Language Development for the Hearing Impaired : The Role of Grammar

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Abstract

Language development program was initiated on a group of hearing impaired children, matched for their language age. The difficulties in learning the grammatical aspects by the hearing impaired children are highlighted. The importance of the role of grammar in enhancing communicative language is stressed.

Key Words

AIISH : ALL INDIA INSTITUTE OF SPEECH AND HEARING
LDP : LANGUAGE DEVELOPMENT PROGRAM
CA : CHRONOLOGICAL AGE
LA : LANGUAGE AGE
LPT : LINGUISTIC PROFILE TEST
STASK : SCREENING TEST OF ACQUISITION OF SYNTAX IN KANNADA

Abilities to hear and respond to various sounds have an impact upon virtually every aspect of an individual's life. When hearing is severely limited, there can be far reaching effects upon his capability to interact with the environment.

One of the most devastating effects of hearing impairment is that normal development of speech is often disrupted. As a consequence, most hearing impaired children must be taught the speech and language skills that normal children readily acquire during the first few years of life.

Prior to teaching speech and language, the hearing impaired children are assessed on various skills such as, listening, language, articulation, reading and writing at the Therapy Clinic of All India Institute of Speech and Hearing (AIISH), Mysore. On an average, these children show a wide gap of 4-9 years between their chronological age (CA) and language age (LA).

This observation, particularly the poor performance on language test by the hearing impaired led to the initiation of Language Development Program (LDP) on a group of hearing impaired children selected on the basis of language age (not varying by more than + or - 2 years). As these children are also enrolled in regular Kannada medium school, duration of the LDP was scheduled for one and half hour on all working days.

Table -1

Table-1 Showing the CA & LA of the children selected for LDP (Equivalent age level in years on LPT)

Name Age/Sex	Phonology	Syntax	Semantics	Language Age
AN-11/F	8	6	10	7+
PR-14/M	10	7	10	8+
RA-8/M	8	6	6	6
SU-9/F	8	7	8	7
YA-11/F	9	8	8	9+
UM-10/M	6	4	6	5+

Table-1 indicates the number of children selected for the LDP and their equivalent language ages as tabulated from the Linguistic Profile Test (LPT) scores (Karanth, P. 1986). The test items are given under three sections-

Phonology, Syntax and Semantics. The scores indicate the type and severity of impairment of linguistic skill at each level and serve as a baseline for therapeutic management.

Pappas D.G. (1985) states that syntax presents the greatest challenge to deaf children in learning language and hence should receive emphasis in assessment and training. In order to strengthen the LDP in the areas of syntax, an additional assessment on STASK (Screening Test of Acquisition of Syntax in Kannada, Vijayalakshmi, B. 1986) was done.

Table - II

Table - II shows the equivalent ages on stask

Name	Age/Sex	Language Age on Stask
AN	11/F	4.5-5 Yrs
PR	14/M 5+	5+ Yrs
RA	8/M	4.5-5 Yrs
SU	9/F	5+Yrs
YA	11/F	5+Yrs
UM	10/M	4+Yrs

Table-2 indicates the equivalent ages of the group children as per the assessment on STASK. Unlike the syntax section of the LPT (which is a judgement task), STASKis a performance task which helps in identification of specific areas of deficit in syntax and also gives direction in planning.

A comparison of Table - I and Table - II shows the discrepancy between the actual knowledge [LPT scores] and the use [STASK scores] of the language structures by these hearing impaired children.

As it is known that pragmatic ability rather than mere knowledge of structures plays an important role in effective communication, the LDP was geared towards enhancing comprehension and expression of syntactic skills in communicative context.

Implementation of the LDP

A broad outline of the LDP is given here.

1. Parents' meeting prior to initiation of the LDP
2. Scheduling training modules
3 Material preparation
4 Teaching procedures
5 Home training activities for stabilization and generalisation
6 Periodic review of the progress
7 Periodic parents' meeting
8 Reinforcement strategies
9 Supplemental objectives
10 Evaluation of the LDP

Taylor R.L. and Sternberg, L. (1989) state that many deaf children experience problems in understanding the syntactic and morphological structure of language which result in academic deficiency. They suggest emphasis on development of vocabulary, syntax and language use in the instructional program.

