The Study of Deaf People and Their Language*. P. 28.

⁶ Kyle & Woll (1985) *Sign Language: The Study of Deaf People and Their Language* p. 28.

⁷ Kyle & Woll (1985) *Sign Language: The Study of Deaf People and Their Language*: pp. 28-29.

Signs put together will give rise to structures compatible with the syntactic structure of spoken language. In this study a description of the manual alphabets currently use by the schools in Shillong will be presented, secondly a brief account of the data accumulated from deaf subjects will be focusing only at the lexical level. The analysis will represent the manner and place of articulation of the signs, which is primarily phonetic and phonological description. Since the present study has a focus on the relevance of manual approach as a method of teaching the deaf students, data was collected only at the lexical level and some examples for the syntactic structure were included. The analysis describes each lexical item according to its four components in handshape, location, movement and orientation according to the data collected.

2.2 Sign Acquisition/Learning:

Several comparative studies (Klima & Bellugi, Schlesinger & Meadow, Tervoort, Ahlgren et.al.) that have been carried out concerning the acquisition of sign language with the acquisition of spoken language revealed that regardless of the modality, both sign and spoken language are acquired in similar ways. Deaf children of deaf parents will naturally acquire the language of the parents that is similar to hearing children acquiring the first language from their hearing parents. Concerning a deaf child having hearing parents, the question is what language (either sign or spoken) should a deaf child acquire. Therefore in this context the nature of linguistic input is a major factor that determines not only the child's first language that may have an effect on the child's linguistic ability, but also his/her cognitive development. Deuchar⁸ states "that BSL is often acquired in an unusual way, in schools for the deaf where there is little adult sign language".

Most of the deaf students in Shillong have hearing parents who lack the knowledge of sign language, and therefore the nature of linguistic input in the home environment has always been the spoken language and a system of gestures that are acquired through the process of lip-reading and residual hearing. It is only when these children start attending schools and through contact with their peers, the eclectic

⁸ Deuchar, Margaret (1984) *British Sign Language* p. 156.

gestures or home signs that are learnt at home are use in school and are further created and developed by them through interaction. The spoken language input that the students receive from home is never use amongst them in schools, and it is only when they communicate with their teachers that were forced to speak. The trend of language acquisition (both sign and spoken) for a deaf child having deaf parents has become the process where by the acquisition of spoken language will take place in a hearing environment and the acquisition of sign language are learnt through contact with other deaf children in deaf environment with no adult language input. Consequently, deaf children simultaneously acquire both sign and spoken language depending on the amount of input receives from these two environments that ultimately determine their language ability.

According to Narang⁹ “the absence of a proper linguistic input, often leads to problems not only in communication and acculturation but also in the cognitive development of the hearing impaired children”. For a prelingually and profoundly deaf, acquisition of the spoken language seem to be a rather difficult task with the absence of auditory input. As pointed out by Myklebust¹⁰ “the diminished auditory input results not only in language delay, but also in different cognitive processes from those of hearing children that in turn, compound the linguistic problems”. The question remains, to what extent will a prelingual profoundly deaf acquire spoken language from the hearing parents? How will learning in school takes place through the oral input? Ahlgren¹¹ in her study of the acquisition of Swedish sign language by deaf children of hearing parents shows that in spite of the absence of adult sign language input, deaf children develop sign language normally and adequately to a degree that is superior to their parents, even if parents start attending school. Shillong is an example of this phenomenon where in spite of the absence of adult sign language input from the parents in the home and from the teachers in the school, still students develop sign language.

⁹ Narang, Vaishna (2004) Sign Language; Issues and Challenges: in Journal of the School of Language, Literature and Culture Studies, JNU. P.152.

¹⁰ Bench, R. J (1992) *Communication Skills in Hearing- Impaired Children*: in Crystal, Lesser & Snowling (eds.), *Studies in Disorders of Communication*: p. 165.

¹¹ Deuchar, Margaret (1984) *British Sign Language*. p. 172

2.3 Fingerspellings:

Fingerspellings presented in fig 1 (Spence & Woll 1988), simply represents the BSL manual alphabets using both hands that are found to be used by the students and the teachers in the schools, and it is often used for spelling out the names of persons and places. Kyle & Woll¹² had pointed out that fingerspelling has in the past often been confused with signing, but fingerspelling differs from signing. Fingerspelling provides signers with another source for new sign formation. A sign cannot consist of more than two parts, but a fingerspelled word may contain handshapes as letters in the written word.

Similarly is the case in Shillong where parents are often confused with the difference between fingerspelling from signing, they are under the assumption that fingerspelling is sign language. The teachers use fingerspellings as a teaching strategy to introduce new vocabulary that is part of the lesson planned, and fingerspellings are also utilized for presentation of new words which both students and teachers do not know any form of signs for the words. Observations on and off the video recorded data, it can be seen that both the teachers and the students are heavily dependent on the use of fingerspellings. The fingerspellings used by these schools in Shillong although resemble the British manual alphabets, but one difference can be seen with the manual alphabet 'T' as shown in the diagram in fig 2 in the following page.

¹² Kyle & Woll (1985) *Sign Language: The study of deaf people and their language*: p. 124.

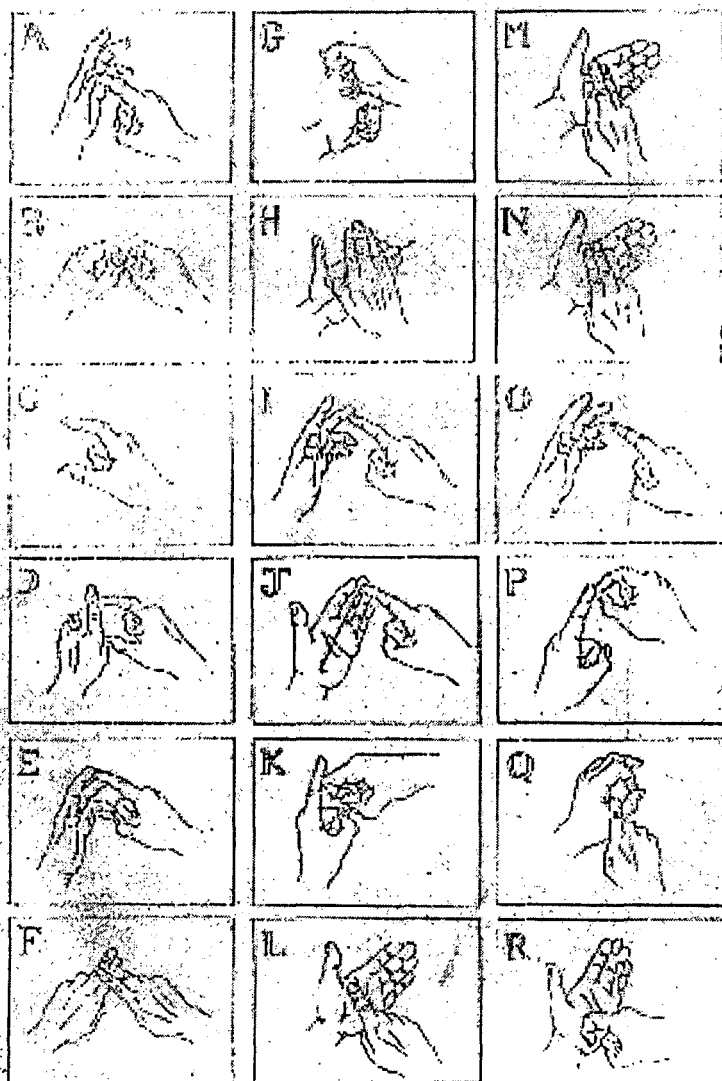


Fig. 1.11. The British manual alphabet

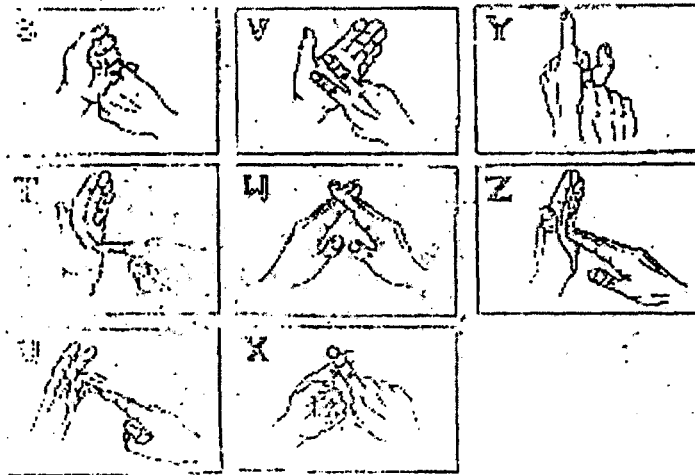


Fig. 1.11 (cont.)

Fig 1. The British Manual Alphabet

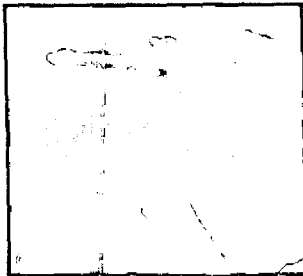


Fig 2. British Manual Alphabet 'T'

2.4: Distinctive Features in Sign Language

Handshapes

Signs that are articulated by the hands can be described in the following symbols according to the manner of the articulation of the handshapes (see end of the chapter page a & b). Right hand is indicated as RH and Left hand is indicated as LH, and the following symbols that are used for the present study are given below, an adaptation of the symbols developed by Spence & Woll (1998).

1. A Fist
2. A1. Fist with thumb extended.

3. B. Flat hand fingers extended and together.
4. B1. Bent Curved hand, thumb at side.
5. C. 'C' shaped hand
6. Y. Little finger with thumb extended from fist to form Y shape.
7. F. Thumb and index finger form circle, others finger straight
8. G. Index finger extended from fist.
10. H. Index and middle fingers extended together
11. I. Little finger extended from fist
12. L. Index finger and thumb extended at right angles
13. O. Circle with thumb and fingertips touching
14. F#. Small 'O' handshape Index finger with thumb touching
15. G^. Small 'O' handshape with thumb and fingertips without touching together
16. R. Fist with index and middle fingers extended and cross
17. V. Fist with index and middle fingers extended and spread
18. V1. 'V' handshape with index finger and middle fingers bent.
19. 4. All fingers except thumb extended and spread
20. 5. All fingers extended and spread
21. 5a. All fingers extended, spread and loosely curved
22. K. small V Handshape.
23. U.U. Handshape
24. S. This symbol indicates fingerspellings.

Location:

1. Head
2. Vertex¹³ (top of the head)
3. Frontalis¹⁴
4. Eyebrow
5. Eyes

¹³ A term taken from *Taber's Cyclopedic Medical Dictionary*; in Thomas, L Clayton (ed): F.A. Davis Company: 1997

¹⁴ A term taken from *Taber's Cyclopedic Medical Dictionary*; in Thomas, L Clayton (ed): F.A. Davis Company: 1997

6. Ears
7. Cheek
8. Nose
9. Upper lip.
10. Mouth
11. Teeth
12. Lips
13. Chin
14. Neck
15. Shoulder
16. Wrist
17. Elbow
18. Chest
19. Stomach
20. Waist
21. Arms
22. Forearm
23. Fingers
24. Hand
25. Knee
26. The line of symmetry¹⁵: The line of symmetry also known as the mid line is an imaginary line dividing the body into two sections. Orientation of the signs is described in terms of the handshape facing this line of symmetry.

Movement

The movement¹⁶ of the hands is illustrated by the following symbols.

1. ↓. Hands move down.
2. ↓*. Hands move down repeatedly.

¹⁵ A term taken from *Taber's Cyclopedic Medical Dictionary*: in Thomas, L Clayton (ed): F.A. Davis Company: 1997

¹⁶ Most of the symbols for the illustration of the movements of the hands were taken from. The Indian Sign language Dictionary developed by the RamaKrishna Mission Vidhyalaya Coimbatore 2000. Others are developed in consistence with the movement of the signs available from the data.

3. ↑. Hands move up.
4. ↑*. Hands move up repeatedly.
5. ↵. Hands move from right to left.
6. ↘. Hands move from left to right.
7. ↔. Hands move repeatedly from side to side.
8. ↑↓. Hands moves up and down repeatedly.
9. →. Hands moves from left to right in a slant.
10. ←. Handshape move from right to left in a slant.
11. ☐. Handshape move away from each other.
12. ☐. Handshape in contact
13. →. Handshape moves from left to right in a slant repeatedly.
14. ←. Handshape moves from right to left in a slant repeatedly.
15. ↘. Handshape hops from left to right.
16. ↙. Handshape hops from right to left.
17. ☐. Handshape hops forward
18. ↶. Handshape move in a curve from left to right.
19. ↷. Handshape move in a curve from right to left.
20. ↔. Handshape move in a curve repeatedly from side to side.
21. ∫. Handshape move in a vertical circle.
22. ∫*. Handshape move in a vertical circle repeatedly.
23. ⇄. Handshape move in a horizontal circle.
24. ⇄. ○ Handshape move in horizontal circle repeatedly.
25. ↵~. Handshape moves in a wavy motion from right to left.
26. ↘~. Handshape move in a wavy motion from left to right.
27. ~. Both handshape moves in a wavy motion up and down.
28. ≋. Handshape moving in a Zigzag motion.
29. †. Handshape move in a shivering manner.
30. ⇨. Both Handshape move forward.
31. ⇨*. Both Handshape move forward repeatedly.

Orientation:

Orientation of the signs is described in terms of the handshapes facing the line of symmetry.

1. η Handshape facing the line of symmetry towards the signer.
2. \uparrow Handshape facing against the line of symmetry towards the addressee.
3. \updownarrow Handshape facing each other towards the line of symmetry.
4. $\overleftarrow{\updownarrow}$ Handshape facing against each other towards the line of symmetry.
5. $\left\| \right.$ Handshape facing left towards the line of symmetry.
6. $\left\| \right.$ Handshape facing right towards the line of symmetry.
7. $\overleftarrow{\uparrow}$ Handshape facing down from the signer.
8. $\underline{\uparrow}$ Handshape facing upward along the line of symmetry.
9. $\left\| \right.$ Handshape facing each other vertically in front of the line of symmetry.
10. $\eta \times$ Handshape facing towards the signer crossing the line of symmetry.

2.5 Sign and its Features:

The signs collected consist of most of the basic items familiar to the deaf in the school environment. During the elicitation of the data several problems arise where no professional sign interpreter was available, therefore most of the intended vocabulary prepared for elicitation could not be obtained as students lack perception of most of the vocabulary items, and this is discovered when students just fingerspell the items. Informants are all right handed signers except for one student (Mela) is a left handed signer therefore differences in orientation in her articulation from the other informants can be seen. From the data collected the following signs, are formed by compounding two or more nouns these are: GOLD (Earring + Nose pin + Ring); GRANDFATHER (Old + Man) GRANDMOTHER (Old + Woman); ONION (Cut + Cry); SUGAR (Tea + Drink); VILLAGE (Home + Small) and COCONUT (Round + Break). Signs that are articulated in the same way are usually signs that are semantically related like signs for MEMORY, THINK and REMEMBER, and similarly signs for DRINK, THIRSTY and WATER are articulated in the same manner. Sign for MOTHER differ from those students who are from Shillong and are natives of Khasi hills from those students

who are from the plains, for example, in the Khasi culture generally women do not wear nose-pin, therefore the sign for MOTHER, SISTER and GIRL is articulated in the ear denoting women wear earrings not nose-pin and those who are non-Khasi the location for the signs is in the nose. The sign for KHASI is articulated in a manner that signifies the Khasi women's attire. The signs for COURAGE, LABOURER, UNWILLING taken from their English grammar lessons were unable to sign, simply because they cannot understand the meanings of the words. The questions markers are articulated in the same way for instance the signs for HOW, WHEN, WHAT and WHERE and these question seem to occur both in the initial as well as in the final position, i.e. before or after the sentence except the sign for WHO that differ in terms of hand shape and the movement of the sign that occurs in the initial position. Non-manual signs can be seen for the articulation of the lexical items for kick, tongue, spit, kick, and football, and these signs are articulated using other parts of the body. The following features of each signs are given below according to the available data obtained from the informants.

