

**Development of Grade Level Assessment Tool for  
Grade-V Kannada Language (GLAT-K) for Children  
with Hearing Impairment**

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Registration No. 10MSD003

A Dissertation Submitted in part fulfillment of Master's Degree

(Master of Special Education)

University of Mysore,

Mysore.

**ALL INDIA INSTITUTE OF SPEECH AND HEARING**

**MANASAGANGOTTHRI**

**MYSORE- 570006**

**MAY-2011**

*DEDICATED TO...*

*My beloved mother & father*

## Certificate

This is to certify that this Dissertation entitled “**Development of Grade Level Assessment Tool for Grade V Kannada Language (GLAT-K) for Children with Hearing Impairment**” is a bonafide work in part fulfillment for the degree of Master of special education (Hearing Impairment) of the student Registration No.10MSD003. This has been carried out under the guidance of a faculty of this institute and has not been submitted earlier to any other University for the award of any other Diploma or Degree.

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Date: June, 2011

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**Mysore**

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**Register No. 10MSD003**

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***Chapter – I***  
***Introduction***

## **1.0 INTRODUCTION**

*The test of our progress is not whether we add more to the abundance of those who have much; it is whether we provide enough for those who have a little.*

(Roosevelt, 1937)

This is very true for children with hearing impairment. Children with hearing impairment are one of the disadvantaged groups. In addition to their manifest limitations they are subject to social discrimination, reduced work opportunities and the most devastating of all- impoverished educational experiences. This is because the educational system which is prevailing is entirely language based, and since language is the area which is affected the most in children with hearing impairment. Hard of hearing children consistently show a 2 to 3 year lag in vocabulary development, while deaf children show a significantly wider gap (Ross, Brackett, & Maxon, 1991). Since language is affected, communication among children with hearing impairment also becomes a barrier. As it is rightly said a true language *communicates*. It communicates experiences, thoughts, or feelings of an individual received through the modes of listening, and reading and expressed through speaking and writing. However, expression of thoughts, feelings through the verbal mode is a challenging task for children with hearing impairment because of inadequate language development.

### **1.1 Pre-requisites for language development**

The early language and communication development of children with mild to moderate hearing impairment appears to follow a normal developmental sequence and

pace (Yoshinaga-Itano& Seddy,1999). Language develops in the course of interactions between parents and child during routine, everyday play and care-giving activities. The essence of fluent communication between the parent and the child consists of sending and receiving linguistically encoded messages. Early communicative interaction with parents is intact as is the early development of cooing and babble (Oller, Eilers, Bull &Carney,1985). Early language and communication stimulation along with good pair of appropriate hearing aids and systematic and intensive training are some of the pre-requisites for age appropriate language development for children with hearing impairment.

However for children with severe to profound hearing impairments, early language and communication development is not entirely intact. While research indicates that early communication between deaf children and their hearing parents is similar to that of hearing children (Lederberg & Everhart, 1998), intelligibility of speech is severely impacted by the child's hearing loss. With age, the gap in language development widens to the point where it limits effective communication.

## **1.2 Impact of Hearing Impairment on Language development**

According to Lenneberg, E (1967), "children will never learn language unless they hear it". Hearing impairment is a hidden disability. One cannot outwardly diagnose a baby as having a hearing loss. Also babies and young infants cannot tell whether or not they hear the sounds and people around them. The critical period of a child's life for

language acquisition (0 to 5 years) just passes away unknowingly. This is some times due to ignorance, lack of awareness and at times due to false belief.

According to Meadows “the basic deprivation of sound, is the deprivation of language”. This statement suggests that profound congenital deafness creates problems in communication. The deprivation of communication is more than the deprivation of sound this means that more than the loss or absence of sound it is the language that is affected is of primary concern.

Hearing impaired children seem to experience problems in communication because their hearing loss either prevents them from hearing speech at all. Thus children with hearing impairment have difficulties in acquiring communication skills because they cannot hear or they find difficulty to hear, the sounds of speech. Children with hearing impairment have impaired speech perception however the problem does not stop here, it leads to problems with language acquisition and cognition which becomes very evident in their communication. Due to problems in communication they encounter difficulties in learning to read and write, since literacy skills depend on language and cognition. Their knowledge of affairs is reduced because of linguistic and cognitive factors. Oral communication affects the literacy skills of the hearing impaired child. (Brackett,1997,p. 355) puts it that the “impact of hearing impairment on communication development dramatically alters social and academic skill acquisition”

As Vellumno (1979) and Hanson (1983) cites that if children have problems with oracy they are also likely to experience problems with literacy. Hearing impairment not only affects the literacy, communication and cognition aspect of an individual, but also affects

the other aspects of the individual like social integration, peer interaction and vocational placement. The language deficiency of a hearing impaired child affects their social integration and peer integration (Bench, 1992). Presence of hearing impairment in a child severally affects language acquisition process. This difficulty in abstract language in turn impedes the particular child's social skills and academic learning.(Brackett,1997). Children with mild, fluctuating hearing loss are at risk for a variety of language and communication disorders. (S.Jay Kuder,2003).

