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LANGUAGE GAMES FOR CHILDREN WITH HEARING IMPAIRMENT IN INCLUSIVE SETUP**¹R. Shanthi, ²K. Kalaivani and ³D. Nandhini**

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Abstract-- Children with hearing impairment frequently experience speech-language deficits and exhibit lower academic achievement and poorer social-emotional development than their peers with normal hearing. It is the biggest task for the teachers in inclusive education to work for the development of language among CWHI. Language games are one among the alternatives which enables the students to remember things faster and better in an easy and relaxed atmosphere. Present study aimed to describe the benefits of language games to develop language among children with hearing impairment in relation to their age, gender and degree of hearing loss. Purposive sampling technique was used to do an experiment study of 20 primary school children aged 5 to 11 years studying at Coimbatore in Tamilnadu. A pretest and posttest tool was prepared to find the effectiveness of using language games and five language games were used to teach language for primary school children with hearing impairment. The results show that mean scores of posttest is relatively higher when compared to that of the pretest of CWHI at primary level. Children of age level 9 to 11 years have scored higher than the age level of 5 to 8 years. The achievement scores in pretest and posttest decreases with the increase in degree of hearing loss. There was not much difference between the achievement scores of boys and girls. Age and degree of hearing loss are found to be significant factors in the language development of primary school children with hearing impairment. On the whole, it was found that the language games are effective technique in imparting language to children with hearing impairment.

I. INTRODUCTION

THE sense of hearing provides a background, which gives a feeling of security and participation in life. It plays a critical role in the development of speech and language and in monitoring one's speech. For children with hearing impairment, congenital or acquired before development of speech and language, normal speech development is interfered with. With unilateral hearing impairment also, there is difficulty in localizing sound, reduced speech discrimination. Lower speech and language development in children has significant effect on their educational, linguistic and auditory perceptual development.

Educational games have become a vital part of curriculum planning for preschool, the fact that young children learn best through games. Games help kids in learning social skills, basic etiquettes and values like teamwork etc. It is such a important phase in a child's life. Richard-Amato (1988) says "Games can lower anxiety, thus making the acquisition of input more likely." "Games are highly motivating because they are amusing and interesting. They can be used to give practice in all language skills and be used to practice many types of communication." (Ersoz, 2000).

A study conducted by Marjaana Kangas (2009) on "Creative and playful learning: Learning through game co-creation and games in a playful learning environment" shows that one way to

er activity, creativity, imagination, and group work skills-along with academic achievement-is to integrate fact and fiction and a playful learning environment in teaching, playing and learning. The results of research on "Efficacy of Play Therapy in Developing Communication Skills among Children with Moderate Intellectual Disability" conducted by Rathi Rani, K. (2009) revealed that the language skills of the children are facilitated by the experiences of the child during play. Play contributed to the children's ability to explain, describe, articulate, express feelings, comprehend statements and questions, construct typical sentences and use nonverbal cues.

The results of the study on "A comparison of the effectiveness of game-based and traditional teaching on learning and retention of first grade math concepts" by Farid Bahrami, et al. (2012) showed that the experimental group had higher scores in learning tests and retention tests. A study on "Effectiveness of Using Games in Teaching Grammar to Young Learners" conducted by Arikan, et al., (2011) shows that, according to the teachers, games are an important and necessary part of English language teaching and learning in the context of primary schools'. Mania Moayad Mubaslat (2012) carried out a research on "The Effect of Using Educational Games on the Students' Achievement in English Language for the Primary Stage". Experimental research is conducted using three groups out of six randomly. The results of the post test for the experimental group are so better than the controlled one which shows that games have a good effect on improving the achievement for the primary stage and create an interactive environment. It is recommended to use games since they are very effective especially for the primary stages in teaching a second language and games are helpful for the teacher as a procedure for language acquisition.

The research done on "Games as an Engaging Teaching and Learning Technique: Learning through playing?" by Kirkland, et al., (2008). The analysis suggests that in class, games do have a positive impact on students. In addition, students who participated in the games appear to be more engaged in the learning process.

Hadfield (1990) confirms that "games provide as much concentrated practice as a traditional drill and more importantly, they provide an opportunity for real communication, albeit within artificially defined limits, and thus constitute a bridge between classroom and the real world." Like in a traditional classroom, students have an opportunity to drill and practice using grammatical rules and other functions.

A study on "Effectiveness of using Games in Teaching Grammar to Young Learners" conducted by Arikan, et al., (2011), shows that according to teachers, games are an important and necessary part of English language teaching and learning in the context of primary schools' English lessons simply because they provide EFL teachers with many instructional advantages.