Signs

Lexical Items	Hand-shapes	Location	Movement	Orientation
1. Air	B1	Nose + Mouth	↔	∩
2. Ant	G^	Waist level	⋈	∩
3. All	5	Chest	↔	∩
4. And	B1	Chest	⇒	∩
5. Animals	L	Head	↑	∩
6. Ashes	O	Chest	↓	∩
7. Ass	L	Head	⇒	∩
8. Axc	A	Chest	↓*	∩

Lexical Items	Hand-shapes	Location	Movement	Orientation
9. Afternoon	G+10 + 2 Finger	Chest	↑	⌈
10. Banana		Chest	↓.	⌋
11. Bangles	F	Wrist	↙	⌋
12. Blouse	F#	Chest	↑	⌈
13. Book	B	Chest	↑	⌈
14. Bald	B1	Vertex	↑	⌈
15. Bath	A	Shoulder + chest	↑	⌈
16. Bag	A	Shoulder	↑	⌋
17. Bread	RH 4+ LH B	Stomach	↓*	4 ⌋ + B ⌈
18. Behind	B1	Waist	↘	⌈
19. Blind	V	Eyes	↑	⌈
20. Brave	A	Forearm	↑	⌋
21. Bull	L	Above the ears	↑	⌋
22. Butterfly	K	Above shoulder	↕↑	⌈
23. Bricks	B1	Waist	↻	⌋
24. Buy	F	Stomach	⇒*	⌈
25. Black	F#	Head	↑	⌈
26. Back	B			
27. Bad	O released to a 5	Chest	⇒	⌋
28. Because	B	Wait	⇒	⌈
29. Belly	5a	Stomach	↔	⌈

Lexical Items	Hand-shapes	Location	Movement	Orientation
30. Big	B1	Chest	↑	⌈
31. Bite	A	Mouth	↙	⌈
32. Blood	G, F#	Hands	↙ ↓	⌈ + ⌈
33. Blow	B	Hands + mouth		⌈
34. Bone	F#	Wrist	↙	⌈
35. Breathe	B	Chest	↑	⌈
36. Burn	O	Waist	↑*	⌈
37. Bald	B1	Vertex	↑	⌈
38. Bring	F#	Chest	↖	⌈
39. Boy	G	Upper lips	↘	⌈
40. Baby	B	Stomach	↔	⌈
41. Black-board	G	Chest	☐	⌈
42. Broom	A	Waist	↔	⌈
43. Beautiful	B + O	Face	↗ ○	⌈ + ⌈
44. Brother	G	Upper lip	↘	⌈
45. Buy	F#	Chest	↑	⌈
46. Ball	5a	Chest	⇒	⌈
47. Cat	F	Upper lip	☐	⌈
48. Call	5	Chest	←	⌈
49. Chili	F#	Mouth	↑	⌈
50. Cold	A	Chest	{	⌈
51. Comb	A	Vertex	↔	⌈
52. Cough	O	Mouth	↑	⌈
53. Cow	L	Head	↑	⌈
54. Crow	B1	Forearm	↓	⌈
55. Cry	G	Eyes	↓	⌈
56. Cheap	F	Chest	↑	⌈

Lexical Items	Hand-shapes	Location	Movement	Orientation
57. Coconut	5 + 4	Chest	↙	⌈ + ⌋
58. Car horn	A + O	Chest + Ears	↑	⌈
59. Child	B1	Waist	←2.	⌋
60. Clothing	F#	Chest + Waist	⇔	⌈
61. Cloud	5	Above Shoulder	↑	⌈
62. Claw	B1	Elbow	⇔	⌈
63. Cook	F#	Chest	↑↔.○	⌋
64. Count	F#, B	Waist	⇔ ←2.	⌋
65. Cut	RHB+ LH A	Waist	↘	RH [⌋] + LH [⌋]
66. Courage				
67. Class	C+ 5	Chest	↔	⌈
68. Carry	A	Forearms	↑*	⌈
69. Chair	A	Chest	↓	⌈
70. Cup	C	Stomach	↑	⌈
71. Door	B	Chest	↔.	⌈
72. Dog	5a	Chest	↑	⌈
73. Danger	G	Neck	↑	⌈
74. Double	V	Chest	↑	⌈
75. Dance	A, B1	Chest	~	⌈
76. Day	G	Chest	↓	⌋
77. Die	G	Neck	↙	⌈
78. Dig	A	Waist	↓*	⌈
79. Dirty	F#	Waist	↓	⌋
80. Dog	B1	Waist	⇔*	
81. Drink	C	Stomach	↑	⌈

Lexical Items	Hand-shapes	Location	Movement	Orientation
82. Dry	F# + B1	Chest	⇨	∏ + ⊥
83. Doll	B	Stomach	↔.	⊥
84. Dust	B1	Nose	↔.	∏
85. Day after tomorrow	B	Chest	⇨	∏
86. Doctor	F#	Ear + Chest	↑	∏
87. Earth	B1	Shoulder	↑*	⊥
88. Egg	B	Waist	↓	∏
89. Eight	5 + 3	Shoulder		∏
90. Eye	G	Eye	↑	∏
91. Earn	S	Chest		∏
92. End	S + 5	Fingers	↘.	
93. Earring	F#	Ear	↑	∏
94. Eat	O	Chest	↑	∏
95. Elephant	G^	Nose	~	∏
96. Earn	S	Chest		∏
97. End	S + 5	Fingers	↘.	
98. Enemy	A1	Chin	↑*	∏
99. Elder sister	F# + B1	Ear + Chest	↑	∏ + ∏
100. Everyday	B	Chest	∏*	∏
101. Enjoy	Y	Cheeks	↑	∏
102. Evening	B1	Elbow	↙.	∏
103. Finger	F#	Fingers	↙	∏
104. Fish	4	Waist	□	∏
105. Flour	O + A	Shoulder	~	∏

Lexical Items	Hand-shapes	Location	Movement	Orientation
106. Food	O	Mouth	↑	π
107. Forest	B	Chest	↷	π
108. Fever	O+ 5 +B1	Chest + Mouth + Frontalis.	↑	π
109. Farmer	A	Waist	↓*	π
110. Feed	O + S	Mouth	↑	π
111. Flood	A1+ B1	Mouth+ Chest	↺.O	π
112. Fall	5a	Chest	↓	π
113. Far	5a	Chest	⇒	π
114. Fat	A	Arms	↑	π
115. Fear	5a	Chest	{	π
116. Feather	F#	Chest	⇒	π
117. Few	F#	Chest	⇒	π
118. Fight	A	Chest	□	π
119. Fire	B	Waist	↓	π
120. Five	5 finger	Chest	↑	π
121. Float	A1, B1	Chest	↶~	π + π
122. Flower	B	Chest	↑	π
123. Fog	A	Chest		
124. Foot	B	Foot	↓	π
125. Four	4		↑	π
126. Freeze	A	Chest		π
127. Fruits	C	Mouth	↑	π
128. Full	5	Waist	↓	π
129. Finish	5	Chest	⇒	π

Lexical Items	Hand-shapes	Location	Movement	Orientation
130. Football	Non-manual using the Knee			
131. Favorite	O	Chest	↑	ㄱ
132. Fruits	5a	Chest	↔○	ㄱ
133. Fly	5a	Chest	↑	ㄱ
134. Friends	B1	Hands	□	RHㄱ + LHㄱ
135. Grand – mother	F#	Ear + Chin	↑	ㄱ
136. God	G	Chest	↑	ㄱ
137. Gold	F# + S	Ears + Nose + Finger	↑↓	ㄱ
138. Grand-father	G + A	Upper lip + Chin	↙	ㄱ
139. Goat	L + A	Head + Chin	↑	ㄱ + ㄱ
140. Gold-smith	F + G +A	Ears, Neck, Upper lips & Waist	↑↓	ㄱ + ㄱ
141. Give	B	Chest	⇒	ㄱ
142. Good	F	Chest	↑	ㄱ
143. Grass	F# + B1	Waist	↑*⇒	ㄱ + ㄱ
144. Glass	C	Mouth	↑	ㄱ
145. Green	S + F#	Chest	⇒	ㄱ
146. Girl	F#	Ears	↑	ㄱ
147. Good	O	Chest	↑	ㄱ
148. Gift	B	Chest	ㄱ⇒	ㄱ
149. Go	5	Chest	↑	ㄱ

Lexical Items	Hand-shapes	Location	Movement	Orientation
151. Hot	G + 5	Frontalis + Chest	↑	π
153. Her	F	Ear	↑	π
154. His	G	Upper lip	↑	π̄
155. High	B1	Chest	↑	π
156. Honey	LH G^ + RH G	Chest	RH ↔○	π
157. Hungry	O + 5	Mouth + Stomach	↑ + ↔○	π
158. Half	B	Waist	↙	π
159. Husband	G	Upper lips	↘	π̄
160. Headache	G	Forehead	⇒*	π
161. House	B	Chest	□	π̄
162. Hard	5a	Head	↔	π̄
163. Happy	G	Cheeks	*	π
164. Hair	F#	Head	↑	π̄
165. Hand	B	Hand		π̄
166. Head	G	Head	↑	π̄
167. Heart	B	Chest	↑	π
168. Heavy	5	Waist	↑*	π̄
169. Here	5	Chest	↓	π̄
170. Hit	B1	Stomach	⇒	π̄
171. Hold	A	Chest		π̄
172. Horn	F#	Head	⇒	π̄
173. How	5	Chest	↑	π̄
174. Hundred	G, O, O	Chest	⇒	π̄, π̄
175. Hunt	G^ + G	Chest + upper lip	⇒	π + π̄

Lexical Items	Hand-shapes	Location	Movement	Orientation
176. Help	RH A1, LH B	Chest	⇨	∩ + ⊥
177. Idea	G	Head	↑	∩
178. I	B	Chest	⇨	∩
179. King	B	Vertex	↑	∩
180. Kill	G	Neck	↙	∩
181. Knee	B	Knee	↓	∩
182. Know	G	Head	↑	∩
183. Kick			⇨	
184. Khasi	B1	Chest	↑	∩ ×
185. Lion	5a	Cheeks	↔	∩
186. Lips	G	Lips	↑	∩
187. Liquor	A1	Mouth	↑	∩
188. Land	B	Waist	↙	∩
189. Lazy	B1	Chest	↓	⊥
190. Letter	F#	Hand	↙	⊥
191. Love	B	Chest	↑	∩ ×
192. Lonely	G	Chest	↑	∩
193. Leaf	B	Chest	↔	∩
194. Left side	B	Chest	↙	∩
195. Leg	5	Leg	↓	∩
196. Lie	G	Tongue	↔	∩
197. Live	B1	Chest	□	∩
198. Long	5	Chest	⇨	∩
199. Like	O	Chest	↑	∩
200. Laugh	5	Stomach	↑*	∩

Lexical Items	Hand-shapes	Location	Movement	Orientation
202. Loads	A	Shoulders		π
203. Labourer				
179. Lake	5	Waist + Mouth	↔	π + ㄩ
204. Mad	G	Head		π
205. Memory	G	Head	↑	π
206. Mine	G	Chest	↑	π
207. Monkey	B1	Arms	↑	ㄩ
208. Mango	G^ + A	Mouth	↓.	π
209. Medicine	B1 + O	Wrist + Mouth	↑	π
210. Milk	F	Chest	↓	π
211. Money	F	Fingers		π
212. Mirror	B	Face	↑	π
213. Master	G	Upper lips	↘	π
214. Market	F +	Stomach	↔*	π
215. More	B	Waist	ㄥ	π
216. Move	R	Chest	↔	π
217. Morning	5	Chest	↑	π
218. Meat	A	Mouth	↑	π
219. Mother	G	Nose	↑	π
220. Movie	O	Eyes	↑	π
221. Nails	G	Nail		π
222. Necklace	5	Neck	↑	π
223. Necktie	O	Chest + Neck	↑	π
224. Name	U	Chest	↙	π
225. Near	F#	Chest	↔	ㄩ

Lexical Items	Hand-shapes	Location	Movement	Orientation
226. Neck	B	Neck	↑	π
227. New	B1	Stomach	↓	π̄
228. Night	B	Chest	↓	π
229. Nose	G	Nose	↑	π
230. Not	B2	Stomach	⇔	π̄
231. New	S			
232. Onion	R + G	Chest + Eye	↕	π̄
233. Oil	A1 + S	Chest	↓	π̄
234. Old	B	Chest	⇐	π̄
235. One Minute	G	Stomach	↑	π̄
236. Other	B1	Stomach	⇔	π̄
237. Office	S			
238. Peacock	F#	Chest	↑	π̄
239. Paint	B	Chest	⇐	π̄
240. Price	F	Fingers		π̄
241. Pig	G^	Nose	↓	π̄
242. Pond	A1	Mouth + waist	↔	π
243. Potato	C	Chest + waist	↕	π̄
244. Plane	B	Above shoulder	↑	π̄
245. Person	G	Upper lip + Nose	↘ + ↑	π̄ + π̄
246. Play	A	Chest + waist	⇔	π̄
247. Pull	A	Waist	⇐	π
248. Push	A	Waist	⇔	π̄

Lexical Items	Hand-shapes	Location	Movement	Orientation
249. Passing	5	Stomach	⇨	⌌
250. People	G + F#	Upper lips + Ears	↘ + ↑	⌌ + ⌌
251. Park	S			
252. Pray.	B	Chest	□	⌌
253. Pot	B	Chest	⊞	⌌
254. Rice	F#	Mouth	↑	⌌
255. Road	5	Waist	⇨	⌌
256. Round	G	Waist	↙	⌌
257. Run	A	Chest	┆	⌌
258. Read	B	Chest	↑	⌌
259. Remember	G	Head	↑	⌌
260. River	B	Waist	↙~ + ⇨	⌌
361. Room	G	Chest	+.○	⌌
262. Rope	G	Shoulder	┆.	⌌
263. Rotten	B	Mouth	⇨	⌌
264. Rain	O	Above shoulder	↓	⌌
265. Red	S, F#	Chest	⇨	⌌
266. Right side	A	Chest	↑	⌌
267. Sister	F#	Ear +Shoulder	↘ (↑ Eldest, ↓ Youngest)	⌌ + ⌌
268. Small	5	Chest		⌌

Lexical Items	Hand-shapes	Location	Movement	Orientation
270. Sugar	LH G^ + RH G	Chest	RH ↔○	π
271. Sick	5	Frontalis	↑	π
272. Sell	F#	Chest	↻	π
273. Shop	G	Chest	↻	π
274. Silver	F#	Ear	↑	π
276. Sometime	G	Wrist	□	π
277. Sugarcane	G^	Chest	↻	π
278. Sari	B	Shoulder	←	π
279. Shirt	F#	Chest	↑	π
280. Salt	F#	Tongue	↔	π
281. Sand	F#	Chest	↓	π
282. Say	G	Lips	⇒	π
283. Scratch	C	Hand	↔	π
284. Sea	5	Waist + mouth	↔	π + ⊥
285. See	V	Eyes	⇒	π
286. Seed	F#	Chest	↓	π
287. Seven	5 + G	Chest		π + π
288. Sharp	G	Waist	↑	⊥
289. Shoot	G1	Chest	⇒	π
290. Short	B1	Waist	↓	π
291. Sing	B		⇒	
292. Sit	A	Chest	↓	π
293. Skin	G	Cheeks	↑	π
294. Sky	G	Above vertex	↑	⊥

Lexical Items	Hand-shapes	Location	Movement	Orientation
295. Sleep	B	Cheeks	□	⌈
296. Smoke	V	Mouth	⇒	⌈
297. Snow	B1	Chest	↔.	⌈
298. Some	F#	Chest	↑	⌋
299. Spit	F#	Mouth		
300. Split	B	Waist	↙	⌈
301. Squeeze	A1	Chest	⌈	⌈
302. Stab	A	Hand	⇒	⌈
303. Stand	B	Waist	↑	⌋
304. Star	F#	Above Vertex	↑*	⌈
305. Stick	A	Chest	↓*	⌈
306. Stone	5a	Chest		⌈
307. Straight	B	Chest	⇒	⌈
308. Suck	A1	Mouth	↑	⌈
309. Sun	B1	Frontalis	↙.	⌈
310. Smell	B	Nose	↑	⌋
311. Swim	B1	Chest	⇒*.	⌈
312. Slow	B1	Waist	↓*	⌈
313. Simple	F#	Chest	⇒	⌈
314. School	B	Chest	↑	⌈
315. Sweep	A	Waist	↔	⌈
316. Study	B	Chest	↑	⌋
317. Soft	5	Chest	↑	⌈
318. Spoon	A1	Stomach	↑	⌋
319. Shopping	B	Chest	↑	⌋
320. Stay	B	Chest	□	⌈