### **1.3 Impact of Hearing Impairment on Scholastic Performance**

Many studies have found the academic achievement of children who are hearing impaired to be below that of hearing children. Even though children with hearing impairment gain entry into formal schooling like their hearing peers, educationally they lag behind their hearing counterparts because of factors like language based curriculum, insufficient resource materials to help them develop interest in studies. Lack of appropriate assessment system also put these children into a system for which they are not ready. While children with hearing impairment at 9 years are retarded about 2 years in grade level whereas the children at 13 years have fallen even farther behind and are retarded more than 4 years in comparison with the grade level expectancy for hearing children of their age. Myklebust,(1964).

(Davis et al. 1981;Davis et al.,1986; Phelps &Branyan, 1990) have found that the educational performance of students with moderate to severe hearing impairments is below that of hearing students, especially in reading and language arts.

### **1.3.1 Reading**

Reading comprehension seems to be a particular problem. (Trybus & Karchmer, 1997) reported that more than half of a sample of 20-year-old persons with hearing loss had a median reading comprehension grade level of 4.5. They also found that the average gain in reading scores was only .3. In contrast to the general finding that reading is significantly impaired in students who are deaf, their study showed the mean reading level of these 16-17-year old students was at grade 8.

Recent studies show little change in the reading achievements of individuals with severe and profound hearing impairments. Paul (1998) reported that the average 18-19-year old student with severe to profound hearing impairment reads no better than the average 9-10-year-old normally hearing student.

### **1.3.2 Writing**

Typically, the writing of students who are deaf is shorter and less complex than those of hearing students. In addition, these students make more errors in their writing, errors that include using unnecessary words, omitting essential words, substituting the wrong word, and using incorrect word order (Quigley & Paul, 1990). According to Quigley and Paul (1990), there is no evidence that the written language of students with hearing impairments has improved significantly in the last several decades.

Davis et al. (1981) found that the academic achievement of children with mild hearing impairments did not differ significantly from the norm. However children with more severe hearing impairments (greater than 50 dB) exhibited significant achievement problems that increased with age. However, when Davis et al. (1986) did a more

intensive study of the academic achievement of 40 children who differed in the severity of their hearing impairments, they found that the degree of hearing impairment had little to do with the test results. All of their subjects tested below the norm of hearing children on tests of vocabulary and reading but scored close to the norm for math achievement. The authors concluded that even minimal hearing loss can cause difficulty with academic achievement. One of the most robust findings in the research literature on hard of hearing students is that even a slight impairment negatively affect language, literacy, and academic achievement Paul & Quigley (1987); Ross & Maxon (1982).

Hallan and Kauffman (1981) recorded that some areas of academic achievement like reading and writing severely affected in hearing impaired.

Paul & Quigley (1990) recommended that students who are deaf or partially hearing impaired have considerable difficulty succeeding in educational system that depends primarily on the spoken words and written language to transmit knowledge.

Difrancesca (1972) stated very clearly that the deaf children's language deficit is primarily responsible for their retarded educational progress. Progress in school depends increasingly on the ability to read English prose and reading comprehension is proverbially poor among deaf children. Due to their inadequate language ability most deaf children leave school with a 4<sup>th</sup> to 5<sup>th</sup> grade reading ability.

Research on the academic achievement of students who are deaf can be viewed in two ways. The pessimistic view is that despite years of effort, the academic achievement of these students has not significantly improved. Children who are deaf still struggle with reading and writing. The optimistic view is that the factors that appear to cause these



academic deficiencies also appear to be subject to remediation. Early intervention, consistent language development, and appropriate educational programs can make a difference.

#### **1.4 Importance of Language Assessment**

There has been an enormous amount of research activities being carried out in language assessment. There are number of purposes for assessing language of the students like to determine learners language proficiency according to the age; for diagnosis purposes like to identify learner's strengths & weaknesses, to plan for instruction and teaching, to encourage learners to study harder and many more. Language assessment is important as language is the foundation for overall development.

