

A STUDY ON CERTAIN FACTORS INFLUENCING LANGUAGE PERFORMANCE OF HEARING IMPAIRED STUDENTS

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ABSTRACT

This is a study on certain factors which had positive impact on the language performance of the hearing impaired students. Language handicap is the biggest hurdle in the education of the hearing impaired. Research reveals that hearing impaired persons commit more syntactic errors as compared to semantic errors. Though language acquisition is innate for human beings, it needs a proper environment to develop. Hence, the investigator formulated a grammatical assessment tool and compared the performance of three hundred upper primary class hearing impaired students with certain variables like the use of a hearing aid, type of management of the school, size of the class and residential vs non-residential set-up. The results showed that regular use of a hearing aid, private schools (both aided and unaided), size of the class (up to ten students) and a non-residential set-up had a positive impact on the performance of students. This study will help planners, administrators, academicians and teachers to formulate appropriate policies and teaching strategies in improving the academic performance of the hearing impaired; as language proficiency is the basis of better performance in other subjects and all round development in school.

INTRODUCTION

Man is a social being, who wants to converse and make contact. A hearing child masters language automatically by picking up from the talking environment around him. But in the case of a hearing impaired child, he/she should be 'taught' language. Children who are deprived of hearing, are cut off from the world of sound and language. According to Quigley and Paul (1) language handicap is the biggest hurdle in the education of the hearing impaired. Therefore, teaching language and acquisition of language skills are the central themes of any educational programme for the hearing impaired.

NEED FOR THE STUDY

From the experience of the investigator as a classroom teacher and teacher educator for the hearing impaired, it is observed that in spontaneous written language, hearing impaired children commit many syntactic errors. It is almost similar to telegraphic language i.e., with omission

of prepositions, conjunctions, case and tense markers etc. They are unable to write complex and compound sentences. Hence, the investigator felt the need to develop an assessment tool and to assess the written language skills of the hearing impaired children of Upper Primary Level, in the Malayalam language of southern India. So far, such studies have not been conducted for the hearing impaired in the Malayalam language.

The poor language performance of the hearing impaired is supported by the previous studies of Heider (2), Kretschmer and Kretschmer (3), Quigley, Power and Steinkamp (4) and Power and Wilgus (5). Though language learning is innate in human beings, it is not so, in the case of the hearing impaired. They should be given the right environment to compensate for their hearing loss.

OBJECTIVES OF THE STUDY

1. To develop a tool to assess the written language performance covering the grammar aspect in Malayalam for hearing impaired children of upper primary (Std V, VI and VII) level.
2. To compare the performance of students using a hearing aid regularly and those who use it occasionally.
3. To compare the performance of students in private unaided, private aided and government schools for the hearing impaired.
4. To compare the performance of hearing impaired students in schools with class sizes up to ten and above.
5. To compare the performance of students in a residential and non-residential set-up.

HYPOTHESES FORMULATED

1. There is no significant difference between the test scores of students who are using a hearing aid regularly and occasionally.
2. There is no significant difference between the test scores of hearing impaired students in private unaided, private aided and Government schools.
3. There is no significant difference between the test scores of the students whose class size is up to ten and above.
4. There is no significant difference between the test scores of residential and non-residential students.

METHODOLOGY

Development of the Tool

In the initial stage of the study, the investigator collected spontaneous written language samples in Malayalam, from two hundred hearing impaired students studying in V, VI and VII classes, from eight schools of the hearing impaired, in the State of Kerala. The investigator collected 6000 sentences and assessed them thoroughly to identify the main grammatical errors, categorised and compiled them under ten major headings based on the most frequently repeated errors. Keeping in mind the major syntactic errors, an assessment tool was made, dividing them into ten subtests. Each subtest had ten questions and each question had four multiple choices. The students had to mark the letter of the correct answer from them. The following were the ten subtests: (1) Copula (2) Pronouns (3) Tenses (4) Derived Forms of Verbs (5) Case Markers (6) Negatives (7) Question Forms (8) Compound Sentences (9) Complex Sentences (10) Word Order.

After the pilot study, an item analysis was carried out to find out the facility value and discrimination index. As the items were objective type, objectivity was established. Internal consistency was also calculated by Spearman Brown Prophecy Formula (split half method). Hence reliability and validity were established.

Sample

As the study aimed to assess the written language performance covering the grammatical aspect of the Malayalam language for the upper primary (Std. V, VI and VII) hearing impaired students, the investigator selected three hundred samples from all over Kerala. They were above average, average and below average, in academic achievements as per the assessment of the class teachers. They were between the ages of ten to seventeen years and as per the school records were normal in all respects except for the hearing loss and were perlingually deaf. They had hearing loss from severe (61 to 90 dB) to profound and above (91 dB above). Thus the sample was purposive and was selected on simple random procedure.

The test was conducted; answer sheets were scored and subjected to statistical analysis. The necessary information like use of hearing aid, (regular/occasional), size of the class (up to ten and above ten), type of management (Government/Private Aided and Unaided), residential/non residential etc. were collected from the respective school records. Mean Values, Standard Deviation, 't' values, 'F' values and L.S.D. were calculated.

RESULTS AND DISCUSSIONS

Hypothesis - 1

"There is no significant difference between the test scores of students who use hearing aids regularly and those using it occasionally."