Lexical Items	Hand-shapes	Location	Movement	Orientation
321. Shy	F#	Chin	↑	π
322. Snake	B	Elbow	↔	∩
323. Same	G	Chest	□	∩
324. Teeth	G	Teeth	↑	π
325. Tea	RH F#+ LH B	Chest	↑	π
326. Teacher	G	Wrist	□	∩
327. Thirsty	A1	Mouth	↑	π
328. Train	B	Waist	↔.○	∩
329. They	5a	Chest	↔.○	∩
330. Them	5a	Chest	⇒	∩
331. Thick	B1	Chest	↑	∩
332. Thin	I	Chest	↔	∩
333. Think	G	Head	↑	π
334. This	G	Chest	⇒	∩
335. Three	3 finger			∩
336. Throw	O released to a 5	Chest	⇒	∩
337. Tail	A	Backside of the waist	⇒	∩
338. Tale	B	Chest	⇒*	∩
339. Ten	5	Chest	⇒	∩
340. That	G	Chest	⇒	∩
341. There	5	Chest	⇒*	∩
342. Tongue	G	Tongue	↑	π
343. Touch	B1	Arm		∩

Lexical Items	Hand-shapes	Location	Movement	Orientation
344. Think	G	Head	↑	∩
345. Tall	B1	Shoulder	↑	∩
346. Tooth	G	Tooth	↑	∩
347. Turn	S	Face		
348. Tailor	G^	Waist		∩
349. Teach	S + A1	Chest	⇒	∩
350. Tooth-brush	A1	Mouth	↔	∩
351. Table	B	Chest	⇨	∩
352. Tree	U	Chest	↑	∩
353. Take	F#	Chest	⇨	∩
354. Tonight	B	Chest	↓	∩
355. Today	B	Chest	↓	∩
356. Tomorrow	B	Chest	⇒	∩
357. Two	2 finger	Shoulder	↑	∩
358. Thank you	H	Chin	⇒	∩
359. They	B1	Chest	↻	∩
360. Upside-Down	G	Waist	↑↓	∩ + ⊥
361 .Up	G	Chest	↑	⊥
Useless	F#	Waist	↻	∩
362. Unwilling				
363. Vomit	B	Mouth	⇒	∩
367. Vegetable	G	Chest	↔	∩ ×
59. Village	4	Chest	↗	∩
368. War	A	Chest	□	∩
369. Well	F#	Waist	↑*	∩
370. Write	F#	Hand	↙	∩
371. Worship	B	Chest	↑	∩

Lexical Items	Hand-shapes	Location	Movement	Orientation
372. Word	F#	Hand		⌈
373. Walk	V1	Chest	⇨	⌈
374. Warm	B	Chest	↑	⌈×
375. Wash	A	Waist	⇨*	⌈
376. Water	A1	Mouth	↑	⌈
377. We	B	Chest	↔.○	⌈
378. Wet	5	Chest	□	⌈
379. What	5	Chest	↑	⌈
380. When	5	Chest	↑*	⌈
381. Where	5	Chest	↑*	⌈
382. White	G	Teeth	↑	⌈
383. Who	G	Chest	↔○	⌈
384. Wide	5	Chest	⇨	⌈
385. Wife	F#	4 th Finger		⌈
386. Woman	G	Nose	↑	⌈
387. Woods	B	Chest	⇨	⌈
388. Work	A	Waist	↕	⌈
389. Worm	V1	Chest	⇨	⌈
390. Water	A1	Mouth	↑	⌈
391. Window	B	Chest	□	⌈
392. Worthless	F#	Waist	↔○	
393. Wonderful	O	Chest	↑	⌈
394. Went	S			
395. Went	5	Chest	↑	⌈
396. Watch	G	Wrist	⇨	⌈
397. Yesterday	B	Chest	⇨	⌈
398. Younger brother	G + B1	Upper lip Shoulder	□	⌈

Lexical Items	Hand-shapes	Location	Movement	Orientation
399.Yours	G	Chest	⇨	⌈
400.Year	B1 + G	Chest	⇨	⌈ + ⌈
401.Yellow	S	Chest	⇨	⌈

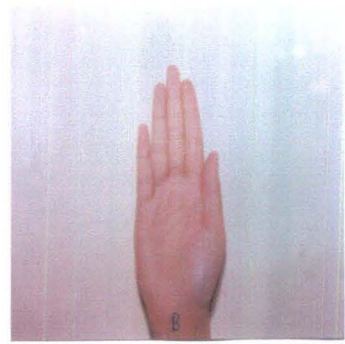
HANDSHAPES



A



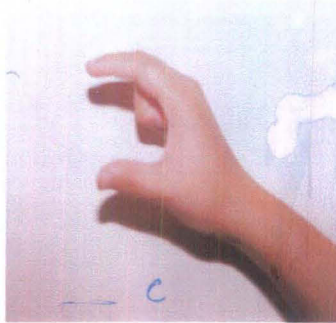
A1



B



B1



C



Y



F



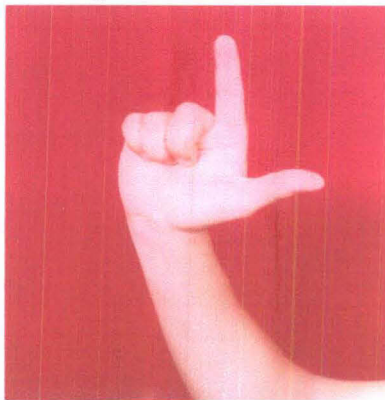
G



H



I



L



O



F#



G^



R



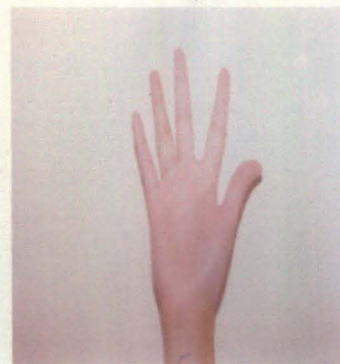
V



VI



4



5



5a



K

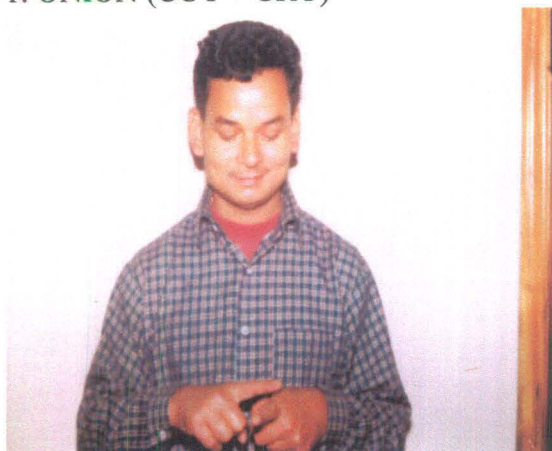


U

Spence & Woll 1988.

(b)

1. ONION (CUT + CRY)



CUT



CRY

2. COCONUT (ROUND + BREAK)

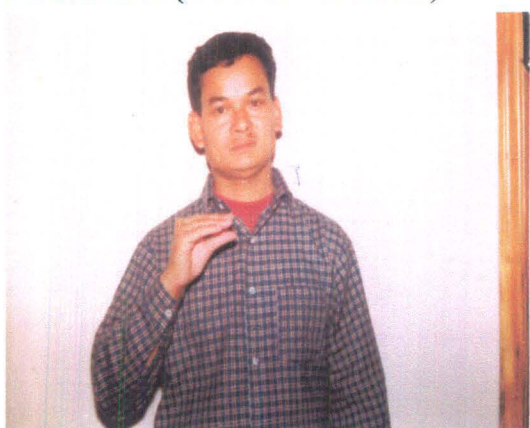


ROUND



BREAK

3. VILLAGE (SMALL + HOUSE)



SMALL



HOUSE

4. SUGAR (TEA + DRINK)



TEA



DRINK

5. GRANDMOTHER (OLD+GIRL)



OLD



GIRL

6. GRANDFATHER (OLD+MAN)



OLD



MAN

7. THINK/ REMEMBER/MEMORY

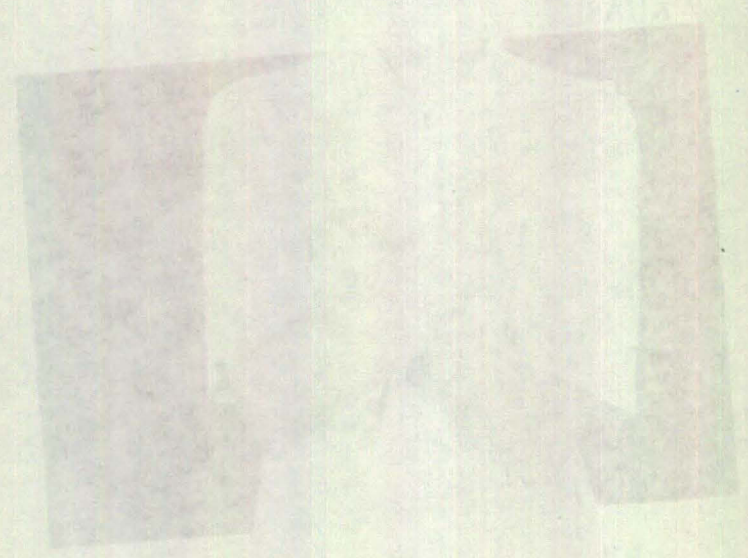
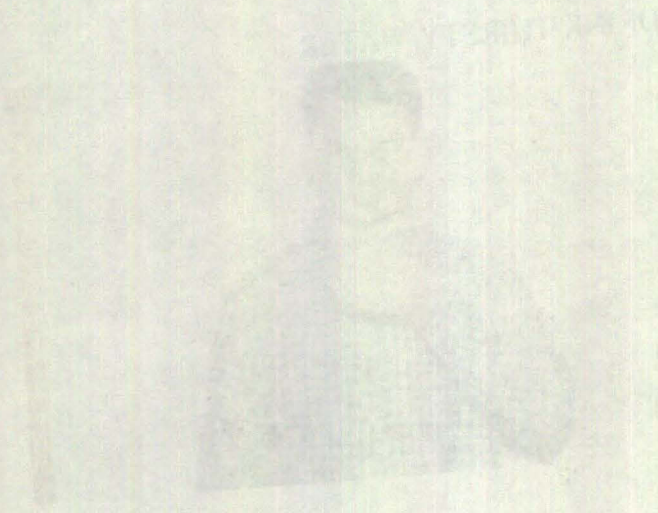


8. DRINK/THIRSTY/WATER



9. KHASI





CHAPTER III

Methodology

As explained earlier in chapter I, the main objectives of the present study are to highlight the significance of sign language in deaf education; the preference given to spoken language as a medium of instruction rather than sign language; preference given to mono-lingual approach rather than bilingual-bimodal approach; preference given to English rather than any of the local languages and to present the materials and syllabi used by the schools in Shillong.

3.1. Elicitation of Data:

In order to fulfill these aims and objectives, using various techniques such as observation, questionnaire interview, testing by picture cards and video recording, followed some objective and subjective methods. The observation method was carried out with the intention to focus on the mode of teacher-students' interaction in the classroom and interaction between the student in and outside the classroom. Data elicitation for the present study was collected on the basis of chosen subjective and objective type of questionnaires handed out to the teachers, parents and the students in the three schools. The speech test conducted in this study was a combination of the two (observation and questionnaire). Interviews were also conducted with the teachers of all the three schools and some of the parents. The methodology for eliciting sign language data was previously carried out using the photography method. But later it was pointed out by those who worked on sign language that video-recording method is more appropriate for the collection of sign language data as it will be more accurate, clear and able to capture the movements and the orientation of how signs are articulated. Branson & Miller¹ (1997:181) states that 'of particular importance to sign language research has been the development of computer-based use of video materials through rapidly improving digitizing processes'.

¹ Branson. J & Miller. D: Research Methodology in Language & Education: In Encyclopedia of Language & Education: Ed. Hornberger. N.H & David Corson: Kluwer Academic Publishers: 1997. p.181.

The data collection techniques used in this study can be divided into the following:

3.1.1. Observation Method:

Participant observation method in the schools social functions for instance the world deaf day celebrations and during classroom sessions were also carried out. Participation observation method was also carried out during speech therapy session of the students.

3.1.2. Questionnaire method:

The questionnaires prepared for both the parents and the teachers consist of two parts that is the subjective and objective types in which Yes/No questions were included in the objective type of questionnaire. The questionnaires prepared were distributed to the teachers of all the three schools and no specific time were given to the teachers to return the questionnaire on account of the teacher's conveniences. Most of the teachers took more than a week to return the questionnaire. The questionnaires are presented in the following pages in section 3.5.

Due to limited time available for the fieldwork, questionnaire prepared for the parents were distributed through the students with no specific time limit. The questionnaire prepared for the parents were handed out only to non-resident student, as it was difficult to contact parents of residential students for most of them came from most interior villages. For non-literate parents other literate members of the family were acted as interpreters.

For the parents and teachers the question were a combination of subjective and objectivity and therefore some questions were followed by three to five, sometime even six options which they had to work.

For the parents Yes/No type of sample questions were prepared mainly to find out more about the prenatal history of each child, whether the children babble during infancy stage, the mode of communication in the home environment and other related questions. (See section 3.5.1c.).

For the teachers Yes/No type of sample questions were also prepared to find out more about the students' behaviour or activities in the classroom. This binary type of questions for the teachers were also prepared with the intention in understanding more about the problems, gaps or lacunae in deaf education in general and the language educational programme in particular. (See section 3.5.2c.)

For the student Yes/No type of sample questions were prepared because of the difficulty of interaction in data elicitation for obvious reasons. The questionnaires were distributed to the students and a bilingual teacher acted as interpreter. The students were given for one hour to work on the questionnaire. (See section 3.5.3). Samples of the questionnaire are presented in the appendix.

3.1.3 Interview Method:

Data was also collected on the basis of the interview method. Questions for the interview are based on the questionnaires prepared for the parents as well as for the teachers and other common questions relating to their daily activities and experiences with the deaf. On account of limited time interview sessions are mainly with the teachers in the school itself. Personal visit and interview was also carried out with one family (Mr. Choudhury) and a retired teacher of the S&CHH (Br Donahue).

3.1.4. Method for Video Recording:

As mentioned previously in chapter I Sr. Merley a professional BSL sign interpreter was the first to incorporate the use of sign language in Shillong, however BSL is not taught to the students where the focus is on development of speech. In this present study, since no professional interpreter was available therefore, data were collected at the lexical level prepared in randomly ordered lists of around 400 items were collected from the students chosen from the three schools. The word list given to the students contains mostly the common basic words used in their daily lives. Illustrations, pictures and diagrams with the help of flash cards were also used during the presentation of the word list. The lexical items were presented on the blackboard where students were asked to translate these lexical items into signs. Students

translate these lists of words at the lexical level. Student's translations of these signs were recorded using the manual videotape camera.

3.1.5. Method of Testing Speech Ability:

As pointed out earlier in the first chapter the educational approach that the schools are following is the oral approach, therefore this necessitates testing the success of speech development in the students. The language used for this test is English, which is the medium of instruction and the subjects chosen for this test are mostly from Ferrando Speech and Hearing centre and the S&CHH. Test was also conducted with two students of the centre who had been integrated into the normal hearing school. The students may experience problems with verbal test instructions therefore the test is conducted using the help of flash cards containing pictures associated with each word. The words chosen for this test comprise of common basic words that include all the basic phonemes in the language either occurring in initial, medial or final position. Another test was also conducted at the alphabetic level. The procedure for the test was conducted by first showing the flash cards and through lip-reading technique that the school is using, the students were asked to articulate the words one by one. Speech articulation of the students was recorded using the micro-tape recorder.

3.2. The Subjects:

Prior to the fieldwork the subjects for the present study were decided mainly on the three sections of the community, the deaf students, the teachers and the parents from the chosen three schools in the area. All the subjects were informed regarding the nature of this study before the collecting the data. As the present study involves the educational context and situation of the deaf, therefore the device questionnaires were distributed to the chosen subjects that are presented as follows:

3.2.1. Parents.

1. L. R Marbaniang
2. Lalengliana

3. (Late) R.B Kharlukhi
4. Sheik Jalal & Ambia Khatoon
5. K.S.Kharmawphlang
6. Smt.Eldaris Mary Jyrwa
7. Bishnu Gurung & Chandra Gurung
8. Nicholson Paswett
9. Marngar
10. Late Mrs Angelina Sohtun & Mr Victor Marbaniang
11. G. B Chettri
12. Shri Abhinoy Dhar
13. Mr Karmeshwar Das
14. Leslington L Nongpiur
15. Shri Vinod Tiwary & Mrs Babita Tiwary
16. Tilzathang Lunglim
17. Tel Bahadur Ghorti
18. Bishnu Bahadur Chettri
19. D. B. Sinha
20. Shyamal Deb & Jhara Deb
21. Prabhu Kuma Singh
22. Leslinton Lyngdoh Nongpiur

3.2.2. Teachers

1. Monica M. Pdah BA, B Ed, HI (AYJNIHH)
2. Sangeeta Lyndoh DSE (HI)
3. Madhavi Gurung. BA
4. Mrs. Elizabeth Khonglah DSE (HI)
5. Ms Scolastica Rynksai BA
6. Ms Kyntiewlang Mukhim BSc
7. Ms Fedalis Bawar BA DSE (HI)
8. Ms Baridor Sohtun DSE (HI)
9. Bibiana DSE (HI)

10. Caroline D. Sohtun 9 years experience
11. Ms Balakordor Buhphang BA
12. Ms. (deaf) Sona Choudhury HSSLC
13. Ms Geona Dkhar BA, DSE (HI)
14. D. Dkhar DSE (HI)
15. Ms Wanhun Nongneng BA
16. Sr Shalaly Jose DIIIS Speech Audiology Kerala
17. Ms Collette W Nongsiej Speech Therapist/ Audiologist AYNIIH.