The test should assess the strengths as well as the weaknesses of children with hearing impairment regarding the language and knowledge of curricular information. Developing such a test would help in making decisions about placing children with hearing impairment in appropriate educational settings. This would help the teacher in working towards improving the child's shortcomings with a hold on his strengths. This would be in line with the recommendations of Mann and Suiter (1978) who observed that the teacher must work concomitantly with the strengths at the task level as well as with deficits in the daily educational program. This would provide information regarding how much a child deviates from a typically developing child.

## **1.5 NEED FOR THE STUDY**

Considering the lacunae in age-level language in children with hearing impairment, it is necessary to identify and remediate children who are below their age level in acquiring the language concepts of their immediate surroundings. In order to identify whether children with hearing impairment have acquired age appropriate curricular skills, there is a need to develop age appropriate tests. It is also essential that the assessment test should evaluate the specific skills and knowledge taught at a specific academic level.

On reviewing the various tests compiled by the National Test development library of NCERT, it was observed that there have been very few tests in India targeting evaluation of children at the Standard V level in English language. The tests developed in other countries, most of them are not suitable for Indian conditions as they are culturally inappropriate. Assessment tests in English language is available, however, India being a multilingual country, not many test are developed for the children or people who cannot comprehend or express English language.

Some organizations working for children with learning disabilities in India like Madras Dyslexia Association, Alpha to Omega, Educare, and Department of Special Education SNDT Women's University, NIMH and NCERT have developed tests for assessment. Most of them are tests for grade level assessments. Hence, there are hardly any tests which assess the grade level performance of a children in Standard V in Language (Kannada). Hence there is a need to develop a test to examine the grade level performance in children with hearing impairment and find out the process and product of

their performance, so that it will be possible to work with the child keeping a concrete goal. The current study was carried out with the purpose of developing a test to assess grade level performance in children with hearing impairment pertaining to Language (Kannada-language used in the State of Karnataka). Since Kannada is a regional language of India, the tests developed in other countries in English, are not suitable for Indian conditions as they are culturally inappropriate. It should also be kept in mind that there are:

- No test to establish eligibility for services.
- No test to determine appropriate placement in school.
- No test to diagnose a problem.
- To provide feedback and plan for instruction.

Viewing the above discussion, the present study was taken up with the following objectives.

### **1.6 OBJECTIVE OF THE STUDY**

- To develop a test in Kannada language for assessing the grade level performance of children with hearing impairment studying in Standard V using Karnataka State Text Book.
- To administer the developed test on typically developing children.
- To administer the test on children with hearing impairment to assess the utility of the developed test.

- To compare the performance of children with hearing impairment studying in Grade V in special school with that of typically developing children studying in regular schools.

***Chapter - II***

***Review***

***Of***

***Literature***

## **2.0 REVIEW OF LITERATURE**

Review of literature plays an important role in a research study. It helps the researcher to locate, organize and use the already existing literature to help plan and carry out the study in an interesting manner. The review of related literature involves the systematic identification, location and analysis of documents containing information relating to the research problem. It also gives a large amount of in-depth knowledge for the study and provides a baseline for conducting the study. Therefore an attempt has been made by the researcher to organize the literature and studies related to the present study undertaken.

### **2.1 Impact of Hearing Impairment on Academic Achievement**

The present study is related to assessing the grade level performance of children with hearing impairment in Kannada. It should be kept in mind that the assessment involves aspects of reading and writing, an area which children with hearing impairment lags behind. The testing device which was developed by the researcher included reading as well as writing activities. A study conducted by Difrancesca (1972) which indicated that those children with less severe degrees of hearing impairment surpassed those in the severe-to-profound range in all areas of measurement that involved high language proficiency, such as Paragraph Meaning and Vocabulary. The opposite is true, however, on those subtests requiring knowledge of spelling, punctuation, capitalization, and arithmetic computation. These skills are less dependent on high reading comprehension levels, and students can study such tasks independently from their own test books, relying upon visual input and memory. In reviewing the overall tests results, Differences

concludes that for hearing impaired children reading comprehension is the most difficult area of all those covered by the Stanford tests. Poor performance in this area contributes to learning difficulty in almost all the school learning tasks required for a sound educational foundation and emphasizes the serious difficulty in properly educating hearing impaired children.