This suggestion was taken into consideration while formulating the training modules. Listening and articulatory skills were also incorporated into the training module as supplementary goals (see appendix-1 for sample illustration). As the aim of this paper is to highlight on the role of grammar in enhancing communicative language of the hearing impaired, the discussion is centered around the training modules set for enhancing syntactic skills.

Teaching Procedure

David Cross (1992) states that the teaching of grammar is an enormous field to cover. The aim of this teaching is to get the students internalise the rules with a sensitivity to the generative power of each one.

Hutchinson J.M. and Smith L.L. (1980) state that the teaching methods and programmes for facilitating language behaviour are not mutually exclusive. They are systems that the clinician must bend/change/accelerate/ decelerate to meet the unique needs and particular behaviours demonstrated by the children.

Streng et.al., (1978) is of the opinion that curriculum for all hearing impaired children is one in which language and reading play an important part. Hence the training material prepared for the LDP was based on the lines of language art activities mainly through graphic modality (see appendix for sample illustration).

Before drawing the training modules, a hierarchy of acquisition of syntactic skills (Karanth and Suchitra, under publi ation) by normal children-based on the assumption that this would be the easiest pattern to acquire-was taker into consideration. Abroad outline of the teaching procedures is given here:

1. Explanation and demonstration of the syntactic aspect in question by using various educaids.
2. Training the target structure initially through graphic mode.
3. Emphasis on group interaction through verbal mode by making use of the target syntactic structures.
4. Home assignments to use the target syntactic structures in suitable contexts.
5. Opportunities for correcting the fellow group member were provided as this heightened his/her attention and motivation.

Syntactic errors observed in the hearing impaired children

Inspite of the intensive training, these children expericenced difficulties in learning a few syntactic structures such as:

1. Subject - object relationship

Eg: magu.....o age.....hākuttade
(anče patra, pōs abba)
(Baby.....inside.....puts)
[mail.....postbox]

2. Case markers

Eg: nānu benga ūrinda maha i bus nōdide
(I from [At] Bangalore double decker saw.)

3. Causatives

Eg: avanannu nāyi ō ut tade
'him dog runs'
dog makes him run

4. Pronominalizaiton

Eg: hariśa giriśana ge aya. avanu tumba tun a
'Harisha is Girisha's friend. He is very naughty'
avanu =.....

Quigley et.al., (1975) have also observed similar findings in their study.

The difficulties experienced in learning the above structures may be attributed to the particular language structure (i. e., Kannada), the teaching procedures orto the interference of the sensory disability. For instance, the suffixes for causatives (-isu), case markers (-ige, -ke, -inda, -alli) are grammatical inflections and hence have high chances of being missed by the hearing impaired children.

Wolff (1973) elaborates on this phenomenon further by stating that we tend to put stress on the content words and leave most function words unstressed. These unstressed words fade in intensity and may not be identified by the hearing impaired children.

In constrast, the following structures were, however, learnt with ease and minimum drilling.