3.2.3. Students for Videography

Video recording was carried out with the students from S&CHH as mentioned as follows:

The informants comprise of both the pre-lingual and post-lingual deaf students:

1. Mai-Mai: Class-9, Prelingually deaf
2. Lasanbor: Class-9, Prelingually deaf.
3. Swapna: Class- 9, Prelingually deaf.
4. Franklin: Class_9, Prelingually deaf.
5. Michael: Class-9, Postlingually deaf.
6. Stephanson: Class-9, Prelingually deaf.
7. Wankitbok: Class-9, Postlingually deaf.
8. Healingson: Class-9, Postlingually deaf.
9. Mela: Class- 9, Postlingually deaf.

3.2.4. Subject: for speech test

1. Iasuklang 16 years, postlingually deaf
2. Melda 15 years, postlingually deaf
3. Sarita 13 years, postlingually deaf
4. Justine 12 years, moderate deaf
5. Bobby 10 years, profoundly deaf
6. Pyndap 10 years, postlingually deaf
7. Ibanpynshailang, 10 years postlingually deaf

8.Kintup 10 years, profoundly deaf

9.Joel Rani profoundly deaf

10.Aroma Rani profoundly deaf.

3.3. Assessment procedures

The questionnaires (including the multiple choice and Yes/No) consist of eighteen questions for the parents, forty-one questions for the teachers and five questions for the students. The analysis of the data in this study involved the investigation into the method of language education of the deaf.

The objective type questionnaires prepared were presented to the subjects as a multiple-choice question. Usually the choices given were four but in some questions in which greater subjectivity was involved we also had to give three to five or in a few questions six options. These responses could be graded on similar scales but in the assessment I decided to discuss each response separately. Each questionnaire was given to the subjects in which they were asked to tick on the appropriate choices. The responses were tabulated in the form of tables that shows the total number of different responses obtained from the subjects.

The subjective type of questionnaires was given to both the parents and the teachers for the specific detailed account needed regarding their experiences with the deaf. Analysis for the subjective questionnaires will be based on the detailed responses gathered from the subjects. The responses will be highlighted in the form of a chart.

The responses to Yes/No questionnaires will be counted from the maximum number of responses to the lowest number of responses and discussed separately.

Data on sign language will be presented in the form of a table. The table will consist of four columns providing details relating to the features i.e. in handshapes, location, movement and orientation. The handshapes that are currently used by the students will be presented in a photographic form using the manual photograph camera.

Assessment of the speech development of the children will take into account the acquisition of sounds and this was assessed in relation to the degree of hearing loss

recorded earlier by the audiologist. Test is conducted at both the alphabetic level that is to test students' ability on the correct articulation of the names of each alphabet and at the phonetic level. The test will investigate the most difficult sounds that could be found when children are attempting to articulate to the least difficult ones. The aim of this test is also to assess the success of speech therapy program that is offered in these schools. Standard test developed by special clinics for English is presented in the appendix (page).

3.4. Samples of the response sheets for speech Test:

Eleven tests were conducted at the alphabetic level. Only one sample of the response sheet for the speech test at the alphabetic level is presented in this chapter.

At the phonetic level four tests were conducted, and only one sample of the response sheet for the speech test is presented in this chapter.

3. 4. 1. Alphabetical level: (+ Accurate, - Inaccurate)

Name: Frederick

Age: 8 yrs

Class: I

Time of receiving speech therapy: 3 years old

Degree of hearing loss: Prelingually deaf

Alphabets	Accurate	Inaccurate	Comments
A	+		Out of 26 alphabets 19 accurate and 7 inaccurate.
B	+		
C		-	
D	+		
E	+		
F	+		
G	+		
H	+		
I	+		
J		-	
K		-	
L	+		
M	+		

N	+		
O	+		
P	+		
Q			
R	+		
S	+		
T	+		
U	+		
V	+		
W	+		
X		-	
Y		-	
Z		-	

3.4.2. Phonetic Level: Articulation Test. (The symbol * has been used for non-audible responses)

Name: Aroma

Age: 10 years

Degree of hearing loss: Moderately severe

Speech training receives since two years old.

Consonants	Correct	Incorrect	Comments	Vowels	Correct	Incorrect	Comments
/b/	√			/i:/	√		
/p/	√			/i/	√		
/t/	√			/e/	√		
/f/	√			/ʌ/	√		
/d/	√			/a:/	√		
/k/	√			/u:/	√		
/g/	√						
/m/	√						
/n/	√						
/s/	√	X					
/sh/	√	X	/sh/ in the final position is produced as /t/ in the word <i>brush</i>				

CHAPTER IV

Data Analysis

The present study intends to examine the following issues:

- (a). Preference given to spoken language as a medium of instruction rather than sign language.
- (b). Preference given to monolingual approach rather than bilingual-bimodal approach.
- (c). Preference given to English rather than any of the local languages or language of the peer group learners.
- (d). To study the materials, methods and syllabi used in these schools for the hearing impaired. (Details regarding the schools/ curriculum are provided in chapter I).
- (e). A comparative study between schools following the manual approach with those following the oral approach.

To elicit responses for these objectives a set of questionnaires were designed and a detailed account of these objectives is discussed on the basis of the number of responses gathered from the fieldwork that is tabulated in the following sections:

4.1. Subjective Questionnaire for Parents

The subjective questionnaire prepared for the parents consists of four questions and twenty-two responses were collected and these responses are discussed as follows:

Chart 1

Parents/Guardian	Question 1.	Question 2	Question 3	Question 4
1.L.R.Marbaniang	Normal	Unknown	3 years old	Medical treatment and Schooling
2.Lalengliana	Stress, over-drug, tension	Lack of nutrition	2 yrs	Medical treatment and Schooling
3. (Late) R. B. Kharlukhi	Normal	Unknown	Unknown (parents died)	Medical treatment and Schooling

Parents/Guardian	Question 1.	Question 2	Question 3	Question 4
4. Sheik Jalal & Ambia Khatoon	Normal	Unknown	13 months	Medical treatment and Schooling
5. K. S. Kharmawphlang	Normal	Unknown	1yr	Medical treatment and Schooling
6. Smt. Eldaris Mary Jyrwa	Over-drug	Over-drug	3yrs	Medical treatment and Schooling
7. Bishnu Gurung & Chandra Gurung	Normal	Fever after 5 days of delivery	1 yr.	Medical treatment and Schooling
8. Nicholson Paswett	Normal	Inherited	4yrs	Medical treatment and Schooling
9. S. Marngar	Normal	Ear infection	2yrs	Medical treatment and Schooling
10. (Late) Mrs. Angelina Sohtun & Mr. Victor Marbaniang	Normal	Congenital	No precise information	Medical treatment and Schooling
11. G. B. Chettri	Normal	Small-pox	2yrs	Medical treatment and Schooling
12. Shri Abhinoy Dhar	Normal	Difficult delivery	2yrs	Medical treatment and Schooling

Parents/Guardian	Question 1.	Question 2	Question 3	Question 4
13. Mr Karmeshwar Das	Weakness	Sickness just before delivery	Since birth	Medical treatment and Schooling
14. Leslington L Nongpiur	Normal	Inherited	1yr	Medical treatment and Schooling
15. Shri Vinod Tiwary & Mrs. Babita Tiwary	Normal	Typhoid –fever at the age of 5 years	After 5 yrs	Medical treatment and Schooling
16. Tilzathang Lunglim	Attempt abortion, over-drug	Over-drug	Since birth	Medical treatment and Schooling
17. Tel Bahadur Ghorti	Attempt abortion	Pneumonia at the age of 3yrs	3yrs	Medical treatment and Schooling
18. Bishnu Bahadur Chettri	Normal	Inherited	Unknown	Medical treatment and Schooling
19. D. B. Sinha	Accident	Over-drug	No precise information	Medical treatment and Schooling
20. Shyamal Deb & Jhara Deb	Normal	Unknown	Since birth	Medical treatment and Schooling
21. Prabhu Kuma	Weakness	Over drug	1 month after birth	
22. Leslinton Lyngdoh Nongpiur	Weakness	Inherited	6 months after birth	Medical treatment and Schooling

No. 1. Can you briefly describe your family history, and before your child is born?

Thirteen number of responses reported having normal pregnancy. Cases like No. 7, 2,6,13 are due to stress lack of nutrition and affliction during pregnancy. Cases 16 and 17 are due to ineffective abortion. Cases 21 and 22 reported weakness and Case 19 due to accident during pregnancy.

No. 2. What do you really think caused this hearing problem in your child?

Five responses due to unknown reason are equal to the 5 cases reported due to congenital cause and congenital cases are either immediately or intermediately inherited from one generation to the next. Cases 6, 16, 19 and 21 are due to over medication in their children. Cases 7, 12 and 13 reported sickness before and after delivery. Cases 9 & 11 are due to ear infection and small pox disease with no specified time of occurrence given. Cases 15 & 17 reported typhoid fever at the age of 5 years and pneumonia at the age of 3 years respectively. Case No. 2 reported lack of nutrition with no further details.

No.3. When did you realize that your child has hearing problem?.

Five responses were obtained on 2 years of age of the child, where hearing loss was detected and mostly parents assumed that their child was slow to acquire language. Case 4, reported identification of hearing loss at the age of 13 months and Cases like 5, 7, and 14 reported hearing loss at the age of 12 months. Cases 13, 16 & 20 reported hearing loss since birth with no further details. Case 21 and Case 22 reported hearing loss since 1 month and 6 months after birth. Cases 10 and 19 provided no information. Case 3 parents had died, therefore no precise information can be collected.

No. 4. What are the steps taken by you as soon as your child is identified as having hearing problems?

All twenty- two responses were obtained on medical treatment and schooling as the immediate steps that parents had rendered to ensure health and education for their children.

The questionnaire above has been summarized in the following table below:

Question. No. 1	Normal	Stress, lack of nutrition, over medication	Ineffective abortion	Weakness	Accident
	14	4	2	3	1
Question. No. 2	Unknown and Congenital	Sickness before delivery and after delivery	Over medication and Lack of nutrition	Ear infection and small pox/ typhoid fever	Difficult delivery
	5 + 5	1 + 3	3 + 1	1 + 1 + 1	1
Question. No. 3	Since birth and 1 month after birth	6-12 months	13months- 2 years old	3-4 years old and After 5 years old	Unknown (parents died) and No precise information
	3 + 1	1 + 3	1 + 4	3 + 1 + 1	2 + 2
Question No. 4	Medical treatment and Schooling			Others	
	22		22	0	

4.2. Objective Questionnaire for the Parents.

Chart 2 consists of eight objective questions (Ref. Chapter III, p.) prepared for the parents and twenty- two responses collected has been presented and summarized below followed by a discussion:

Chart 2 RESPONSES

Questions	A	B	C	D	E	F	Total
1	10	12	4	-	-	-	26
2	8	9	5	-	-	-	22
3	10	7	10	-	-	-	27
4	2	5	20	-	-	-	27
5	13	6	5	-	-	-	24
6	8	11	3	1	-	-	23
7	13	10	3	2	-	-	28
8	22	22	22	-	-	-	66

*(The total number exceeding more than twenty-two indicates that parents have ticked more than one or two choices of the given questionnaire).

Question 1. Does your child make a response or come to you when you call?

Twelve responses show that deaf children respond to their parents by signing, ten used to attempt to speak, and while others simultaneously use sign and spoken language. Those who answered to other mode of communication gave no details.

Question 2. How does your child express his/her needs (emotionally, socially, etc)?

Nine responses show that deaf children express themselves in sign language. The other eight responses show that children attempt to speak rather than sign, and five responses indicate vocalization only.

Question 3. What is the mode of communication between you and your child, your child with his/her siblings, with friends and others?

Ten responses show that the mode of communication used is sign language and ten responses show use of speech, and seven responded to the use of fingerspelling. Therefore responses to the use of sign language are equivalent to the use of spoken language. Speech still plays a major role in the lives of these deaf children.

Question 4. What are your expectations from the school for your child?

Twenty responses show that parental expectations are mostly in terms of preparing students for higher education. Five parents expect the school to prepare the students to know how to read and write in English. Two parents expect their children to be able to sign. The data evidently reveals a positive outlook on deafness whereby, it reveals that whether deaf children communicate in sign or spoken language, it does not matter and whether children learn to read and write English or mother tongue it also does not matter to them. The main concern for them is learning rather than competence in language according to the parents.

Question 5. As parents what are your aspirations for your child?

Thirteen responses were obtained on preference of the academic skill; six responses show the preference for computer skills, and three responses show the preference for a self-supporting business.

Question 6. What does your child aspire to excel in?

Eleven responses were obtained on the preference for computer skills that reveal student's interest in computer management and engineering, and eight responses show the preference for academic skills. Three responses indicate the preference for a self-supporting business, and 1 parent did not give any specific details.

Question 7. Do you prefer your child to learn the mother tongue, sign language or English language?

Thirteen responses were obtained for the preference for learning the mother tongue, probably as mentioned earlier in chapter I, for the reason that it would be easy for everyone to comprehend it. Ten responses were obtained on learning English language for it is the medium of instruction in the schools and three responded to learning sign language for the reason as one parent testified that learning sign language by her child, he would be able to assist others experiencing the same problem.

All twenty-two responses in using speech can be seen in the data. This information however depended on parent's target for their children.

Question 4. Do you know sign language?

Twelve out of twenty-two parents claimed to know sign language.

Question 5. Do you use sign language with your child?

Twelve out of twenty-two parents use sign language with their children.

Question 6. Do you think that the government should provide any kind of assistance towards the betterment of the hearing impaired?

The responses revealed a strong agreement from the parents that the state government should grant remedial assistance to the hearing impaired so as to improve their social-political and legal situation.

4.4. Subjective Questionnaire for the Teachers

Chart 4 consists of six subjective questions (Ref. Chapter III p) prepared for the teachers, and it contained fourteen responses from the hearing teachers, one response from a deaf teacher (No.4) and two audiologists cum speech therapist. The subjective questionnaire has been presented in the following table below followed by a discussion on the responses gathered:

Chart 4

Teachers	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6
1. Monica M. Pdah BA, B Ed, HI (AYJNIIHH)	a. Training residual hearing. b. Amplification of sounds c. Developing reading skills d. Aimed at expressive speech f. Focusing on pronunciation & assimilation into words	Yes, Students can be compared to a second language learners	No, Through contact with other children, they developed sign language	No, parental efforts.	No, Government, parents, NGO's, Special Educationist are needed	Yes
2. Sangeeta Lyndoh DSE (HI)	Single words with pictures are introduced, sentences introduction.	Yes	Start signing when they start attending school	Yes	No	Yes
3. Madhavi Gurung. BA Two weeks training in Sign	Fingerspelling Facial expression Body gestures	Yes	Start signing when they start joining school	Yes, there should be parental effort without it, is not	No, it is not enough	Yes

language.				possible		
4.Mrs. Elizabeth Khonglah DSE (HI) Two weeks training in sign language.	School focus on development of speech, but parents mostly used sign language with them which hampers speech development	Yes, students can understand better using both spoken and sign language	Students used their own sign language which is different from the signing system of the school before they start school	Yes, but not all	No, Parents & relatives, friends, people, surrounding them in their daily life are needed to help these children	Yes, for a profound deaf child, speech is difficult to develop, therefore sign language is important
5.Ms Scolastica Rynksai BA	By lip-reading	Yes	Yes, only when they start attending school	Yes	No, co-operation between teachers and parents/ guardians	Yes

Teachers	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6
6. Ms Kyntiewlang Mukhim BSc	By lip-reading	Yes	In school	Yes Co- operation between teacher s & parents is needed	Yes	Yes
7. Ms Fedalis Bawar BA DSE (HI)	By lip-reading	Yes	Yes, only when they start attending school	No there is no parent teacher co- operation	Special educationists alone are not enough for student's successful learning	Yes, deaf educator s should use sign language when communi cating with the deaf
8. Ms Baridor Sohtun DSE (HI)	By lip-reading	Yes	Yes, only when they start attending school	Yes, some of them	Special educationists alone are not enough for student's successful learning	Yes
9. Bibiana DSE (HI)	By lip-reading	Yes	No	No	No	Yes

10. Caroline D. Sohtun 9years experience.	Individual speech therapy, depending on a child's degree of hearing loss	Yes	No	Yes	No	Yes
11. Ms Balakordor Buhphang BA	Speech therapy	Yes	No only when they start attending school	Yes	No	Yes
12. Ms. (deaf) Sona Choudhury HSSLC	Students should be trained for lip-reading by speech therapy	Yes, so that students can communicate with the non hearing impaired	When they start attending school	Yes, for my education my mother had taken up courses for speech therapy and lip- reading	Definitely not	Yes, Yes, Yes
13. Ms Geona Dkhar BA, DSE (HI)	Single words are introduced associated with pictures and then sentences	Yes	When they start attending school	Yes	No	Yes
14. D. Dkhar DSE (HI)	Single words are introduced associated with pictures and then sentences.	Yes	Start signing when they joined school	Yes	No	Yes

15. Wanhun Nongneng B.A	Single words are introduced associated with pictures and then sentences	Yes	In school	Yes	No	Yes
16. Sr Shalay Jose DIILS Speech Audiology Kerala	Single words are introduced associated with pictures and then sentences	-	-	-	-	-
17. Ms Colette W Nongsiej Speech Therapist/ Audiologist AYNIHH	Attention is given to lip-reading, visual- cues, Gestures/ signing are not used as much as possible, Tactile, visual feedback is given.	Yes	When they start attending school	Not much effort from the parents	Special education is important but if the students can interact with hearing children socially and academically, learning can be beneficial.	Yes

Question 1. If oral approach is used, what are the steps taken to enhance the development of speech?