When in the present study, the scores of the performance of children with hearing impairment studying in Grade V was compared to the scores of typically developing children, it was found that the performance of typically developing children was better as compared to children with hearing impairment. A study conducted by Paul and Quigley in 1990 also revealed that Characteristics of deaf children are similar to those of hard-of-hearing students, including delayed English language development and academic achievement that is sometimes inferior to their hearing counterparts. However, it should be noted that the distribution of intelligence quotient (IQ) Scores of deaf individuals (without additional handicaps) in comparison to the hearing population is similar. Similar intelligence is an indication that the probable cause of the recording of academic differences between deaf and hearing peers is likely the communicative abilities of their teachers / clinicians and the lack of adequate language among children with hearing impairment.

Hard of hearing children consistently show a 2 to 3 year lag in vocabulary development, while deaf children show a significantly wider gap (Ross, Brackett, & Maxon, 1991). Children with hearing impairments encounter the most difficulty with idiomatic expressions, colloquialisms, and other uses of words beyond their dictionary meanings and are often deficient in use of synonyms. Syntactical constructions pose

problems and, again, there is a correlation with degree of hearing loss; children with mild losses often perform like children with normal hearing, whereas children with severe losses show numerous problems with complex grammatical constructions.

Simmons (1962, 1963) compared the spoken and written language of hearing and deaf children ranging in age from 9 to 14 years. The hearing children's performance exceeded that of their deaf counterparts in their use of longer sentences, use of more flexible constructions, and a tendency to increase output with age. Both groups demonstrated greater structural and lexical variability in written samples than in the spoken compositions. Simmons concluded that the language of deaf children, because of its rigidity, may differ from that of hearing children in quality as well as quantity. She further stated that the deaf child's language may be molded by the curriculum, a concept that has been suggested by others, including MacGinitie (1964) and Russell, Quigley, and Power (1976).

Davis et al. ,(1981) study mentioned previously examined the standardized test scores for academic achievement, as well as intelligence and language development, of more than a thousand children whose hearing impairments ranged from mild to severe. The authors found that the academic achievement of children with mild hearing impairments did not differ significantly from the norm. However, children with more severe hearing impairments (greater than 50 dB) exhibited significant achievement problems that increased with age. However, when Davis et al. (1986) did a more intensive study of the academic achievement of 40 children who differed in the severity of their hearing impairments, He found that the degree of hearing impairment had little do with the test results. All of their subjects tested below the norm of math achievement. Degree of



hearing impairment was not highly related to academic achievement, although there was a great deal of variation in academic performance among the individuals in their study. The authors concluded that even minimal hearing loss can cause difficulty with academic achievement.

Bishop (1983) administered the test of reception of grammar (TROG) on deaf individuals and observed that reception of certain grammatical structures was impaired. Use of auxiliaries, past tense markers, negative are not only difficult but are a later acquired.

Historically, academic paradigms have implied that deafness impedes literacy, intensely focusing on student deficiencies (Mogford, 1988; Perfetti & Sandak, 2000; Quigley Power, & Steincamp, 1977).

Reading comprehension was assessed in 1974 and again in 1979 for 1,664 hearing-impaired students enrolled in special education programs across the United States. The Special Edition for Hearing Impaired Students of the 1973 Stanford Achievement Test, an adaptation of the regular edition of the Stanford but with identical items and subtest structure, was used to assess students' achievement both years. The major research question concerned the relative importance for achievement growth of the most salient handicapping characteristics of the population (specifically, the degree of hearing loss and the presence of any additional, educationally significant handicaps) compared with basic student demographic characteristics, such as race, age, and sex. A repeated-measures statistical analysis' of the data indicated that the growth in reading achievement of the typical hearing-impaired student over a 5-year period was

approximately one-third that of the average hearing student. In addition, degree of hearing loss, age, and racial background had significant effects on reading-comprehension growth.

## **2.2 Studies Related to Grade Level Performance of Children with Hearing Impairment in the Indian Scenario.**

Organizations working for children with learning disabilities in India including madras Dyslexia Association, Alpha to Omega, Educare and Department of Special Education in SNDT Women's university have developed test for assessment. Arithmetic diagnostic test for primary school children (Ramaa,1990) is specifically for assessing arithmetic ability. Reading test in Kannada by the same author is in use in Kannada. There is a dire need for developing a comprehensive grade level assessment tool for reading, writing and computation abilities suited to Indian conditions so that children receive the appropriate education early in lives.

All the above studies indicate that there is a need to develop assessment devices to help teachers assess the performance of children with respect to their grades. A study conducted by Dixit, D(2010) also revealed that children with hearing outperformed children with hearing impairment in grade level assessment test in English for children studying in Std V. So in the current study an attempt is made to develop grade level assessment tool for assessing the performance of children with hearing impairment studying in Grade-V.

