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K.C.Lalithavinodini Kunnath Chalil

G.Victoria Naomi

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¹Research Scholar, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore

²Dean, School of Education, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore



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ABSTRACT

The purpose of this study was an attempt to examine the effect of using Flashcard and Blackboard in learning vocabulary among students with hearing impairment. The study was an experimental method using pre-test and post-test design. The sample of the study was 30 students studying from 1st to 5th standard in two schools for the hearing impairment, and the sample was chosen through stratified random sampling method. The tools developed by the researcher and used in this research was a Teacher Made Test contains 11sight words. The students were taught using traditional classroom teaching method.To analyze the collected data, Repeated Measures of ANOVA was used. The Test analysis reveals significant improvement in learning vocabulary through flashcard and Blackboard teaching. The study reveals the efficacy of using flashcards and blackboard teaching strategy in learning vocabulary among students with hearing impairment.

Keywords: Flashcards; Sight words; Children with hearing impairment.

1. INTRODUCTION:

English Language proficiency is important in the present Education system. Children with hearing loss have difficulty with all areas of academic achievement, especially reading and mathematical concepts(**Kapoor, P (2019)**. English language is an international language which is widely used all over the world for those who speak other languages. As a language of education and career, it should be accessible to everyone in the word even marginalised. (Ms. Nisha M V ,Dr. J. Chriso Ricky Gill, 2020).

English is an official language used in all government offices. But, not every state teach English as a compulsory language in schools for the hearing impaired. This makes them less competent in a workplace. In comparison with their hearing peers, deaf/hearing-impaired children miss out on vocabulary that hearing children pick up incidentally. Students with Hearing Impairment find it difficult to understand oral and written language.In order to solve this problem, deaf/hearing- impaired children need to learn vocabulary.

2. NEED AND SIGNIFICANCE OF THE STUDY:

Teachers know that students learn in different ways. In order for instruction to reach all students, teaching methods must relate to each child's own learning preference style. Knowing that no one method of learning is appropriate for all children, teachers should have a variety of strategies from which to choose, therefore appealing to all learning preference styles. Using a variety of materials allows students to gain experience for understanding and using vocabulary. For these reasons, school systems encourage their teachers to search for new and better ways to help children learn.

Through teaching of vocabulary, a child can receive complex learning environment that enriches language. Hearing plays a very important role in acquisition and development of language. Flashcards and Blackboardwas used to make learning active, interesting, and concrete.

3. OBJECTIVES OF THE STUDY:

- To assess the level of vocabulary among the students with Hearing Impairmentbefore and after usage of flashcards and blackboard.
- Compare the mean scores obtained in pretest, intermediate test and post test.
- To assess the level of vocabulary among the students with Hearing Impairment with respect to gender.

4. METHOD

Site Description

The site selected for the study is two schools for children with Hearing Impairment in Calicut in the state of Kerala. They are:

1. Rotary School for the Hearing Impaired, Vatakara
2. Rahmaniya School for the Hearing Handicapped, Calicut.

Selection of Sample

In the present study, Stratified Random Sampling technique was adopted to select the sample. The researcher identified 30 students, 15 students each from special and Inclusive schools for the present study. A total of 47% students are male and 53% students are female in Rahamaniya School for the Hearing Impaired. The sample consisted of 60% male and 40% female from Rotary School for the Hearing Impaired.

Design of the Study

In the present study, Quasi-experimental design was adopted. Due to scarcity of sample, the researcher followed Quasi-experimental study wherein Pre-observation and Post-observation was done besides treatment.

The layout of the design carried out in this study is given below.

P1 × P2

Here,

P1 indicates Pre-observation

P2 indicates Post-observation

× means Treatment (Intervention using Flashcards and Blackboard)

Preparation of the Tool

The tool employed in the current study was developed by the researcher and it's a teacher made test. The tool was designed to evaluate the extent to which selected vocabulary were grasped by the students with hearing impairment when taught through flashcards and blackboard method.

The tool consisted of 11 sight words assessed through "Choose from the correct options".

Sight words- Eleven Sight words from the Dolch Kindergarten years category of sight words were selected. In the category, there are 40 sight words. From the group, only upto 4 letter sight words were selected. The kit comprises of 2 letter word (2), 3 letter word (7) and 4 letter word (2).

Before conducting the pilot study, the tool constructed was given to the experts which includes Teacher educators in Special Education and Special teachers for students with Hearing Impairment. Based on their opinions and suggestions, certain modifications were made and then pilot study was administered.