Focusing on the development of speech by following the oral approach. From the given responses of the teachers and audiologists, special attention is given to lip-reading, as it is the only strategy for developing speech along with the aid of visuo-tactile cues. Depending on the child's degree of hearing loss, individual speech

therapy is given by utilizing residual hearing, amplification of sounds using the speech trainer and audiogram. Gestures and sign language are not encouraged in speech developmental programme. According to response No. 4, the teacher point out that although the school focuses on the development of speech, this programme get disrupted where at home they used augmentative- alternative communication (written board, note pad, gestures etc).

Question 2. Do you think a bilingual (sign and spoken) approach is more suitable for learning and development?

All the seventeen teachers agree to the bilingual approach for deaf education for learning development to take place. Teachers agreed that knowing and using both spoken and sign language would improve the teaching and learning situation and at the same time enhance the process of communication in both hearing and non-hearing communities.

Question 3. Does your student start signing when they start attending school, or are they already fluent signers before attending schools?

The data indicates that majority of the students begin signing when they came into contact with their peers in school, and response No. 4 indicates that deaf children have their own system of signing different from the signing system used in schools, before they enter school.

Question 4. Apart from your efforts are there any parental efforts?

According to the teacher's responses, parents are cooperative and hard working towards the education of their children, however responses No. 1, 7,8,9 and 17 shows that parental efforts are still lacking especially from those parents of residential students who have less contact with the parents. Response No. 3 explicitly states that there should be parental efforts, without which is not possible to achieve significant success.

Question 5. Do you think a special educationist alone is enough for the student's successful learning achievements?

All responses agree to a collaborative effort of the parents, the NGO's, the teachers, the government, and other volunteers for deaf education to be successful. Response No. 4 states that even relatives, friends, and people surrounding the deaf students in their daily life are needed to help these children.

Question 6. Do you think the importance of sign language is necessary for a deaf educator?

All the responses agreed to the importance of sign language. Response No. 4 pointed out that sign language is essential for a profoundly deaf student since speech development would be difficult to comprehend and developed. Moreover, profoundly deaf hardly show any interest in speaking therefore their use of sign language should be supported to a great extent.

The questionnaire has been summed up here in the following:

Question 1.	Main strategy for development of speech is <i>lip-reading</i> and training the residual hearing.	Technical aids: <i>Hearing aid, Speech trainer</i> and the audiometer
Question 2.	Preferences for a <i>bilingual approach</i> .	To be able to <i>communicate</i> in the <i>hearing world</i> .
Question 3.	Deaf students have <i>their own system of signs</i> before schooling	Most children learn to <i>use sign</i> when they <i>start attending school in contact with their peers</i> .
Question 4.	<i>Parent-teacher co-operation</i> is important for deaf education	
Question 5.	<i>Collaborative efforts</i> of the parents, teachers along with the help of the government and the NGO's.	
Question 6.	Profoundly deaf <i>cannot acquire the spoken language</i> through lip-reading.	Sign language is <i>important</i>

4.5. Objective Questionnaire for the Teachers

It consists of twenty-two questions (Ref. Chapter III p) and fourteen responses from the hearing teaches, one from a deaf teacher, two from the audiologist cum speech therapist, and responses varied depending on student's age and degree of hearing loss.

Chart 5. RESPONSES

Questions	A	B	C	D	E	F	Total
1	2		2	16	-	-	20
2 (a)	14	6	9	5	-	-	34
2 (b)	16	4	-	-	-	-	20
3	9	6	4	-	-	-	19
4	2	1	14	-	-	-	17
5	-	8	-	-	13	-	21
6	2	-	-	15	-	-	17
7	1	13	-	-	6	-	20
8	7	2	3	2	-	-	14
9	3	-	6	4	5	-	18
10	10	7	-	-	-	-	17
11	2	2	5	8	-	-	28
12	18	9	-	-	-	-	27
13	1	1	6	8	1	-	17
14	8	13	6	-	-	-	27
15	-	10	15	-	-	-	25
16	7	14	8	-	-	-	29
17	17	-	-	-	-	-	17
18	-	17	-	-	-	-	17
19	2	1	11	3	-	-	14
20	16	2	1	-	-	-	19
21	11	3	4	-	-	-	17
22	6	1	9	-	-	-	16

*(The total number exceeding more than seventeen indicates that teachers have ticked more than one or two choices of the given questionnaire).

Question 1. What is the primary mode of communication between you and your students?

Sixteen responses indicate that teachers use the method of total communication. Two responses use the oral method for communication while the other two use only fingerspelling. Respondent No.10 simultaneously use oral, fingerspelling and total communication.

Question 2. Please tick all modes of communication currently used by the students

The data indicates that children use both symbolic and non-symbolic communication. It also appears that children use more of the manual mode of communication than the oral mode.

2. (a). Fourteen responses indicate that students use facial expression, six use eye-gaze, nine use gestures and five use vocalization as non-symbolic mode of communication.

2. (b). Sixteen responses indicate that students mostly use the manual code of communication and four responses use the oral mode of communication.

Question 3. Can you make out what is the type of sign language your students are signing?

Nine teachers indicate the use of Sign English (SE), and six responded to using sign language that is different from SE and spoken language. The other four responses did not give any specification.

Question 4. What according to your experience is the best approach for teaching the hearing impaired?

Fourteen teachers indicated a bilingual approach as the best approach of teaching the hearing impaired and by following the method of total communication.

Two teachers indicated that the manual approach is the best approach while one teacher agrees to the oral approach.

Question 5. Please tick any of the following as the frequent behavior of the students in the classroom:

The data indicates that deaf students are participative as well as attentive in the classroom. Eight responses indicated that students are attentive and thirteen responses indicated that students are participative.

Question 6. How will you rate the level of achievement in term of reading abilities of the students?

Fifteen teachers rated reading ability of the students as below average and two teachers rated students as excellent.

Question 7. How will you rate the level of achievement in terms of writing abilities of the students?

Thirteen responses rated writing ability as good; six responses rated it below average and one teacher rated the same as excellent.

Question 8. How will you rate the level of achievement in terms of sign language abilities of the students?

Seven responses rated sign language ability as excellent; three rated it as average; two rated good and two rated the same as below average.

Question 9. How will you rate the level of achievement in terms of speaking abilities of the students?

Rating deaf student's speaking abilities and this may differ from one student to another based on the degree of hearing loss. 6 responses rated speech as distorted; five rated below average; four-rated average and three responses rated speech as intelligible.

Question 10. How will you rate the level of achievement in term of fingerspelling abilities of the students?

From the responses it can be seen that students have excellent abilities in fingerspelling. Ten teachers rated students' fingerspelling abilities as excellent and seven rated the same as good.

Question 11. It provides information on the age of the students in each of the teacher's classroom.

Two teachers has students whose age are from four to five years old; two teachers has students whose age are from six to eight years old; five teachers students has students whose age are nine to eleven and eight teachers has students whose age are twelve to fifteen and more.

Question 12. What type of teaching aid do you use for teaching?

The data indicates that the most influential tool of teaching strategy is the visual-aid and other strategies are object identification available in the school environment. Eighteen responses indicate visual –aid while nine responses indicates object identification as the main teaching aids.

Question 13. Tick one of the following as the learner's frequent problems or errors in writing

It appears that deaf children's frequent problems and frequent areas of errors in writing are due to their incompetence to spell the words, which contributed to their inability to produce grammatical sentences or probably grammatical in sign language. Eight teachers indicated that all the given choices in the questionnaire are the frequent problems or errors in writing; six teachers indicated students' inability to produce grammatical sentences; one indicated inability to recall the meaning of words and one teacher indicated students' inability to spell the words.

Question 14. Tick one of the following as the learner's frequent problems or errors in reading:

Errors in reading according to the teachers are mostly due to the inability to comprehend the meanings of words. Thirteen teachers indicated that students' frequent problems in reading are mostly due to the inability to understand the meaning of the words; eight indicated as inability to recognize the words and six did not give any specification.

Question 15. Tick one of the following as the learner's frequent difficulty in producing sounds?

Fifteen responses indicate that the fricatives are the most difficult sounds to produce. Several reasons can be the cause for this incapability, firstly they cannot perceive and secondly, related sounds that are homophonous for instance, the bilabial stops [m] and [p] which are articulated in the same manner cannot be observed through lip-reading technique. Ten responses indicated the nasals.

Question 16. Does your student respond to you?

Students responded to teachers mostly by signing and fingerspelling. Fourteen responses indicated by signing; eight by fingerspelling and seven by speaking.

Question 17. What learning strategies do your students generally use?

From the seventeen responses obtained it is obvious that the most common learning strategy that the students use is to fingerspell every word and retain it in the memory. It was also observed that students rehearse by using the fingerspellings.

Question 18. According to your experience, what are their cognitive or mental capacities for learning compare to the hearing children?

According to the seventeen responses from the teachers, it appears that repetition and drilling are the essential steps for developing cognitive and intellectual skills among the deaf students. Teacher's remark that teaching the deaf is time-consuming. For instance the syllabus that is usually use for the hearing students will take one year to complete the course, but for the deaf it would take two years for the same.

Question 19. If fingerspelling is used for teaching the students, what type of fingerspelling is use?

Initially the BSL type of fingerspelling was use, but lately the use of the ISL manual alphabet has emanated, however it was noticed that the BSL manual alphabet is still in use in most cases. Other than ISL and BSL type, some also uses single-handed fingerspelling similar to ASL. Eleven teachers use ISL; two teachers use BSL; one use ASL and three did not give any specification.

Question 20. If oralism is the method that is used, specify the language:

The spoken language used for the oral method is mainly English. Students who acquired deafness at a later stage, having some amount of input of the parent's language, either Hindi or Khasi would be used with these students for the need for successful communication and the home language (whether sign or spoken language) is not discourage in the schools. Eleven teachers indicated English; four teachers indicated Khasi and three indicated Hindi.

Question 21. What is the main goal of deaf education?

Eleven teachers indicated that in deaf education, the main goals of teaching are both to prepare the learners for higher education and improving communication skills and at the language level. Four teachers indicated to prepare learners for higher education and three responses to improve communication.

Question 22. What is the main goal of teaching?

Nine responses can be seen where the main goals are to develop competence in the student's speaking, reading and writing of the English language. Six responses indicated that the main goal is teaching students to read and write in English and one indicated that the main goal is teaching students to speak in English.

4.6 Yes/No Type Questionnaire for the Teachers

It consists of thirteen questions (Ref. Chapter III p) prepared for the teachers.

Chart 6. Responses

Question	A	B	Total
1	12	5	17
2	7	10	17
3	11	5	16
4	4	11	15
5	4	12	16
6	7	6	13
7	-	16	16
8	8	7	15
9	3	11	14
10	17	-	17
11	17	-	17
12	3	14	17
13	17	-	17

* (The total number of responses that is less than seventeen indicates that some questions do not apply to the speech therapist cum audiologist. Therefore only the teachers have given responses to these questions).

Question 1. Does students initiate communication?

Twelve said 'Yes', where students initiate communication mostly in the form of questions and five said No.

Question 2. Is language being taught as a separate discipline?

Ten responded to 'No' and Seven-said 'yes' consequently English language to a deaf student has become his/her first language. English is being used as the medium of instruction and it is also taught as a subject to fulfill the curricular requirements to prepare learner for higher learning.

Question 3. Does student understand single words in English?

Eleven responded to 'yes' indicated that deaf students have the ability to grasp single words and five teachers said 'no'.

Question 4. Does student understand sentences in English?

Eleven responded to 'yes' showing that students cannot understand sentences in English and four teachers said 'no'.

Question 5. Does he or she express himself or herself in a two-word sentences or simple phrases?

Twelve responses reveal student's incompetence to phrase in simple sentence and four teachers said 'yes'.

Question 6. Does student follow verbal command?

Seven responses said 'yes' and six responses said 'no'. Students do follow verbal command, depending on their lip-reading skills and maybe their residual hearing capacity.

Question 7 & 8. Does student use the tense properly?

Deaf students do not have the ability to recognize tense, aspect, gender and plural markings in sentences that had always been identified as the case of language deficits. Sixteen responses is 'no' and zero responses can be seen on 'no'.

Question 8. Does the student exhibit the ability to recognize gender, plural markings in a sentence?

Eight responses said 'yes' and seven responses said 'no'

Question 9. Is the curriculum employed suitable for you and the students?

Eleven teachers said 'no' to the unsuited curriculum for teaching. Three teachers said 'yes' to which no details was given.

Question 10, 11, 12 & 13 Do you think sign language should be the medium of instruction? Are you a fluent signer? Do you think sign language is important for you to learn? Will you be willing to learn sign language to improve your teaching strategy?

All seventeen responses said 'yes' to these four questions. These responses indicate the significance of using sign language as the medium of instruction in the schools. Out of seventeen responses only three teachers are quite fluent in sign language that is including the deaf teacher and teachers agree that sign language is important to know in teaching the deaf. The responses also indicate that teachers are inclined to learn sign language to improve the teaching and learning situation in school.

4.7. Objective Questionnaire for the Student

It consists of five questions (Ref. Chapter III p) handed out to the students of the S&CHH in Shillong. Teachers were used as interpreters for this questionnaire and the responses indicate that students are eager in learning to comprehend and master how to read and write in English. At the same time, it indicates that students are

elated about the idea that parents, friends and teachers would like to learn sign language to communicate with them.

These questions were intended as hypotheses viz.

(1). The hearing impaired learners do want to connect with the rest of the world by enquiring the ability to read and write in English.

(2). The hearing impaired do wish to communicate with their parents teachers and peer group in the language of their communications i.e. sign language. All sixteen students responding to the five questions positively and seventy-eight responses to 'yes' confirmed the hypotheses.

Chart 7.