1. Coordinators
   Eg: nānu pensil athava penin a bari ini
   'I write with pencil or pen'

2. Conditional markers
   Eg: amma čokle ko a i re nīn ēn mā īyā?
   What do you do'if mummy does not give chocolate?.

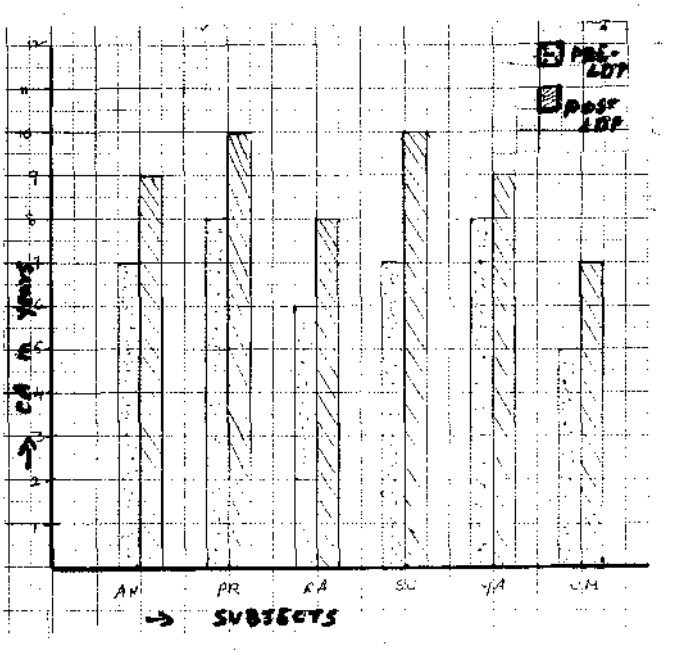
3. Quotative sentences
   Eg: "čennāgi ō i re mā ra ninge bahumāna ko īni" en u amma hē i ru
   Mummy said that she will give a gift if studied well.

This observation is also supported by Quigley et.al., (1975).

It is a general assumption that the normal pattern of acquisition is the easiest. But, the structures learnt by this group of hearing impaired children donot follow the same. It was observed that the factors such as concreteness of the construct, easy demonstrability and scope for funtional usage have contributed to the ea se/ difficulty in learning the target structures. However, if this observation is strengthened by more number of studies in future, we would, hopefully, be able to set a hierarchy of structures for easy acquisition by the hearing impaired children.

Discussion

The children were re-assessed on the LPT two years after the implementation of the LDP.



Bar Diagram Showing the Pre-LDP and Post-LDP Language Ages.
Based on LPT Scores

The graph indicates that on an average, the language age of the hearing impaired children was enhanced by two to three years in a span of two years, which is quite noteworthy considerating their severe sensory disability.

Table - III

Table Showing the difference in age levels in years on various lanquaqe skills on LPT

Name Age/Sex	Phonology	Syntax	Semantics	Language Age
AN-13/F	2	2	1	2
PR-16/M	1	3	1	2
RA-10/M	1	2	2	2
SU-11/F	2	3	2	3
YA-13/F	1	2	1	2
UM-12/M	2	2	2	2

The table shows the progress achieved in the various language skills. The progress in the syntax section oi the LPT is greater than that of the other two which inturn has contributed to the-progress in overall language age.

The progress in the various language skills (which is parallel to that of the progress in chronological age) can be attributed to the intense structured training. The reports obrained from the school and family stated that the children were much more verbal and clearer with better -communication abilities. This shows that the progress was -not limited to the training situation alone but was generalised to communicative contexts.

It is a known fact that syntax plays an important role, especially in writing as there are no clues such as intonation changes, gestrues and facial expressions to get the meaning across. The written language samples of these children showed a greater change, thus leading to better performance in their academic subjects such as Kannada, Science and Social studies.

On the basis of the limited data obtained from this study, it would tee premature to comment on the role of the syntax in enhancing linguistic skills in the hearing impaired children. But based on the test performance, communicative performance, academic performance and the written language skills of these children, the significant change in communicative abilities - both verbal and written - may be attributed to that of progress In syntactic skills by which they were able to convey and understand the intended message effectively.

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Appendix -1

Sample Illustration of the Training Module

Module for the month of August 1991 :-

1. Listening experience through induction loop amplification using verbal and non-verbal stimulus.
2. Articulation drill for palatal phonemes.
3. Introduction of tag questions.
5. Expanding the vocabulary of nouns and verbs.

Appendix - 2

Language Arts Activities

1. Tenses with PNG markers

Match the columns

A	B
ninu iga	manege hoguttale
avalu nale	manege hoguttiddiya
avaluTga	manege hodalu
avaju nenne	manege hoguttiddale

2. Semantics : Kinship terms

raviya tande raja, raviya tayi rama. rama mattu rajana magalu ramya.

1. ramya raviya.....
2. rama rajana.....
3. raja ramyaja.....

3. Lexical categorization :

Cross the odd man out:

1. hannu bisket rotti camaca
2. karu bassu railu gombe