Herman (2011) carried out a research on "Developing Communication Skills in Deaf Primary School Pupils: Introducing and Evaluating the SmiLE Approach". Many profoundly deaf signers have difficulty communicating with hearing people. This study evaluates the effectiveness of smiLE in helping deaf pupils develop their ability to make successful requests in a specific communication situation and whether this generalized to another communication situation. The result shows that the smiLE therapy approach is effective in providing deaf children with the communication skills and confidence to interact with English speakers in targeted situations. The lack of generalization of these skills to similar situations may be overcome by a longer therapy programme that specifically promotes these skills across different situations.

Unlike the traditional method of learning and teaching, in a communicative language teaching (CLT) approach, learners are required to take part in a number of meaningful activities with different tasks. This is to improve learners' communicative competence by encouraging them to be a part of the lessons themselves. Decarrico (2001) states that words

should not be learnt separately or by memorization without understanding. Moreover, "learning new words is a cumulative process, with words enriched and established as they are met again", *Nation (2000)*.

Many experts of language teaching methodology also agree that playing games is a good way to learn vocabulary. With the use of games, the teacher can create various contexts in which students have to use the language to communicate, exchange information and express their own opinions (*Wright, Betteridge and Buckby, 1984*). *Huang (1996)* stated that "learning through games could encourage the operation of certain psychological and intellectual factors which could facilitate communication heightened self-esteem, motivation and spontaneity, reinforcing learning, improving intonation and building confidence." Some experts have also figured out characteristics of games that make vocabulary learning more effectively.

II. NEED AND RATIONALE OF THE STUDY

The excessive abstraction in learning activities causes children to hate school. They simply cannot identify with what they are learning, because it usually has nothing to do with reality and their whole beings - it mostly directed at their intellects. The simple fact that children have to sit for hours listening to what the teacher says, without doing anything else than thinking, eventually interrupting this process by writing in their notebooks. The present study attempts to provide practical experience for primary school children with hearing impairment to learn the language. Games are student focused activities. So they enjoy the process of learning. The games used in the present study, is quite informative and interesting. So that the hearing impaired children actively participate in the learning process. With the help of games, they can learn familiar language in their day to day activities. Games are highly motivating and entertaining and they give shy students more opportunity to express their feelings and opinions. Game enables learners to acquire new experience which are not always possible during a typical lesson or content. Game provides diversity in regular classroom situation. If the subject content is taught using games, children with hearing impairment remember things faster and better.

III. OBJECTIVES OF THE STUDY

- To analyze the effect of language games in developing language among children with hearing impairment in relation to their age, gender and degree of hearing loss

IV. METHODOLOGY

Research design

Under the informal experimental method, Before and After Without Control Design was adopted.

Sample

Twenty hearing impaired children at primary level in inclusive setup were selected by using purposive sampling from Coimbatore District.

Tool for the study

The researcher developed the research tool with consultation of experts in the field of special education. It is prepared in such a way that it would help to achieve the objectives of the present study and establish reliability and validity. The tool used for the present study is achievement test tool prepared by the researcher.

Initially the researcher made a thorough review of the related literature to explore the test items that has been used in various assessments. A pretest and posttest tool was prepared to find the effectiveness of using language games to teach language for primary school children

with hearing impairment. The tool consists of five parts in which five items were given in each part. Each item is prepared in such a way to assess the receptive and expressive skills at primary level.

An intervention package involving five language games were used. The games included identifying the words, matching pictures with words and forming words and sentences. The languages games had rules which had time limitation and points/scores/rewards given for achievement in each task.

Data Collection Procedure

Data were collected from 20 samples studying in inclusive schools in Coimbatore city. Permission for administering the tool and for teaching language using the language games was sought. The time taken for administering pretest and posttest were 45 minutes. The time taken for conducting language games was 1 hour per game. The data collection procedure was started by administering the pretest for the selected sample first. Then the language games were conducted to the selected samples. The intervention was carried out for four weeks. After the intervention, the posttest to the selected sample were administered.

V. RESULTS AND DISCUSSION

The objectives of the research study was to analyze the effect of language games in developing language among children with hearing impairment in relation to their age, gender and degree of hearing loss. Keeping in view of the above objective, the empirical evidence obtained in terms of factual data was analyzed in the context of the objectives set for the study by subjecting them to appropriate statistical analysis. This scores obtained on administration of research tool i.e. pretest and posttest on the selected sample were categorized in such a way, which can answer the formulated objectives. The findings thus arrived are presented below:

TABLE 1: Mean, Standard Deviation and 'T' Value of Achievement Test of Children With Hearing Impairment At Primary Level

VARIABLE	TEST	MEAN	SD	't' VALUE
Achievement scores	Pretest	10.35	2.99605	7.02*
	Posttest	17.2	2.820974	

*Significance * at 0.01 level*

From the table 1, it is clear that 't' value for the mean scores of pretest and posttest is 7.02 which is significant at 0.01 level indicating that there is a significant difference between the performance in pretest and posttest of children with hearing impairment at primary level. Therefore, The Null Hypothesis (1) "There is no significant difference between the pretest and posttest of the students with hearing impairment in learning language through games" is rejected. From this it is generalized that treatment has a good effect on the achievement level of children with hearing impairment in the posttest.