Student	1. Do you want to know how to write in English?	2. Do you want to know how to read in English?	3. Do you want your friends to know sign language?	4. Do you want your parents to learn sign language?	5. Do you want your teachers to teach you in sign language?
1. Wankit	Yes	Yes	Yes	Yes	Yes
2. Vikash class VII	Yes	Yes	Yes	Yes	Yes
3. Lapdiang Shisha Class VIII	Yes	Yes	Yes	Yes	Yes
4. Gopal Class VII	Yes	Yes	Yes	Yes	Yes
5. Micheal	Yes	Yes	Yes	Yes	Yes

Class IX					
6. Arif Class VII	Yes	Yes	Yes	Yes	Yes
7. Vanish a Class VII	Yes	Yes	Yes	Yes	Yes
9. Stephan Class IX	Yes	Yes	Yes	Yes	Yes
10. Dayolang ki Class VII	No	Yes	Yes	Yes	Yes
11. Franklin son Class VIII	Yes	Yes	Yes	Yes	Yes
12. Lasanbor Class IX	Yes	Yes	Yes	Yes	Yes
13. Melari -suk Class IX	Yes	Yes	Yes	Yes	Yes
14. Swapn a Class IX	Yes	Yes	Yes	Yes	Yes
15. Kiewa	No	Yes	Yes	Yes	Yes

t-son Class VIII					
16. Maimai Class IX	Yes	Yes	Yes	Yes	Yes
Total	14/16	16/16	16/16/	16/16	16/16

4. 2. Brief Summary of the Analysis

A brief summary of the analysis can be summed up as follows based on the five points given at the beginning of the analysis:

1. *Approaches and Methods of teaching the deaf:* Based on observations and analysis of the responses it can be concluded that the method of teaching employed in these schools is primarily the oral approach and the method of total communication. A combination of all forms of oral, aural, and manual, make-believe, acting pantomime, all aid the students to reason and to express themselves. When inquiring regarding the preferred approach for teaching the deaf students most common responses were the bilingual approach and the method of total communication, as teachers often remarked “ it is always better for a student to know both the forms (sign and spoken) at least enough, to be able to function both within the hearing and non-hearing society”. Therefore the method of teaching is based on a bilingual approach rather than monolingual mono-modal. Since the teacher testifies to the need of fulfilling learning aspirations of the students, every possible means of enhancing success are utilized.

2. *Speech development:* The success of speech development and proficiency in sign language among these students depends on the access to the available linguistic input and the time when these students enter schools. Based on these responses, it can

also be stated that in Shillong preference is given to spoken language that is also used as a medium of instruction rather than recognizing the value of sign language that can be used as a means of instruction with great success.

3. *Sign language success:* Most students learn to use sign language in school through contact with those teachers who encourage the use of sign language and in contact with their peers and prior to schooling these children rely on home signs and gestures. At present, the situation in these schools is that the articulation of sign language depends heavily on the application of fingerspellings especially when they are communicating with their teachers. For terms that the teachers do not know any form of signs they use fingerspellings. Therefore proficiency in fingerspelling also depends on students' knowledge of the vocabulary.
4. *Integration:* Aiming at integration, emphasis is laid upon the acquisition of English language (since it also the official language of the region) so that students could pursue for higher education.
5. *Why no use of sign language:* In spite of the awareness of the growing importance of parents and deaf-educators the dreams of making deaf people speak, still hold strongly and firmly in the minds. From the interview with some parents (Mr&Mrs Choudhury, etc) of the deaf and a retired deaf-educator (Br.Donahue, St. Edmund's College), after mature consideration affirmed on the idea that sign language is important for the deaf. However they still persist in believing that the problems of deafness can be triumph through the strategies of lip-reading and speech-reading, training in using the residual hearing capacity that are commonly used in speech and auditory training programme.
6. *English vs. sign language:* The teaching atmosphere in Shillong indicated a continuous effort to equip the students with English in spite of student's common mode of communication in sign language. Based on the information gathered during interview sessions the reasons are the lack of official recognition of sign language and

its acceptance as a language in its own right, which forced educators to stress on the importance of spoken language. Similarly to be able to participate in a wider national life, the regional languages (Khasi) are not used in these schools. Usage of the regional languages is only found in conversation with those who are post-lingual and hard of hearing having enough input and competence in the languages.

7. *Goals of teaching:* The goal of teaching deaf students is to make them speak and write English which contributed to the ignorance of sign language. Overall the main goal of teaching is to prepare learners for higher education.
8. *Curriculum:* It can also be stated that the curriculum and syllabus employed for the high school students is the normal curriculum, which is used for the hearing students that is implemented by MBOSE. For the primary schools students, courses are chosen and rectified by the teachers themselves, which they feel may be best suited according to the student's abilities.
9. *Oral vs. Manual:* As stated in one of the objectives, we wanted to compare and contrast those schools following the oral approach with those following the manual approach. But it was found that all the schools in Shillong professed oralism, due to various reasons mentioned above.
10. *Success of the oral approach:* Observation and interviews could be managed with two successful oralist approach students from Ferrando School, these students are Joel and Aroma who had received auditory training since the age 3 and 2 years respectively, and at present they have been integrated in a normal school, since the age of 5 and now are both in primary school (class-4). These students although are identified as oralist success, yet their proficiency in communication and learning are only within the confinements of a limited circle of family, friends and teachers and the language used in communicating within these circles is mainly English language.

There is limited usage of sign language and probably at this stage these children, can be identified as semi- lingual.

4.3. Speech Analysis: The test was conducted with the help of a speech therapist, an audiologist and a teacher. The therapist and the teachers had selected the students for this test.

4.3.1 Alphabetic Level: Articulation Test. (+ Accurate - Inaccurate)

	1	2	3	4	5	6	7	8	9	10	11
A	+	+	+	-	-	-	-	-	+	+	+
B	+	+	-	-	-	+	-	-	+	+	+
C	-	-	-	-	-	-	-	-	+	+	+
D	+	+	-	+	-	+	-	-	+	+	+
E	+	+	-	-	-	+	-	-	+	+	+
F	+	-	-	+	-	+	-	-	+	+	+
G	+	+	-	+	-	+	-	-	+	+	+
H	+	+	-	-	-	-	-	-	+	+	+
I	+	+	+	+	-	-	-	-	+	+	+
J	-	+	-	+	-	-	-	-	+	+	+
K	-	-	-	-	-	-	-	-	+	+	+
L	+	+	-	-	-	-	-	-	+	+	+
M	+	+	-	-	-	-	-	-	+	+	+
N	+	+	-	-	-	+	-	-	+	+	+
O	+	+	+	-	-	+	-	-	+	+	+
P	+	+	+	+	-	+	-	-	+	+	+
Q	-	-	-	-	-	-	-	-	+	+	+
R	+	+	-	-	-	-	-	-	+	+	+
S	+	-	-	-	-	-	-	-	+	+	+
T	+	+	+	+	-	+	-	-	+	+	+
U	+	+	-	-	-	-	-	-	+	+	+

V	+	+	-	-	-	-	-	-	+	+	+
W	+	+	-	-	-	-	-	-	+	+	+
X	-	-	-	-	-	-	-	-	+	+	+
Y	-	-	+	-	-	+	-	-	+	+	+
Z	-	-	-	-	-	-	-	-	+	+	+
	+19	+18	+20	+7	+0	+10	+0	+0	+26	+26	+26
Total	-7	-8	-6	-19	-26	-16	-26	-26	-0	-0	-0

Details of each test are discussed as follows:

Test number 1. Students' name is Frederick, eight years of age, a prelingually deaf and an outstanding student in comparison with other students from class I in the S&CHH. The student has received speech training since the age of three. The student has nineteen correct responses and seven incorrect responses. The test reveals that the student has difficulty in articulating the alphabets J, K, R Y & Z. The alphabet C, D & G sound similar in his production as well as the production of the alphabet H & X sound similar.

Test number 2. Students' name is Rikida, a prelingually deaf child of six years of age from KG in the S&CHH. The student had received speech training since two years of age. The student has eighteen correct responses and eight incorrect responses. Difficulty in her production can be seen in the alphabets C, F, K & Q and similarly like test number 1, in the articulation of the last three alphabets.

Test number 3. Students' name is Roshni, from class I in the S&CHH, a prelingually deaf child of seven years of age who received speech training since two years of age. She has twenty correct and six incorrect responses. Her production of the alphabet B is similar to the alphabet P and the reason is because both the alphabets are bilabials.

Test number 4. Students' name is Mohit, a prelingually deaf child of ten years of age in class I in Ferrando centre who received speech training since the age of four. The student has six correct responses and twenty incorrect responses.

Test number 5. Students' name is Priyanka, a prelingually deaf child of ten years of age in class 1 in Ferrando centre and received speech training since five years of age. The student has twenty-six incorrect responses.

Test number 6. Students' name is Kintup a prelingually deaf child of ten years in class 1 in Ferrando centre and received speech training only since nine years of her age. The student has nine correct responses and seventeen correct responses. In spite of delayed speech training compared with the others, the child shows remarkable ability.

Test number 7 & 8 are both prelingually deaf students from Asha School. Amit is nine years of age and Ishwar is 4 years of age where both had received speech training quite late. The school did not have a speech therapist and it is until recently (2003) that the school hired a speech therapist, the same therapist that is employed by the S&CHH. The students have twenty-six incorrect responses.

Test number 9 & 10. The students are from Ferrando centre that have been integrated into the normal schools. Aroma is ten years of age and Joel is eleven years of age and their degree of hearing loss according to the audiologist is moderately severe and both received speech training since two years of age. Both students reveal excellent abilities in articulation in which they have all twenty-six correct responses.

Test number 11. Student's name is Justin and he is twelve years of age in class III from Ferrando centre whose degree of hearing loss is moderately severe. He had received speech training since three years of age. The student has twenty-six correct responses and the student displayed no difficulty in his articulation.

The tests has been summed up in the following table:

4.3.1.a. Table

Four groups	Age	School	Deafness	Training method	Interpretation
1. Three children. (Tests number 9, 10 and 11)	Ten, Eleven and twelve years of age.	Ferrando Speech and Hearing centre	Moderately severe.	Standard training procedure viz; Picture articulation test; speech trainer; hearing aid and main technique use is lip-reading.	+ 26
2. Three children Test number 5, 7 and 8	Ten, nine and four years of age.	Ferrando Speech and Hearing centre/ Asha school	Prelingually deaf	Standard training procedure viz; Picture articulation test; speech trainer; hearing aid and main technique used is lip-reading.	-26
3. Two children (Test number 1, 2 and 3).	Eight, six and seven years of age	S&CHH.	Prelingually deaf	Standard training procedure viz; Picture articulation test; speech	18-20 correct response and 6-8 incorrect responses.

				trainer; hearing aid; and main technique used is lip- reading	
4. Two children (Test number 4 and 6.	Both ten years of age.	Ferrando Speech and Hearing centre	Prelingually deaf	Standard training procedure viz; Picture articulation test; speech trainer hearing aid and main technique used is lip-reading	7-10 correct responses and 19-16 incorrect responses.

4.3.2. Phonetic level Articulation Test:

Picture articulation test at the phonetic level was also conducted with few students with advance speech development. The lists of words for the test are included in the appendix. In this chapter, I have listed only those words that students were able to articulate that was prepared for testing their speaking abilities. However the test was unsuccessful as majority of the students were not able to articulate and the speech that they were able to produce is either unintelligible or distorted, except for the four students listed below who were able to produce accurate articulation of all the words. A sample of the most intelligible speech incurred has been presented below. Firstly a brief introduction to these students' background is given below:

Test 1. The first test was conducted with Lasanbor a profoundly deaf student of S&CHH who is 17years of age who receives speech training since 7years of age.

Test 2. The second test was conducted with Wankit a severely deaf student of S&CHH who is 19 years of age. He had been studying previously in normal school for four to five years then shifted to S&CHH when his hearing problems was identified. He received speech training since the age of eleven.

Test 3 and 4. The third and fourth test was conducted with Joel who is eleven years of age and his sister Aroma who is ten years of age who are both from Ferrando Speech and Hearing centre. Their degree of hearing loss is categorized as moderately deaf. Both receive training at the age of three and two years of age. Parents informed that their hearing problems were identified at the age of two. Previously parents assumed that their children are slow in acquisition of language since in infancy stage both these children babble as compared with the normal hearing children. One peculiar feature about both these children is that they do not sign at all even if they were ask to sign except when they were at the centre with the other deaf students. Moreover parents do not encourage these children to sign. At home conversation is mostly in English and when communicating with them parents has to face directly at them and has to speak slowly.

The tests have been presented as below: (Responses that are not audible are represented by the symbol *)

4.3.2.a Table

Words	Test 1	Test 2	Test 3	Test 4
Black	plɑ:k	*	blɑ:k	blɑ:k
Blue	plu:	blu:	blu:	blu:
Brush	brʌʃt	brʌs	brʌʃ	bru:t
Class	kra: s	*	kla:ʃ	clɑ:ʃ
Dress	drʌs	drʌs	drɪʃ	drɛt
Fly	flaɪ	flɑ:i	flɑ:i	flɑ:l
Flour	flu:	*	flu:ɔ:	flu:
Fruit	fruɪ: t	fruɪ:	fru:	fru:t
Glass	klɑ:s	glɑ:s	glɑ:ʃ	glɑ:s
Clock	klok	klok	klok	klok
Green	kri:n	gri:n	kri:n	gri:n
Cradle	kra:dɪl	kra:dɪl	kra:dɪl	kreɪdɪl
Plate	pleɪt	*	pleɪt	pleɪt
Plum	plʌm	plʌm	plʌm	plʌm
Pray	preɪ	preɪ	pri:	preɪ
Prize	preɪʃt	praɪz	praɪt	praɪz
Money	mʌni	mani	mʌni	mʌn
Smoke	ʃmʌk	smʌk	smʌvk	smʌvk
Snake	ʃneɪk	sneɪk	sneɪk	sneɪk
Latch	*	*	lɑ:ʃ	lɑ:tʃ
Steps	step-s	stʌp	stɒp	step-s
Spoon	ʃpʌn	spʌn	ʃpu:n	spu:n
Sky	ʃkɑ	skɑɪ	ʃkɑ	skɑɪ
Square	ʃkwɛr	*	ʃkwɛr	ʃkwɛr
Shrub	ʃrʌb	krʌb	krʌb	ʃrʌb
Tree	tri:	tri:	tri:	tri:

The response sheets can be presented as follows:

Test 1

Consonants	Correct	Incorrect	Comments	Vowels	Correct	Incorrect	Comments
/b/		X	Produced as /p/ in the word <i>black</i>	/i:/	√		
/p/	√			/i/	√		
/t/	√			/e/		X	Produced as /u/
/f/	√	X	/f/ in the word fruit is produced with the aspirated /p/	/ʌ/	√		
/d/	√			/a:/	√		a:/ is also used in place of /ei/ in the word <i>cradle</i>
/k/	√			/u:/	√		
/g/		X	Produce as /k/				
/m/	√						
/n/	√						
/s/		X	Inaudible and mostly is produced				

			as /sh/				
/sh/	√						

Test 2

Consonants	Correct	Incorrect	Comments	Vowels	Correct	Incorrect	Comments
/b/	√	X	Inaudible in the word <i>black</i>	/i:/	√		
/p/	√			/i/	√		
/t/	√			/e/	√		
/f/		X	Produced as aspirated /p/ in the word <i>fruit</i> .	/ʌ/		X	Produced as /a:/
/d/	√			/a:/	√	X	/a:/ is also used in place of /ei/ in the word <i>cradle</i> .
/k/	√			/u:/	√		
/g/	√						
/m/	√						
/n/	√						
/s/	√						
/sk/		X	/sh/ is produced as /k/ in				

			the word <i>shrub</i>				
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Test 3

Consonants	Correct	Incorrect	Comments	Vowels	Correct	Incorrect	Comments
/b/	√			/i:/	√	X	/i:/ is used in place of /ei/ in the word <i>pray</i>
/p/	√			/i/	√		
/t/	√			/e/	√		
/f/	√			/ʌ/	√		
/d/	√			/a:/	√	X	/a:/ is also used in place of /ei/ in the word <i>cradle</i> .
/k/	√			/u:/	√		
/g/	√						
/m/	√						
/n/	√						
/s/	√	X					
/sh/		X	/sh/ is produced as /k/				

Test 4

Consonants	Correct	Incorrect	Comments	Vowels	Correct	Incorrect	Comments
------------	---------	-----------	----------	--------	---------	-----------	----------

/b/	√			/i:/	√		
/p/	√			/i/	√		
/t/	√			/e/	√		
/f/	√			/ʌ/	√		
/d/	√			/a:/	√		
/k/	√			/u:/	√		
/g/	√						
/m/	√						
/n/	√						
/s/	√	X					
/sh/	√	X	/sh/ in the final position is produced as /t/ in the word <i>brush</i>				

Speech errors in the tests conducted can be summed up as follows:

1. Sounds having the same place and manner of articulation are confusing for the students, as they cannot see/hear voicing. As can be seen from the above tests for instance from test 1 the bilabial /b/ is produce as /p/ in the words *Black* and *Blue* and the velar /g/ is produced as /k/ in the words *Green* and *Glass*.
2. Long vowel /u:/ reduced to a short vowel, for instance in the word *Spoon* in test 1.
3. Short vowels were produced as long vowels in the words *Money*, *Dress* and the word *Step* in test 2 and test 3.
4. Alveolar fricative /s/ was produced as post-alveolar fricative /sh/ in the initial position in the words like *Smoke*, *Snake* and *Spoon* in test 1. Similarly in the final position /sh/ was reduced to /s/ in the word *Brush* in test 1. In the final position /sh/ occurs in the words *Class*, *Dress*, and *Glass* in test 3.