# ***Chapter – III***

# ***Method***

### **3.0 Introduction**

The purpose of this study was to develop Grade Level Assessment Test in Kannada (GLAT-K) for children with hearing impairment studying in Grade-V. The study was conducted in two stages. The first stage included the development of Grade level assessment test in Kannada and second stage included field testing the test on typically developing children studying in regular schools and children with hearing impairment studying in special schools. The utility of the test was assessed by comparing the scores of both the groups of children.

### **3.1 Participants**

For the present study 78 typically developing children studying in regular school and 20 children with hearing impairment studying in special schools were selected. Both the group of children selected for the study was studying in Grade V Kannada medium school in Mysore.

#### **3.1.1 Selection Criteria for typically developing children:**

Typically developing children were randomly selected for the present study. The other criteria were as follows:

1. With no problem in the ear
2. No ear discharge
3. No other disabilities

4. Studying in regular school following Karnataka State Board syllabus.
5. Children who have already completed Grade IV
6. Kannada as the medium of instruction

### **3.1.2 Selection criteria for children with hearing impairment**

Purposive sampling technique was used while selecting children with hearing impairment, the other criteria's included:

1. Attending special school following Karnataka State Board of Education.
2. Moderately severe to Profound Hearing Loss
3. No other additional disability
4. Kannada as the medium of instruction
5. Children who have already completed grade IV.

## **Stage I**

### **3.2 Development of the Test Material**

For the present study testing material was developed by the researcher. The contents of the test material were developed based on Kannada language using the Karnataka State Syllabus text book of Grade-V. The following three steps were used to develop grade level assessment tool in Kannada (GLAT –K)

Step – 1: Compilation of the test material.

Step – 2: Validation of test items with professional

Step – 3: Finalization of the test material

**3.2.1 Step-1: Compilation of the test material:** For the purpose of compilation of the test material, Kannada Text Book of Grade-V was selected. It is a text book by Karnataka State Board of Education. The test items were collected from the content of the Kannada Text Book of Grade-V. Totally 20 test items were selected from the entire text book and the preliminary details of GLAT-K was compiled. Following were the items in the compiled test. Write in plural form, singular form, synonyms, and antonyms, make your own sentences, explain the situation, find the odd man out, correct the incorrect statement, differentiate between sajati and vijati words, complete the poem, change the gender, make sentence from the given proverbs, find the adjectives, join the words to make a new word and many more items were given.

**3.2.2 Step-II: Validation of test items with professionals:** For the purpose of validating the developed test material, the test material was given to professionals having more than 2 years of experience in the field of Special Education and General Education. Details of the validators are given below:

1) Special Educators: 05

2) General Educators: 05

The judges were provided with a covering letter (Appendix-1) which comprised of:

- a) Introduction of the present research.
- b) Topic of research study and its objectives
- c) Copy of developed test materials based on the selected Kannada text book of Grade-V.

The validators were requested to validate each test item and also suggested whether they match the objectives of the study. The test items marked relevant by 70% or above by the validators were retained while developing the final GLAT-K. The necessary suggestion given by the validators was also taken into consideration.

**3.2.3. Step-III: Finalization of the test material:** Based on the suggestions given by the validators, the final test with 20 test items each carrying five marks was developed. Hence final GLAT-K of 100 marks was developed to be administered on the two groups of selected children (Appendix-2)

## **Stage-II**

### **3.3 Administration of the developed test materials**

The final test materials of 100 marks was developed and administered on the selected group of typically developed children studying in regular schools and children with hearing impairment studying special schools. Before administering the test, it was ensured from the teachers teaching in regular schools and special schools about the completion of the entire content of the Kannada text book before administering the test.

### **3.4 Procedure for Data Collection**

The developed GLAT-K test was administered separately on the two groups of children. Initially, it was administered on 78 typically developing children from four Kannada medium regular schools in Mysore studying in Grade-V. The 20 children with hearing impairment were selected from two Kannada medium special schools in Mysore. Before administering the test, prior permission was taken from the Head of the School and the concerned class teacher (Appendix-3). The researcher gave oral instructions to the participants about the test and the marking scheme. It was a paper and pencil test. The duration of the test was for 2.30 hours. After administering the test on typically developing children, the developed GLAT-K was administered on the selected children with hearing impairment. These students were also given instructions before attempting the test (Appendix-4). The performance of both the groups was compared statistically to check the utility of the developed GLAT-K.