Pretest, intervention and posttest were administered. The tool was found to be reliable to administer to the whole group as the Cronbach alpha is 0.88, indicating the tool is reliable.

Scoring Procedure-Scoring was done using 'Yes' or 'No' response. If the participant gives the correct response, 'one' score and for the incorrect response, 'zero' score.

5. DATA COLLECTION PROCEDURE

The study was carried out in the following phases.

Phase I

Identify the Students with Hearing Impairment from grade 1 to 5 from the schools in Calicut. The Students with Hearing Impairment were identified by gathering information from teachers and also through the case profile from parents. Stratified Random sampling was taken.

Phase II

Pretesting was done to assess the understanding of vocabulary among selected sample. The tool was developed and used by the investigator on the sight words comprising of 11 "choose from the bracket" questions. The test was administered for 40 minutes to the Students with Hearing Impairment. The pretesting was administered to each student separately. In the pretest, 11 Sight words were given to the student to test their knowledge after introducing those words in sign language. Scoring was assigned as per procedure.

Phase III

Intervention was given to the students on offline basis using flashcards and blackboard. Daily and weekly exercise was given to the children. The time taken for this phase is 3 weeks, five sessions per week and thus total of 15 sessions with one hour for each session.

Intervention Procedure

Use of Flashcards- Flashcards that shows the sight words for vocabulary acquisition was designed and used in the classroom for 11 words.

Blackboard Teaching

All the words were randomly written on the board and taught one by one. Once the teaching was done, the child would be given a pointer to pinpoint the right word uttered by the teacher to check their understanding after the class.

Phase IV

A post test was conducted using the same tool to measure the effectiveness in the scores of learning vocabulary using the 11 sight words given among the Students with Hearing Impairment before and after the using flashcard and blackboard Intervention was given. The test was administered for 40 minutes to the Students with Hearing Impairment in each class.

6. DATA ANALYSIS

Data collected are tabulated on SPSS Data Variable for analysis. All data are used in nominal and are numerical for better understanding of the statistics. The coding is done based on deductive coding method. The method used is Independent t test and Repeated Measures of ANOVA. Frequency Analysis is also used for scoring and interpretation of the data. For comparison of independent and dependent variables, t test was used.

Analysis of Overall scores of Pretest and Posttest in Vocabulary

Table 6.1 Testing wise Mean, S.D, df and t value for acquisition of Vocabulary

Vocabulary	Mean	N	df	SD	Std. Error Mean	t value
Pretest	2.10	30	29	1.37	0.25	16.18**
Posttest	9.43	30	29	2.21	0.40	

** - Significant at 0.01 level

From the table 6.1, it is evident that the t-value for scores on acquisition of Vocabulary is 16.18 with df = 29 which is significant at 0.01 level. It indicates that pre and posttests score of Vocabulary differ significantly. In the light of this, the null hypothesis that there is no significant difference in the scores for acquisition of Vocabulary before and after Intervention using flashcard and blackboard is rejected. It may therefore be concluded that Multimodal Intervention strategies helped in acquiring English Vocabulary among children with Hearing Impairment.

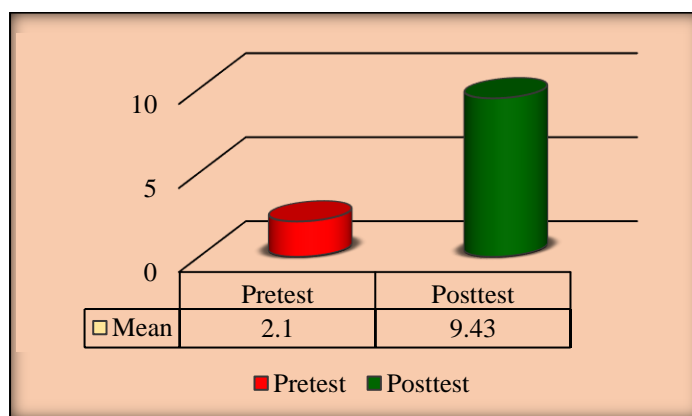


Figure 6.1: Overall scores of Pretest and Posttest in Vocabulary

T- test Analysis on Acquisition of scores in pretest and posttest in Vocabulary with respect to Gender

Table 6.2 Testing wise Mean, S.D, df and t value for acquisition of scores in Vocabulary with respect to Gender.