The 't' value computed between the regular and occasional users of hearing aid according to the test scores, is given in the following table

Table 1: Comparison of Test Scores According to the Use of Hearing Aid

Sl. No.	Category	N	Mean	SD	't' value
1.	Regular	168	53.6607	17.9510	5.3970**
2.	Occasional	132	43.9697	11.4665	
	Overall	300	49.3967	16.1494	

Significant at 0.01 level.

The mean value of the test scores of students using the hearing aid regularly was 53.6607 and the mean value of students using the hearing aid occasionally, was 43.9697. The difference between the two mean values was 9.6810 and it was found significant at a 0.01 level. When the mean values were observed, the students using the hearing aid regularly, scored better than the students who used it occasionally. Hence the hypothesis formulated was rejected.

With the regular use of a hearing aid, the hearing impaired child got auditory feed back constantly and it might have resulted in the better performance of those students, when compared to the occasional users of a hearing aid. So use of hearing aids should be encouraged in schools for the hearing impaired, as much as possible. This finding was in agreement with the studies of Hart and Risely (6) and Luterman (7).

Hypothesis - 2

"There is no significant difference between the test scores of the students of Government, private aided and private unaided schools".

The F value computed to see the interaction effect of the students' performance under the different types of management according to the test scores, is given in the following table.

Table 2: Comparison of Test Scores According to Management of Schools (One Way ANOVA)

Sl. No.	Management	N	Mean	SD	F value
1.	Government	89	37.0225	7.3716	50.9580**
2.	Private aided	133	53.3835	16.1267	
3.	Private unaided	78	56.7179	15.6860	
	Over all	300	49.3967	16.1494	

Significant at 0.01 level.

The mean value of the students from the Government school was 37.0225, Private aided schools was 53.3835 and Private unaided schools was 56.7179. There was a significant difference among the mean scores according to management of the schools. This was confirmed by the calculated 'F' value 50.9580. The LSD (Least Significant Difference) test showed the following comparisons.

Table 3: LSD Test for Multiple Comparison

Sl. No.	Pair	Mean difference	Sig-Level
1.	Private unaided vs Government	19.6950	0.0000
2.	Private aided vs Government	16.3610	0.0000
3.	Private unaided vs Private aided	3.3450	0.0960

It was seen that the difference between the mean scores of students belonging to Private Unaided vs Government, was 19.6950, that between Private aided vs Government was 16.3610, and that between Private unaided vs Private aided was 3.3450. Hence the difference between the scores of students belonging to Private and Government schools was found to be significant, while there was no significant difference between the students of Aided and Unaided Private schools. Hence the hypothesis was rejected.

The reason for poor performance in government schools might be that, there was no proper supervision and administration as in the case of other types of schools. In private aided and unaided schools, proper supervision and follow-up activities might have been strictly followed, both, for the staff and the students. In the Government sector, in the schools as well as in the hostels, lack of enough teachers and personnel would have added to a lack of attention in the

teaching and management of these students.

Hypothesis - 3

"There is no significant difference between the test scores of the students where class size was up-to ten and above ten".

The `t' value calculated between the class size upto ten and above ten according to the test scores, is shown in the following table.

Table 4: Comparison of Test Scores According to Class Size

Sl. No.	Size	N	Mean	SD	`t' value
1.	Up to ten	211	54.6161	16.0092	9.9260**
2.	Above ten	89	37.0225	7.3716	
	Overall	300	49.3967	16.1494	

Significant at 0.01 level.

The mean value of the test scores of students where the class size was up to ten was 54.6161 and the mean value of the test scores of students where class size above ten was 37.0225. The difference between these two mean values was 17.5936, found significant at 0.01 level. When the main values were observed, the students who belonged to class size up-to ten scored better than the students where the class size was above ten. Hence the hypothesis formulated initially, was rejected.

For optimum results, hearing impaired children need personal attention. The lesser the number of students, the better their performance, as the teacher can pay individual attention to the students. This is probably the reason for better performance of the students where the class size was up to ten. The study by Hart and Risely (6) supported the findings of this study.

Hypothesis - 4

"There is no significant difference between the test scores of residential and non-residential students".

The `t' value calculated between the residential and non-residential hearing impaired students according to test scores, is shown below.

Table 5: Comparison of Test Scores According to Type of School

Sl. No.	Type	N	Mean	SD	't' value
1.	Residential	240	48.5333	16.3267	1.8590**
2.	Non-residential	60	52.8500	15.0579	
Overall	300	49.3967	16.1494		

Not significant.

The mean value of the test scores of students belonging to the non-residential school was 52.8500 and residential schools were 48.5333. The non-residential students could perform better than residential students. But the difference of 4.3170 was not significant. Hence the hypothesis formulated was not rejected.

The reason might be that at home these students got more attention and care from their parents, in their studies and development of language skills. The parents made sure of the optimum use of residual hearing, by regular use of a hearing aid. At home, students were surrounded by a comfortable talking environment, which probably had a positive impact on the performance in the test, as compared to residential students.

IMPLICATIONS OF THE STUDY

Language handicap is the biggest hurdle in the education of the hearing impaired. If one were to analyse, it can be seen that for any learning to take place, language is the first prerequisite. As hearing impaired children lack language skills for their better educational performance, a better learning environment must be taken care of.

As the study has revealed, variables like regular use of hearing aids, type of management of the school, size of the class, residential/non-residential set up etc. have a vital role to play in the language performance of the hearing impaired. So, while formulating educational policies for hearing impaired children, regular use of hearing aid, private management (aided and unaided), class size (up to ten), non residential set up etc. should be emphasised by the educational planners and administrators.

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