**Analysis:** The data collected from both the groups of children (typically developing children and CWHI) was statistically analyzed to assess the utility of the developed GLAT-K.



***Chapter – IV***  
***Analysis and***  
***Interpretation***  
***of the data***

#### **4.0 Introduction**

The present study on ‘Development of Grade Level Assessment Tool for Grade-V Kannada Language (GLAT-K) for Children with Hearing Impairment’ was broadly aimed at developing grade level assessment test in Kannada (GLAT-K) for assessing the grade level performance of children with hearing impairment studying in Grade V and comparing their performance with typically developing children studying in Grade-V in regular schools.

The study was divided into two parts:

1. Development of GLAT-K based on the contents of Kannada text book of Grade-V
2. Administering the developed GLAT-K on children studying in regular schools and children with hearing impairment studying in special schools and comparing the performance of both the groups.

The developed GLAT-K was administered on 78 children with normal hearing from four different regular schools in Mysore and 20 children with hearing impairment studying in two special schools in Mysore. The test was administered on these children only after they had studied all the contents in the Kannada text book of Grade-V. Studies from Davis et al. 1981; Davis et al., 1986; Phelps and Branyan, 1990 have also found that the educational performance of students with moderate to severe hearing impairments is below that of hearing students, especially in reading and language arts.

## 4.1 Descriptive Statistics

Table No 4.1: Scores of children studying in the four regular schools

<b>Schools</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
School 1	21	60.33	20.587
School 2	27	48.41	36.857
School 3	10	59.00	20.564
School 4	20	70.50	19.527
<b>Total</b>	<b>78</b>	<b>58.64</b>	<b>28.042</b>

The four schools were compared using Analysis of Variance (ANOVA) and it is evident from ANOVA that there is no significant difference in the performance of children across their schools. ( $F(3,74)=2.564$ ,  $p>0.05$ ).

Hence these four schools are combined and considered as one group that is regular group.

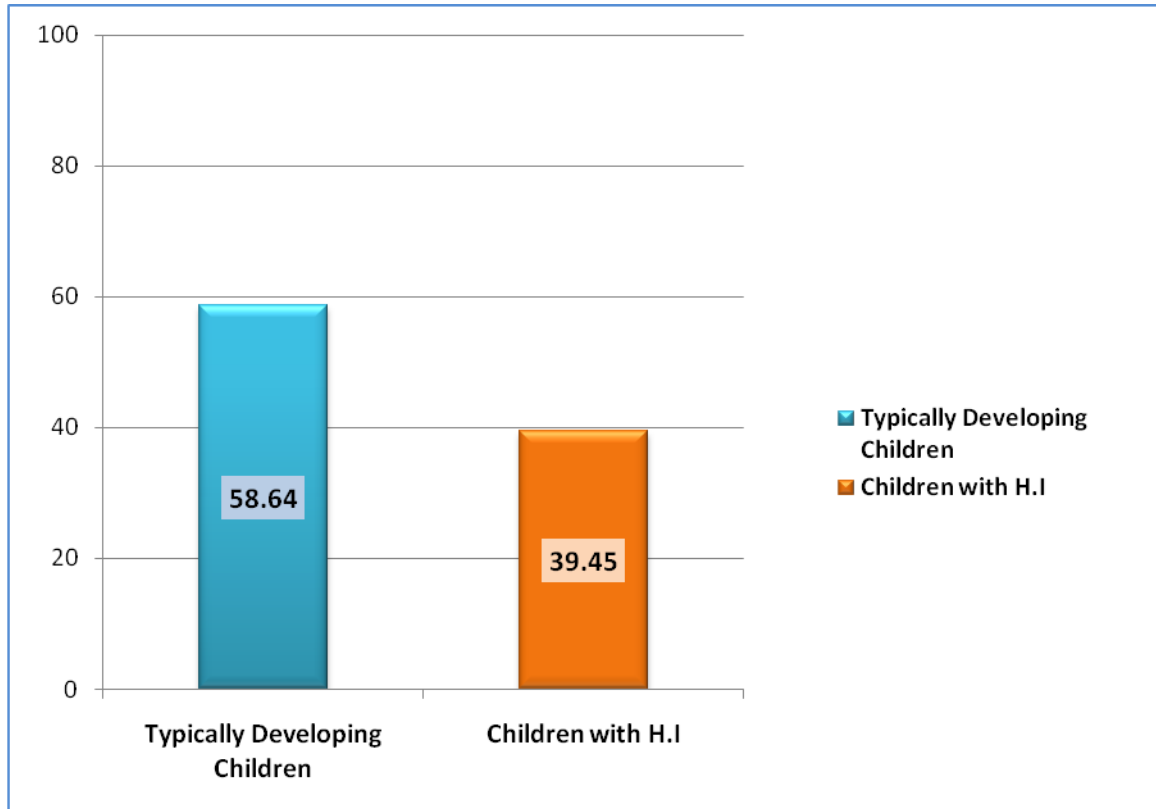
## 4.2 Comparison of performance of children studying in regular school and children with hearing impairment in Special schools