Vocabulary	Gender	Mean	N	df	SD	Std. Error Mean	t value
Pretest	Male	10.63	16	28	00.62	00.15	2.148*
	Female	20.64	14	28	10.78	00.48	
Posttest	Male	90.44	16	28	20.58	00.65	.011 _{NS}
	Female	90.43	14	28	10.79	00.48	

*Significant at 0.05 level NS- Not Significant

From the table 6.2, On analyzing the pretest and posttest scores of Male and Female separately, the result indicates that the posttest scores of Male and Female were higher than pretest scores (Male) M= Pretest Mean 1.63; Posttest Mean=9.44, (Female) M= Pretest Mean 2.64; Posttest Mean=9.43) and thus indicating the effect of using flashcard and blackboard in learning vocabulary among students with hearing impairment.

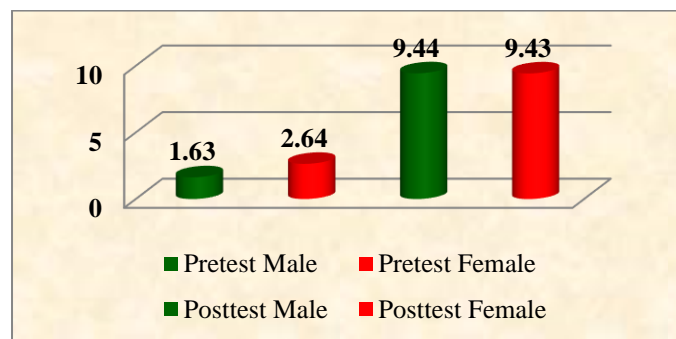


Figure 6.2: Scores in pretest and posttest in Vocabulary with respect to Gender

Repeated Measures of ANOVA for the Performance of Students in scores of Vocabulary in the pretest, intermediate test and posttest.

Table 6.3 Summary of Repeated Measures ANOVA for the Performance of Students in scores of Vocabulary in the pretest, intermediate test and posttest.

Vocabulary	Mean	SD	N
Pretest	2.10	1.37	30
Intermediate	4.77	1.61	30
Posttest	9.43	2.21	30

Table 6.4

Source of variance		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Vocabulary- Pretest, Inter- mediate test, Posttest	Sphericity Assumed	826.67	2	413.33	183.47	0.00	0.86
	Greenhouse-Geisser	826.67	1.73	477.37	183.47	0.00	0.86
	Huynh-Feldt	826.67	1.83	451.28	183.47	0.00	0.86
	Lower-bound	826.67	1.00	826.67	183.47	0.00	0.86

Error (Vocabulary -Pretest, Inter- mediate test, Posttest)	Sphericity Assumed	130.67	58	2.25			
	Greenhouse- Geisser	130.67	50.22	2.60			
	Huynh-Feldt	130.67	53.12	2.46			
	Lower- bound	130.67	29.00	4.51			

*Significant at 0.05 level

From the table 6.3, it is evident that the F value for overall performance of Students in scores of Vocabulary in the pretest, intermediate test and posttest is $(2, 1.73) = 183.47, p < 0.05$). This shows that Mean of overall scores of Vocabulary in the Pretest, Intermediate test and Posttest differs significantly. The effect size $\eta^2 = 0.86$ was found to be significant in making changes as the result of the intervention. In the context the null hypothesis stated as that there is no significant difference within Performance of Students in scores of Vocabulary in the Pretest, Intermediate test and posttest scores is rejected. It means the Intervention was effective in teaching Vocabulary.

7. RESULTS

1. Result 1- There is significant difference in the level of acquisition of Vocabulary among students with hearing impairment before and after introduction of Intervention using Flashcards and Blackboard.
2. Result 2- In the acquisition of Vocabulary, the posttest scores of Male and Female were higher than pretest scores after using Flashcards and Blackboard.
3. Result 3- There is significant difference within performance of Students in scores of Vocabulary in the Pretest, Intermediate Test and Post Test. The analysis of variance for pre, intermediate and post test in Vocabulary revealed that there is a significant improvement from pretest (Mean=2.10) to intermediate (Mean =4.77) and then posttest (Mean =7.43).

8. RECOMMENDATION

The study recommends the use of flashcards and blackboard method in teaching vocabulary rather than usage of sign language alone. The study recommends that the teacher training curriculum for students with hearing impairment may be designed with the instruction in the application in the field of technology.

9. CONCLUSION

The investigator attempted to study the effect of using Flashcard and Blackboard in learning Vocabulary among Students with Hearing impairment. The result of this experimental study showed improvement in vocabulary after Intervention is given to the Students with Hearing impairment. Therefore, the study recommends that teachers can implement use of Flashcard and Blackboard Intervention Strategies as an effective programme to enhance teaching and learning of vocabulary among the Students with Hearing impairment.

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