TABLE 2: Mean, Standard Deviation and 'T' Value of Achievement Test of Children With Hearing Impairment Based On Age

Age group	Test	Mean	S.D	't' value
5 - 8	Pretest	8.12	2.41	5.07*
	posttest	15.25	2.49	
9 - 11	Pretest	11.8	2.40	6.47*
	posttest	18.5	2.27	

*Significance * at 0.01 level*

From the table 2, the mean scores of pretest and posttest of the students with hearing impairment based on the age is compared. The calculated 't' values are 5.07 and 6.47 respectively. It is found to be significant at 0.01 level. Hence it revealed that there is a significant difference between the achievement of hearing impaired children in pretest and posttest based on the age levels 5 to 8 and 9 to 11 who were intervened through language games. It also shows that the intervention was effective. Therefore, the Null Hypothesis (2) "There is no significant difference between the pretest and posttest mean scores of students with hearing impairment based on age who are exposed to language games" is rejected.

Table 3: Mean, Standard Deviation and 'T' Value Of Achievement Test of Children With Hearing Impairment Based On Gender

Gender	Test	Mean	SD	T value
Boys	Pretest	11	2.69	4.74 *
	Posttest	16.58	2.42	
Girls	Pretest	8.099	4.54	5.91 *
	Posttest	13.68	8.43	

*Significance * at 0.01 level*

The scores of the children with hearing impairment between the mean scores of pretest and posttest of boys and girls are compared. The calculated 't' values are 4.74 and 5.91 for boys and girls respectively. It is found to be significant at 0.01 level. Hence it revealed that there is a significant difference between the achievement of hearing impaired children in pretest and posttest of boys and girls. It also shows that the intervention was effective. Hence, the Null Hypothesis (3) "There is no significant difference between the pretest and posttest mean scores of students with hearing impairment based on gender who are exposed to language games" is rejected.

TABLE 4: Mean, Standard Deviation and 'T' Value of Achievement Test Of Children With Hearing Impairment Based On Degree Of Hearing Loss

Degree of Hearing Loss	Test	Mean	SD	't' value
Severe	Pretest	11.72	2.49	6.28*
	Posttest	18.45	2.38	
Profound	Pretest	8.66	2.78	4.77*
	Posttest	15.66	2.64	

*Significance * at 0.01 level*

The above table shows the comparison of the scores of hearing impaired children with severe and profound hearing loss. The calculated 't' value for the mean score of children with severe and profound hearing loss were 6.28 and 4.77 respectively. It is found that there is a significant difference between the pretest and posttest achievement scores at 0.01 level of children with severe and profound hearing loss. The difference between the pretest and posttest mean score of children with profound hearing loss indicate that learning language is effective through language games. Therefore, the Null Hypothesis (4) "There is no significant difference between the pretest and posttest mean scores of students with hearing impairment based on degree of hearing loss who are exposed to language games" is rejected.

VI. DISCUSSION

From the comparative studies between the pretest and posttest scores of children with hearing impairment, it was found that Language Games have a positive impact on language

teaching/learning among Children with Hearing Impairment. The study also revealed that age, gender and degree of hearing loss are significant factors in the achievement of hearing impaired children at primary level. This may be due to the difference in level and duration of exposure to language by the individuals with hearing impairment. It was also found from the analysis that the residual hearing helps in the language development of the children with hearing impairment.

In the light of results of the present study, it is suggested to adapt games in teaching language to the children with hearing impairment, makes teaching learning process interesting. Primary school teachers should be aware of various language games to teach language among children with hearing impairment. Teachers should develop the knowledge on various problems faced by the children with hearing impairment in learning and provide remedial measures through play activities. The inclusive educational setting should provide good opportunities for children with hearing impairment to develop language automatically by communicating with their normal peers through games. Institutions should arrange workshops in developing various language games for children with hearing impairment.

VII. CONCLUSION

The major challenge facing people with hearing impairment is language and communication. Constant effort is required to understand, produce and manipulate the target Language. Well-Chosen games are valuable as they give students a break and at the same time allow students to practice language skills. It is possible to learn a language as well as enjoy oneself at the same time. One of the best ways of doing this is through games, because young learners like to be physically active; moreover, they are imaginative and creative and they learn subconsciously. Therefore, teaching young learners requires a special effort and challenge by the teacher and games are one of the best ways to achieve this. The study on "Language Games for Children with Hearing Impairment in Inclusive Setup" revealed that the hearing impaired children at primary level can learn language through language games effectively.

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