Table No 4.2: Performance of children studying in regular school and children with hearing impairment in special schools

<b>Children</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Typically developing children in regular school	78	58.64	28.042
Children with hearing impairment in Special School.	20	39.45	10.247

Independent t-test was administered to study the difference between typically developing children and children with hearing impairment. There was a significant difference between performance of typically developing children and children with hearing impairment ( $t(96) = 3.00, p < 0.01$ ). Since, the sample sizes in these two groups were not similar and the result of the t-test was cross checked using non-parametric Mann-Whitney U-test and the same result was obtained ( $|Z| = 3.227, p < 0.01$ ). The above results clearly indicates that children with hearing impairment lags far behind in the academic performance as compared to their hearing peers on subjects which is language based. Paul & Quigley (1990) also in his study revealed that students who are deaf or partially hearing impaired have considerable difficulty succeeding in an educational system that depends primarily on the spoken words and written language to transmit knowledge. Difrancesca (1972) also stated very clearly that the deaf children's language deficit is primarily responsible for their retarded educational progress. Due to their inadequate language ability most deaf children leave school with a 4<sup>th</sup> to 5<sup>th</sup> grade reading ability. Despite recent improvements, very little is known about the special educational needs of children with mild and moderate hearing impairments even though the number of such children is greater than of those classified as severely or profoundly hearing impaired (Moore & Moore, 1980). Hence it can be concluded that it is important to have Grade Level Assessment Test to have a better understanding of performance of children with hearing impairment and thereby remedial instruction can be planned.

**Figure 4.1: Performance of typically developing children and children with hearing impairment on GLAT-K.**



The above bar diagram shows the significant difference in the performance of the typically developing children as compared to children with hearing impairment on the developed GLAT-K. The education system prevailing in India is especially language based. Careful attention must be given to the explicit teaching of reading and spelling skills to students with impaired hearing. It is typical of these students that they fall three to four years behind the peer group in terms of reading ability (Hardnian et al., 2005). This reading lag has a detrimental impact on their performance in all subjects across the curriculum. The same results are depicted in the present research wherein the

performance of children with hearing impairment is poorer as compared to that of typically developing children. Since language is affected, it has an impact on the overall performance across all subjects.

It could also be discussed that teachers also play an important role in the academic performance of the children. Teachers in special school tend to neglect the language aspect in children, they tend to concentrate more on the manual mode of communication. Moores (1992) has pointed out that children who are deaf spend less time than hearing children do on academic subject matter. He cautions the magic solutions to this problem are not likely. The answer, he says, is that “teachers and children must work harder on academic tasks”. Hence it can be concluded that it is important to have Grade Level Assessment Test to have a better understanding of performance of children with hearing impairment and thereby remedial instruction can be planned.

Chapter –V  
*Summary*  
&  
*Conclusion*

## **5.0 Introduction**

The present study titled ‘Development of Grade Level Assessment Tool for Grade-V Kannada Language (GLAT-K) for Children with Hearing Impairment’ was aimed at developing grade level assessment tool in Kannada language for Grade-V children with hearing impairment.

The main purpose of conducting the present study was to perceive how grade level assessment test could benefit children with hearing impairment in the assessment process in Kannada. The rationale behind developing the Grade level assessment test is to meet the educational needs of all children with hearing impairment in Kannada Language of Standard V. An in-depth knowledge of the content can be provided to children with hearing impairment, which in turn will widen their interest in learning language.

### **5.1 Objectives of the study**

- To develop a test in Kannada language for assessing the grade level performance of children with hearing impairment studying in Grade-V using Karnataka State Text Book.
- To administer the developed test on typically developing children.
- To administer the test on children with hearing impairment to assess the utility of the developed test.
- To compare the performance of children with hearing impairment studying in Grade V in special school with that of typically developing children studying in regular schools.