5. /f/ was produced as /ph/ in the word *Fruit* in test 1.
6. Lateral /l/ was difficult to produce in the medial position and replaced by the trill /r/ in the word *Class* in test 1.
7. /sk/ in the initial position in the word *Square* cannot be produced and was articulated as /sh/ in test 1 and test 4. In test 3, /sk/ was produced as /k/.
8. /sh/ in the initial position in the word *Shrub* cannot be produced and was articulated as /k/ in test 2 and test 3.

As mentioned earlier that the main approach in both Ferrando and the S&CHH employed is the oralist method that focuses on teaching the students through lip-reading, auditory training and other visual-tactile strategy for the development of speech. According to the teachers and the audiologists, oral approach would be successful only with students whose identification of hearing problems was detected early. The most important stage for the development of speech is during the first few years of the student's age that is from 1-5 years old. Siebert (1980)¹ pointed out that in training the hearing-impaired children in the use of speech, the aims include: "producing vocalization, or phonations, changes in modes of vibration of the vocal folds; developing and practicing imitations, developing, controlling and coordinating respiration, phonation and shape of the supraglottal vocal tract; using residual hearing; acquiring a multisensory feedback system by residual hearing, vision, tactile and kinesthetic senses; articulating phonemes in meaningful contexts; progressing from phonetic skills to connected speech and developing a recognition that speech is a means to manipulating and controlling the social environment". One peculiar reason in the case of Shillong discovered is that children who have been trained in producing the spoken language are never eager to use sign language with the hearing people except within the confinements of the school and in the company of their peers. Moreover parents never encourage their children to communicate in sign language, as they fear that it will interfere with the development of speech and probably for the reason that they do not want their children to be identified as hearing impaired.

¹ Bench, R: Communication Skills In Hearing -Impaired Children: In Studies In Disorders Of Communication: Ed, Crystal, D, Lesser, R & Snowling, M: Whurr Publishers, London. 1993.82

Ling (1976)² also points out “it requires informed, systematic and sustained effort. None the less, even given prolonged training of intelligent, motivated hearing – impaired children by conscientious and competent teachers, it is very rare to find a prelingually, profoundly deaf child whose speech is not characterized by some properties of deaf speech”. Similarly the speech training program in these schools has become an individualized painstaking programme for both the students and the therapist where the process has always been a constant effort on monitoring and correcting student’s articulation of sounds. Students who are exempted from speech training at an early age prefer to use sign rather than attempting to speak or even to vocalize.

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² Bench, R: Communication Skills In Hearing –Impaired Children: In Studies In Disorders Of Communication: Ed, Crystal, D, Lesser, R & Snowling, M: Whurr Publishers, London. 1993. p. 82

CHAPTER V

5.1. Summary

The present study set out to explore the field of deafness mainly focusing on the language education of the deaf in Shillong. The main objective of this study is to view the effectiveness of various methods currently in use in the schools especially the oralist approach and to highlight the potentialities of sign language as a means that can be used in deaf education. Investigating the field of deafness, it was realized that the deaf could be characterized as a heterogeneous group that varies in individual degree of hearing loss, exposure to language and depending on these, affecting their language competence and performance in either sign or spoken language. All methods for teaching the deaf are eclectic provided categorization of the students according to the degree of hearing loss is carried out, and an assessment of his/her competence is also carried out so that appropriate method could be selected to cater to the student's attitudes and aptitude for learning.

In this study the first chapter provides an introduction in the field of deafness and a literature review on the research carried out on the approaches and methods relating to deaf education. It also includes background studies on the teachers, parents and students and the social, psychological and educational situation of the deaf in Shillong. Reviewing the case of deafness one can conclude, that deafness cannot be regarded as a condition of disability, for the deaf have a culture of their own, defined by the language in which they communicate in their day to day lives, giving them a sort of identity to its unique group with its own culture and language, thereby creating a community of their own. The first chapter also provides a detailed description of the three schools in Shillong that includes the curricula and syllabi committed to the education of the deaf and other supportive activities. The aim and objectives of the present study are also highlighted in the first chapter in sections 1.2 and 1.3.

The second chapter presents a linguistic analysis of sign language and the situation of sign language in Shillong. A phonetic and phonological description of sign language at the lexical level was also presented in the second chapter according

to the four parameters of articulation that are used to describe the signs (handshapes, location, movement & orientation). Today most sections of the society in India are quite well aware of the existence of sign language that is directly associated with deafness seeing it as the main communication mode which the deaf have developed. And for those who are not, either they are too blind to see it or simply choose to ignore it. Scholars and people associated with the deaf have been trying to emphasize that the deaf have a language and culture of their own that is unique and needs to be studied on its own.

The third chapter provides the details regarding the methodology adopted for the elicitation of the data, the subjects and it also includes samples of the questionnaires. The fourth chapter provides the analysis of the data that includes both the objective and the subjective questionnaires. As mentioned earlier the questionnaires were handed out to mainly three sections of the community that is, to the teachers, the parents and the students. The study also presents the analysis on the speech development of the students.

The fifth chapter will provide the summary and conclusion based on the preceding chapters. Towards the end of this chapter, it also includes some future projections and suggestions for sign language education.

5.1.2. Methodology adopted in this study:

As mentioned earlier the present study deals mainly with deafness in the educational context, therefore according to the purpose of this study several objective and subjective methods were carried out to meet the requirements of the study. The dissertation can be divided into two components:

- I. Sign language: A phonetic and phonological descriptions of the signs were presented in this study according to the parameters of articulation in the manner of handshape, location, movement and orientation. (Ref. Chapter II)
- II. Survey through various methods: (1). The questionnaire method was carried out mainly with the three sections of the community i.e. the teachers, the parents and the students. (Ref. Chapter III&IV)

(2). Observation method was carried out by attending the classroom sessions in all the classes in all the subjects offered by the school. Through observation method my initial conclusion was drawn that the main mode of interaction between the teachers and the students is through simultaneous use of fingerspelling and speech (Rochester method).

(3). Video recording of sign language data was also done, which reveals that the students and teachers depend heavily on fingerspellings as well.

(4). Interview method carried out with the parents and the teachers, clearly indicates that the status of sign language in Shillong still has a long way to go before being accepted and recognized by the society. Oralism is so deeply rooted in their psyche that the use of sign language is regarded as an abnormal condition. This situation and the attitudes have to change.

(5). Speech test was also conducted on speech development of the students. Most of the test conducted however was not audible which was the reason that only four samples of the test could be included in the discussions. (Ref. Chapter IV).

5.1.3. Elicitation of data:

The data for the present study were collected on the basis of both primary and secondary resources.

I. For the collection of signs the method of video recording was used with the help of a professional cameraman. Since no bilingual teacher was available for interpretation, lexical items were presented on the blackboard and students were asked to produce the signs. Signs were collected mainly from the students of the S&CHH.

II. The questionnaires that were handed out to the teachers, the parents and the students can be represented as follows:

Questionnaire	Parents	Teachers	Students
1. Subjective type	1	4	
2. Objective type			
2.1. Multiple Choice	2	5	
2.2. Yes/No type	3	6	7

The questionnaires consist of both subjective and objective questions for both the parents (1,2 &3) and the teachers (4,5&6). Objective questionnaire were divided into two parts i.e.2.1 Multiple choice questions and 2.2 Yes/No questions. Students were given only the objective questionnaires (7). Specific objectives of each one of the three types of questions, subjective, objective and binary choice have been explained in detail in the Chapter III.

The data collected as well as its analysis was presented in chapter IV. In this section the study is being summarized as follows:

1. The subjective questionnaire contains four questions out of which twenty-two responses were presented in chart 1. From the responses it can be briefly stated that deafness can occur during pregnancy or acquired after birth i.e. either acquired as soon as the child is born or later. Several reasons were found to be responsible for deafness like lack of nutrition during pregnancy, problems of ear infection, accident, fever, pneumonia, etc. From the responses it can be concluded that early identification of hearing loss is a major factor in language acquisition and learning, and this however depends on parental awareness of accessing immediate remedial assistance for their children. (Ref. Chapter IV Chart 1, pp.70).
2. The objective questionnaire for the parents contains fourteen questions of which twenty-two responses were represented in chart 2. According to the teachers some parents cannot even accept their child's hearing loss and teachers had to first provide counseling to the parents for acceptance of their children's disability. According to the information, it can be concluded that the parents and other family members

primarily depend on gestures and parents constantly keep trying to teach their children to speak. Since this does not work and with practically no hearing the child cannot learn to speak which makes it impossible for any personal, social and emotional interactions between the child and the parent, and majority of the deaf students in Shillong have hearing parents with no knowledge of sign language. (Ref. Chapter IV Chart 2, p. 75.)

- 3 Yes/No questionnaire for the parents consists of six questions and twenty-two responses. The responses clearly reveal that even for a profound hearing loss there is still a degree of hearing ability that is commonly known as residual hearing capacity. Auditory training programme makes use of this residual hearing capacity to train students how to distinguish the various sounds for instance, from the sound of a whistle to the sound of a thunder.

The responses to question number four clearly reveal that parents are confused about the difference between sign language and fingerspelling, assuming that fingerspelling is sign language. Therefore if they knew fingerspelling, they claimed to know sign language.

All the parents agree that the government should provide special attention to the deaf not only in terms of finance, provision of hearing aids, etc, but also towards their education and recognition of their language. (Ref. Chapter IV Chart 3 p.77).

4. The subjective questionnaire for the teachers contains 6 questions and it contains 14 responses from the hearing teachers, 1 response from a deaf teacher and 2 responses from audiologist cum speech therapist. It can be briefly stated here that lip-reading is the only available strategy for speech development with the help of a speech trainer and an audiometer.

There seems to be a lot of confusion regarding the method of teaching the deaf students. Realizing that students will not develop speech fully, especially for those students who are profoundly deaf and that sign language will cut them off from the so called normal functions. Therefore teacher follows the total

communication method of teaching that offers the deaf access to both spoken and signed language to be able to function normally in the hearing world.

Teachers also agree to the importance of sign language that can be used as a medium of instruction, and that successful education of the deaf could only be achieved if parents and teachers know sign language, and are co-operating with each other. (Ref. Chapter IV Chart 3 p.77).

5. Objective questionnaire for the teachers consists of twenty-two questions and twelve responses from the hearing teachers, two responses from teachers who know sign language, one response from a deaf teacher and two responses from the audiologist cum speech therapist. For further details on teachers' background please see sections 1.6 and 4.1.4. Based on the responses of these teachers the following conclusions can be discussed regarding students' learning abilities.

Sign language abilities: Deaf students reveal excellent proficiency in sign language, more than in any other language that is being used in these schools. It is important to state here that proficiency in sign language or spoken language varies from one student to another, depending on the degree of hearing loss. Why not use sign language when students are more competent and more comfortable in the language?. Speech development seems to be a complex affair of mastering the art of lip-reading and speech reading, compounded often by the teachers' lack of the linguistic knowledge of sign language.

Speaking abilities: As mentioned earlier, students' speaking abilities depend on the degree of hearing loss, the amount of exposure to the spoken language, language background in the home environment and the time factor in which students received speech training. Therefore the ability to speak differs from one student to another. Speech therapist had been trying to help the deaf to vocalize through lip-reading, but lip-reading requires more effort since it is difficult to distinguish between sounds with minimal distinctions.

Reading abilities: According to the teachers to improve reading skills, deaf children need prior understanding of what he/she is reading, teaching them just to read would not help them, since reading requires syntactic and semantic knowledge in understanding a sequence of words, where he has to learn to associate the written

words with an object or picture familiar to them and their experiences. To improve reading abilities it is important for the teachers of the deaf students to understand the difference between sign language and the written language as two different types of languages, syntactically as well as semantically.

Writing abilities: The sentences that the deaf produced can be characterized as ungrammatical that distort the semantic and syntactic content in terms of English phrases but probably grammatical in sign language structure. Teachers point out that a deaf child depends heavily on the written language for communication, especially when the use of fingerspelling, spoken and sign language failed. To improve the writing skills again, teachers have to give them several written exercises where teachers usually also ask students to copy down messages and notices for the parents. Deaf students often fail to distinguish the past from the present, the difference between singular and plural markers, the use of capital letters, difficulties with personal pronouns, etc. For instance when students were asked to produce a sentence with the word 'football' that is very familiar activity, students produced these kinds of sentences: *I like football play, I friend play ball the football, I love football play, etc.* and similar errors were also found in other sentences.

Fingerspelling abilities: Fingerspelling is the main strategy that is used by both the teachers and the students in all the three schools. Fingerspelling abilities of the students are excellent. (Ref. Chapter IV Chart 5 p.85). But fingerspelling alone is not enough as a means of communication.

- 6 Yes/No/ binary option questionnaire for the teachers consists of 13 questions and contains 14 responses from the hearing teachers, 1 response from a deaf teacher and 2 from the audiologists cum Speech therapists. English is the main language that is being used as both a first and a second language for the deaf and sign language is used amongst the students themselves. Teachers in fact learn the signs from the students and use these signs when interacting with the students. Although most of the teachers do not know sign language yet they are willing to learn sign language (Ref. Chapter IV Chart 6 p. 92).

- 7 Yes/No questionnaire for the students consists of four questions and sixteen responses. The questions basically intend to find out the students' attitude towards sign language, and their attitude towards English language. As can be seen from the responses, it clearly reveals that students are very much interested in learning to read and write in English. The responses also reveal that students need their family, friends and their teachers to know sign language, as it would be easy for them to converse and interact with them in their own language. (Ref. Chapter IV, Chart 7, p.95).

The responses from the questionnaires (Ref. Chapter IV) were presented in the charts in tabular form. The analysis begins with the maximal number of responses to the lowest number of responses.

8. Development of speech differs from one student to another depending on their degree of hearing loss. Speech therapy for developing English proficiency is carried out mainly with the help of a speech trainer. Speech test that was conducted with the chosen subjects reveal that the prelingually/profoundly deaf students cannot develop speech for it is difficult for students to lip-read homophonous words. It also reveals that postlingually deaf students can develop speech depending on the amount of training receives in the spoken language.

9. A phonetic and phonological descriptions of sign language reveals that the deaf students have their own system of signs that serves their communicative needs.

5.1.4. Conclusions and Future Projections:

On the basis of the findings of this present study some tentative conclusions can be drawn:

1. Language environment within the family:

1. Parents' gestures – adhoc, haphazard manner.
2. No signs as in a sign language.
3. Spoken language, which they cannot hear.

As a result there is complete lack of communication in an organized fashion in the hearing environment.

2. Language environment/ inputs from the school.

1. A considerable amount of exposure to the spoken language, which is English, which they often lip-read.
2. Fingerspellings: mainly BSL manual alphabets.
3. For the hard of hearing/moderately deaf students regional language (Khasi/Hindi) is also used for better understanding and successful communication.

As a result students are exposed to a bilingual-bimodal situation.

3. Language environment/ inputs from the peer groups.

1. Sign language: students communicate with each other in sign language. Students are also very much content and happy within the circle of deaf friends for they can easily communicate their emotions, thoughts and ideas through sign language.
2. Fingerspellings: Students also use fingerspellings while communicating with each other in sign language.

4. Goals and objectives: Parental Expectations.

1. Long term goals: Parents are struggling to prepare their children to be independent, and to be able to identify with the hearing society.
2. Expectations from the school: to learn how to read, write and to speak in English, so that they can pursue their education by means of English.
3. Parents from rural areas especially those who are uneducated are under the impression that the schools will help their children to hear again and to be able to speak.
4. Parents counseling and awareness programmes are is therefore necessary in these schools.
5. Training the parents in sign language on a regular basis should be a part of the counseling and training programme for the parents.

5. Goals and objectives of different types of education for the deaf.

1. Language is necessary for cognitive development.

2. Sign language as a means for cognitive development.
3. Sign language as a means of communication.
4. Sign language and fingerspellings as a means of education.

Sign language and fingerspellings as a means of learning other forms of communication viz: (a) speaking (without hearing) and (b) reading and writing.

6. Teachers' training for deaf education.

1. Teachers were trained mainly on basic classroom procedures, from preparation of materials to assessments of students' performance.
2. Teachers from none of the three schools had any sign language training. Training programme in Montford centre for the teachers also does not offer sign language as part of the teachers training programs. Only recently the Coimbatore Ramakrishna Mission on sign language courses had organized a two-weeks training programme for the teachers.
3. Sign language interpreters are very few in Shillong. It can be recommended that sign language interpreters should be employed in teachers' training centres.