## **5.2 Method for the study**

A grade level assessment tool was developed in Kannada for Grade-V based on Kannada text book of Karnataka State Board of Education. The developed GLAT-K test was administered separately on the two groups of children. Initially, it was administered on 78 typically developing children from four Kannada medium regular schools in Mysore studying in Grade-V. The 20 children with hearing impairment were selected from two Kannada medium special schools in Mysore. Before administering the test, prior permission was taken from the Head of the School and the concerned class teacher. The researcher gave oral instructions to the participants about the test and the marking scheme. It was a paper and pencil test. The duration of the test was for 2.30 hours. After administering the test on typically developing children, the developed GLAT-K was administered on the selected children with hearing impairment. These students were also given instructions before attempting the test. The performance of both the groups was compared statistically to check the utility of the developed GLAT-K.

## **5.3 Major findings of the study**

1. The four regular schools selected for the study were compared using Analysis of Variance (ANOVA) and it is evident from ANOVA that there is no significant difference in the performance of children across their schools. ( $F(3, 74) = 2.564, p > 0.05$ ).

2. Independent t-test was administered to study the difference between typically developing children and children with hearing impairment. There was a significant difference between performance of typically developing children and children with hearing impairment ( $t(96) = 3.00, p < 0.01$ ).

## **5.4 Limitations of the Study**

1. The test was developed in Kannada language.
2. Only Grade- V Kannada textbook of first and second semester was selected.
3. Participants from only two special schools for children with hearing impairment were selected for the study.
4. Only Karnataka State Education Board textbook was used for the present study.
5. Reliability of the developed tool was not carried out due to paucity of time.

## **5.5 Recommendations**

### **➤ *For Research Students***

1. Similar type of study could also be conducted in other school subjects
2. Similar type of studies could be conducted in different languages and at different grade levels.
4. Participants from different special schools could be taken.

### **➤ *For Teachers***

1. Teachers can develop and use Grade level Assessment Test in Kannada and other languages and also develop instructional materials for teaching English for those students who cannot benefit from the textbook.
2. Teachers can know the present performance level of children in assessment test and can systematically plan their remedial teaching programs in academic subjects to improve the performance of children with hearing impairment.

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# APPENDICES



LETTER TO VALIDATORS

Date:

To,

Dear madam/Sir

I, the undersigned is a student of M.S.Ed (H.I) doing Masters programme at All India Institute of Speech and Hearing, Mysore. As a part of my study, I have undertaken a research study titled 'Development of Grade Level Assessment Tool (GLAT-K) in Grade-V Kannada Language for Children with hearing Impairment' under the guidance of Mrs.Prithi Nair, Lecturer, Department of Special Education, AIISH.

The study aims at assessing the Grade Level Performance of children with hearing impairment studying in grade-V using Karnataka State Board text Book. For the same purpose, a Grade level Assessment tool (GLAT-K) has been developed. The test items and instructions to validators are enclosed.

Your expertise in the subject is well known and hence, I request you to earnestly give valuable time and suggestions for critical analysis of the developed test.

Yours Sincerely

Sharanaiah M M

M.S.Ed (H.I)

## INSTRUCTION FOR VALIDATORS

Given below are twenty one items in Kannada, from the first and second semester, Standard V, Karnataka State Education Board. Please respond and give your valuable opinion about each question.

- If you **agree with a question** put a tick mark (✓) around the category **Appropriate (A)**
- If you **disagree** put a tick mark (✓) around **Inappropriate (IA)**.
- If you are **undecided** put a tick mark (✓) around **Undecided (U)**,

You are requested to give your free and frank opinion.

REQUEST FOR PERMISSION LETTER TO SCHOOL FOR CONDUCTING THE STUDY

Date:

To,

Dear Madam/ Sir

I, the undersigned is a student of M.S.Ed (HI), doing master's programme at AIISH, Mysore. As a part of my study, I have undertaken a research study titled '*Development of Grade Level Assessment Tool (GLAT-K) in Kannada language for Children with Hearing Impairment*', under the guidance of Mrs. Prithi G Nair, Lecturer, Department of Special Education, AIISH.

The study aims at assessing the grade level performance of children with hearing impairment and typically developing children studying in Grade V using Karnataka State Board Text book. For the same purpose, a Grade Level Assessment Tool (GLAT-K) in Kannada Language has been developed. I would like to administer this test on Grade V children of your school. Assurance is given that it would not disturb the schedule of the class teaching. Hence, kindly grant permission to carry out the test on Grade V children of your school.

Looking forward for your cooperation.

Yours Sincerely

Sharanaiah MM  
M.S.Ed (HI)