7. Materials and methods for deaf education:

1. Easy access to common instructional aids that teacher use such as Flash cards, charts and blackboard.
2. Revisions and modification of these things on a regular basis.
3. Frequent field trips with the teacher and sign language interpreters should be organized.
4. Frequent meetings of the teachers and parents should be organized.
5. For a well-designed syllabus there should be equal emphasis on speech training, sign language training and reading and writing.
6. Teachers should be well versed in different methods of communicating with the students, for proper implementation of the syllabus as mentioned in point 5 above.

8. Development and promotion of sign language.

1. Sign language is not even recognized as a language in India. The state and the central governments must take necessary steps for the same.
2. In Shillong the only available dictionary of sign language that the teachers are using is the dictionary developed by the Coimbatore team in which possible variations could emerge due to distinct social and cultural settings. So far no one or no research has been conducted on the sign language variety of Shillong. Government and educational institutions should promote the process of standardization of the sign language, by producing well-researched dictionary and grammars of sign language.
3. Lack of awareness on the part of the parents and the society at large on the potentialities of sign language. It is essential to conduct awareness programmes and sign language training programmes for the parents and other concerned people, on a regular fashion.
4. Special training for the interpreters on a bilingual-bimodal basis should be conducted regularly in an organized fashion.

9. Sign language as the first language.

1. Recognition of sign language as the first language/ mother tongue of the deaf is essential. In language learning, the mother tongue generally serves as a base language to learn a second/foreign language where he/she transfers the rules of his/her first language to learn the second language. After mastering the rules of the second language that inter-language phase ends. In the context of deafness how will learning take place if there is absolute ignorance about the first language of the students?
2. Once the learners has acquired his first language i.e. sign language this can serve as a means or medium to help him acquire any other form/modality of communication like speaking (without hearing) and lip-reading, reading and writing.

3. The oralist programme so far being followed in the schools seems to have failed to achieve success in students' academic skills.

In the current system students are expected to speak Khasi/English even if they do not have a basic communication system of sign language, which is not possible.

10. Overall assessment of deaf education in Shillong.

1. Failure of the language education for the deaf in Shillong.
2. Failure of the educational system for the deaf in general.
3. Success rate of completing class XII -Out of 2.08% of the deaf students studying in the three schools in Shillong, at present only one student have completed her 12th standard and at present undergoing a bachelor degree course conducted by IGNOU. Senior students of the schools are fed up with the system of education. Students are eager to compete in board exams organized by the MBOSE and to move on further to higher education.
4. The school system not tuned to serve the deaf needs and to match the expectations of the parents and the society.
5. If their main goal is learning achievements of the students then, it would be best if they start thinking on teaching them through sign language or at least through a bilingual-bimodal approach. Those teachers with no competency in sign language informed that they learnt the language from the students through a range of experiences with them, without any proper training in the language.
6. As mentioned above the oralist programme seems to have failed in the academic performance of the students in Shillong in spite of student's and teacher's hard work and dedication, but it still remains a question what if sign language is used as a medium of instruction and will the academic performance improved?.
7. It is only when deaf educational institutions are willing to give it a try on sign language as a medium of instruction. It will be possible to prove that it is better than the oral methods. At the same time it will provide an

assurance to the government and others concerning deaf edification that could promote the deaf social position from a handicapped to a linguistic minority of their own managing to survive along with the hearing community.

8. Options should also be available to both parents and the students to choose the mode of communication, provided that the implications of each mode are communicated to both parents and the teachers. This could have an impact on the students' personal-social and psychological developments as well as in his/her academic career. Therefore the schools should not be rigid in their approach, methods and materials but it should be flexible enough to suit the requirements of the students.
9. However it must be noted here that the results of this study are not conclusive but only exploratory as well as explanatory, which require advance concentrated investigation on all the methods of deaf education.

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APPENDIX A
Words for speech test:

1.Pot	45.Date	88.Coin	131.Bull
2.Pan	46.Latch	89.Gun	132.Put
3.Box	47.Cathedral	90.Latch	133.Put
4.Toys	48.Mother	91.Rice	134.Book
5.Three	49.Clothes	92.Grass	135.Bed
6.Thief	50.Lady	93.Brush	136.Sofa
7.Their	51.Raft	94.Ice	137.Cover
8.Doll	52.Tiffin	95.Ball	139.Butter
10.Fan	53.Eve	96.Doll	140.Eye
11.Fox	54.Cake	97.Page	141.Grinder
12.Vail	55.Actor	98.Orange	142.Knife
13.Van	56.August	99.Swung	143.Buy
14.Class	57.Cradle	100.Long	144.Pie
15.Cloth	58.Mummy	101.Eagle	145.Eight
16.Green	59.Money	102.Bean	146.Blazer
17.Men	60.Nanny	103.Beet	147.Plain
18.Man	61.Pitcher	104.Card	148.Plane
19.Meal	62.Picture	105.Bath	149.Away
20.May	63.Basket	106.Barn	150.Oil
21.Needle	64.Action	107.Oral	151.Boil
22.Name	65.Mary	108.Pork	152.Boy
23.Chilli	66.Colour	109.Forty	153.Oak
24.Chicken	67.Swim	110.War	154.Grocery
25.School	68.Ginger	111.Cool	155.Goal
26.Sock	69.Sink	112.Boot	156.Owl
27.She	70.Single	113.Fly	157.Open
28.Ship	71.Ink	114.Shoe	158. Oats
29.Shoe	72.Tap	115.Burn	159.Bone
30.Zipper	73.Comb	116.Axe	160.Cocunut
31.Zebra	74.Cat	117.Athlete	161.Potato
32.Red	75.Hat	118.Bangle	162.Cow
33.Ribbon	76.Math	119.Bat	163.Ear
34.Letter	77.Month	120.Ink	164.Pierce
35.Watch	78.Bath	121.Chin	165.Peer
36.World	79.Lad	122.Fish	166.Area
37.Yolk	80.Glad	123.Fairy	167.Poor
38.Yes	81.Roof	124.Engine	
39.Gypsy	82.Thief	125.Pet	
40.Gentlemen	83.Give	126.Onion	
41.Reptile	84.Kick	127.Ugly	
42.Blackboard	85.Cock	128.Cup	
43.Baby	86.Bag	129.Bus	
44.Fourteen	87.Broom	130.Pot	

APPENDIX B

Samples of the Questionnaire for the Parents

(These questionnaires were handed out to twenty-two parents of the deaf students).
Please look at the questions carefully before answering.

Name:

Occupation:

Number of Children:

Address:

(a). Subjective questionnaire for the parents

1. Can you briefly describe your family history, and before your child is born?
2. What do you really think caused this hearing problem in your child?
3. When did you realize that your child has hearing problem?
4. What are the steps taken by you as soon as your child is identified as having hearing problems?

(b) Objective Questionnaire for the parents

1. Does your child make a response or come to you when you call?
 - A. By attempting to speak ()
 - B. By signing ()
 - C. Any other ()
2. How does your child express his/her needs (emotionally, socially, etc)?
 - A. By attempting to speak ()
 - B. By signing ()
 - C. By any other vocalization (specify) ()
3. What is the mode of communication between you and your child, your child with his/her siblings, with friends and others?
 - A. By speaking ()

- B. By fingerspelling ()
- C. By signing ()
- D. Simultaneous use of fingerspelling with signing ()
4. What are your expectations from the school for your child?
- A. That your child will be able to sign ()
- B. That your child will learn how to read and write English ()
- C. That the school will prepare your child for higher education ()
- D. Any other ()
5. As parents what are your aspirations for your child?
- A. Academic skills ()
- B. Computers ()
- C. Business (self-supporting systems) ()
- D. Others (specify) ()
6. What does your child aspire to excel in?
- A. Academic skills ()
- B. Computers ()
- C. Business (self-supporting) ()

D. Others (specify) ()

7. Do you prefer your child to learn?

A. Mother tongue (why?) ()

B. English (why?) ()

C. Sign language (why?) ()

D. Any other ()

8. What is your contribution towards your child's education and overall development and integration?

A. Financial ()

B. Technical/professional ()

C. Liaison (Moral, social support) ()

(c). Yes/No type questionnaire for the parents

1. Does your child respond to any sudden loud noises?

A. Yes (specify) ()

B. No ()

2. Did your child babble when he/she was a baby?

A. Yes ()

B. No ()

3. Does your child show interest in speaking?

A. Yes ()

B. No ()

4. Do you know sign language?

A. Yes ()

B. No ()

5. Do you use sign language with your child?

A. Yes ()

B. No ()

6. Do you think that the government should provide any kind of assistance towards the betterment of the hearing impaired?

A. Yes (comment) ()

B. No ()

Thank you.

APPENDIX C

Samples of the Questionnaire for the Teachers

(These questionnaires were handed out to two speech therapist cum audiologists, one deaf teacher and 14 hearing teachers).

Please look at the questions carefully before answering.

Name:

Qualification:

Subject:

(a). Subjective questionnaire for the teachers

1. If oral approach is used, what are the steps taken to enhance the development of speech?
2. Do you think a bilingual (sign and spoken) approach is more suitable for learning and development?
3. Does your students start signing when they start attending school, or are they already fluent signers before attending schools?
4. Apart from your efforts are there any parental efforts?
5. Do you think a special educationist alone is enough for the student's successful learning achievements?
6. Do you think the importance of sign language is necessary for a deaf educator?

(b). Objectives questionnaire for the teachers

1. What is the primary mode of communication between you and your students?

- A. Spoken
- B. Manual
- C. Fingerspelling
- D. Total communication

2. Please tick all modes of communication currently used by the students

(A) Non- symbolic

A. Facial- Expression ()

B. Eye- gaze : ()

C. Gestures ()

D. Vocalization ()

B). Symbolic- communication

A. Manual ()

B. Oral ()

3. Can you make out what is the type of sign language your students are signing? Is it?

A. Sign English (translation of English into sign) ()

B. Sign language as an independent language, different from the structure of spoken language ()

C. Others (specify) ()

4. What according to your experience is the best approach for teaching the hearing impaired?

A. Manual ()

B. Oral ()

C. Bilingual ()

D. Others (specify) ()

5. Please tick any of the following as the frequent behavior of the students in the classroom:

A. Aggressive ()

B. Attentive ()

C. Inattentive ()

D. Indifferent ()

E. Participative ()

F. Non- Participative ()

6. How will you rate the level of achievement in terms of reading abilities of the students?

A. Excellent ()

B. Good ()

C. Average ()

D. Below Average ()

7. How will you rate the level of achievement in terms of writing abilities of the students?

A. Excellent ()

B. Good ()

C. Average ()

D. Below Average ()

8. How will you rate the level of achievement in terms of sign language abilities of the students?

A. Excellent ()

B. Good ()

C. Average ()

D. Below Average ()

9. How will you rate the level of achievement in terms of speaking abilities of the students?

A. Intelligible ()

B. Unintelligible ()

C. Distorted ()

D. Average ()

E. Below Average ()

10. How will you rate the level of achievement in terms of fingerspelling abilities of the students?

A. Excellent ()

B. Good ()

C. Average ()

D. Below Average. ()

11. Information on age of the students in your classroom:

A. 4-5 ()

B. 6-8 ()

C. 9-11 ()

D. 12-15 or more ()

12. What type of teaching aid do you use for teaching?

A. Visual- aid ()

B. Object –identification ()

C. Others ()

13. Tick one of the following as the learner's frequent problems or errors in writing:

A. Inability to recall the meanings of the words ()

B. In ability to spell the words ()

C. Inability to produce grammatical sentences ()

D. All ()

E. Others (specify) ()

14. Tick one of the following as the learner's frequent problems or errors in reading:

A. The Inability to recognize words ()

B. Inability to understand the meanings of the words ()

C. Others (specify) ()

15. Tick one of the following as the learner's frequent difficulty in producing sounds?

A. Lateral (L) ()

B. Nasals (m, n) ()

C. Fricatives (f, s, z) ()

D. Stops (p, b) ()

E. Others (specify) ()

16. Does your student respond to you?

A. By attempting to speak ()

B. By signing ()

C. By fingerspelling ()

D. Others (specify) ()

17. What learning strategies do your students generally use?

A. By using fingerspelling for every word ()

B. By simply reading ()

C. Others ()

18. According to your experience, what are their cognitive or mental capacities for learning as compared to the hearing children?

A. They have the ability to understand meanings just like normal hearing students with the same age. ()

B. Repetition and drilling is necessary for developing their cognitive and mental skills

C. Others. ()

19. If fingerspelling is used for teaching the students, what type of fingerspelling is use?

A. British Sign language ()

B. American sign language ()

C. Indian sign language ()

D. Others (specify) ()

20. If oralism is the method that is use, specify the language:

A. English ()

B. Hindi ()

C. Khasi ()

D. Any other ()

21. What is the main goal of deaf education?

A. To prepare the learners for higher education ()

B. To be able to develop communication ()

C. Both ()

D. Others (specify) ()

22. What is the main goal of teaching?

A. To read and write English ()

B. To speak in English ()

C. Both ()

D. Any other (specify) ()

(c). Yes/No Type Questionnaire for the teachers

1. Does students initiate communication

A. Yes ()

B. No ()

2. Is language being taught as a separate discipline?

A. Yes ()

B. No ()

3. Does student understand single words in English?

A. Yes (specify) ()

B. No ()

4. Does student understand sentences in English?

A. Yes (specify) ()

B. No ()

5. Does he or she express himself or herself in a two-word sentences or simple phrases?

A. Yes (specify) ()

B. No ()

6. Does student follow verbal command?

A. Yes ()

B. No ()

7. Does students used the tense properly?

A. Yes ()

B. No ()

8. Does the students exhibit the ability to recognize gender, plural markings in a sentence?

A. Yes ()

B. No ()

9. Is the curriculum employed suitable for you and the students?

A. Yes (specify)

B. No

10. Do you think sign language should be the medium of instruction?

A. Yes (Why)

B. No

11. Are you a fluent signer?

A. Yes

B. No

12. Do you think sign language is important for you to learn?

A. Yes

B. No

13. Will you be willing to learn sign language to improve your teaching strategy?

A. Yes

B. No

Thank you.

APPENDIX D

Sample of the Questionnaire for Students

Name:

Age:

Class:

1. Do you want to know how to write in English?

A. Yes

B. No

2. Do you want to know how to read in English?

A. Yes

B. No

3. Do you want your friends to know sign language?

A. Yes

B. No

4. Do you want your parents to learn sign language?

A. Yes

B. No

5. Do you want your teachers to teach you in sign language?

A. Yes

B. No

Thank you.

APPENDIX E

MBOSE Syllabus for English for Class 9 In S&CHH:

1. Prose-An Anthology of English Prose and Poetry Published by Macmillan India Limited.

(b) *Course content:*

1. Imitating the English Gentlemen
2. A Letter to Indira Gandhi On Her Birthday
3. The spreading of knowledge
4. All about a dog
5. A scene from Abraham Lincoln

2. Poetry:

1. Meg Merrilies
2. The Echoing Green
3. Home They Brought Her Warrior Dead
4. Silver

3. Rapid Reader:

David Copperfield, Orient Longman Limited

OR

A Tale of Two Cities, Orient Longman Limited

4. Grammar and Composition

1. Phrases- Adjectives phrases, adverb phrases, Noun phrases.
2. Clauses- Adverb clauses, Adjective clauses, Noun Clauses.
3. Sentences- Simple, compound, complex.
4. Transformation of sentences-
 - A. Sentences containing the Adverb “too”
 - B. Interchange of the degree of comparison
 - C. Interchange of active and passive sentences
 - D. Interchange of affirmative and negative sentences
 - E. Interchange of interrogative and assertive sentences
 - F. Interchange of exclamatory and assertive sentences
 - G. Interchange of one part of speech for another

5. Synthesis of sentences-

- A. Combination of two or more simple sentences into a single simple sentence
- B. Combination of two or more simple sentences into compound sentence
- C. Combination of two or more simple sentences into a single complex sentence

6. Sequence of tenses

7. Direct and indirect speech

8. Paragraph writing, story writing, précis writing, and comprehension.

9. Essay

(c) Textbook prescribed for Grammar and Composition

1. High School English Grammar & Composition: Wren & Martin: S. Chand & Co Publishers & Booksellers, Guwahati.

2. Scholar's Senior English Grammar & Composition: T.R. Bhanot & H. Martin: Scholar publishing house, New Delhi.

The school also has the following co-curricular activities participated in during the past years:

- 1. Sit & draw competition
- 2. Cricket
- 3. Public stage performances
- 4. The International Day of the Deaf celebrations.

Home visits are also made by members of the staff as part of the educational programme and is in fact an attempt to involve parents and older siblings in the school life of the pupils. During these visits such topics as the academic progress and the social attitudes of the pupils are discussed.

