

Effectiveness of Play way technique to teach prepositions to children with hearing impairment at primary school level

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Abstract:

The current study was undertaken to investigate the effectiveness of play-way technique in teaching preposition in primary school children with hearing impairment. ten children with hearing loss of 60dB and above, in the age group 5 to 6 years, and having been inducted into primary education for more than a term of 6 months were selected for the study. The children had been formally introduced to prepositions in class, following which the group was randomly assigned to two experimental groups of five children each. This was followed by supplementary training through two play-way techniques akin to table and ball in one of the experimental group, while the other group continued with traditional paper-pencil exercises. At the end of a fortnight of training, the participant-children were tested for their skills for recall and comprehension. As the sample size was small lacking normality, the performance scores were subjected to non-parametric comparison employing Mann-Whitney test. The results revealed that play-way exercises were resulted in better learning with a statistically significant mean rank difference.

Keywords: hearing impairment, preposition, play-way, primary school children

I. INTRODUCTION

The major occupation of children is playing. More often than not they are found forced into a rigorous system of education due to demands of the contemporary world. The pressure of the demands increase manifold when the children are found to have special needs like hearing impairment, as they are to undergo additional rehabilitative training to overcome the impact of their disability. However, if teachers and trainers spend a little thought and effort, the rigours of training could be invisible into enjoyable activities. There are ample evidences indicating that play serves to be an effective and interesting means for imparting instruction for young children. Formal training more than often is found to inhibit these children from full-fledged participation in the learning process and exhibiting their actual learning by instilling anxieties about the process and fears about the consequences of their performances. Play-way training can be helpful in overcoming these hindrances, and motivating children to eagerly participate in the teaching-learning process and come out with their natural talents.

The first and foremost step in the process of effective learning is starting the curiosity of the learners. Play can easily arouse the prerequisite inquisitiveness in children which is necessary for learning. The next major factor contributing for effective learning is an attentive mind. Irrespective of the type of play, all play activities are found to excite children, which in turn tend to heighten the attentiveness of their mind thus enabling better absorption and comprehension of things happening in the process of play. When play-way activities are incorporated in play, the better grasping, understanding and retention of the learning task are naturally conveyed to it. One of the most important effects of play in relaxing children

and helping them overcome the adverse influence of fear and anxiety. It comes when they have to show their learning for the purpose of evaluation. And undoubtedly play effectively turns the evaluation component not noticeable, thus enabling children to perform naturally to their most advantageous levels [1].

Play as an one of most powerful tool for developing language and communication. Play is demanding for children because they have to pay attention to each other's words and actions. They have to concentrate on their own use of language in order to communicate clearly. Children learn these by listening to each other when they play. Children learn to reach agreement and to reciprocate words and actions through play. Preschools and schools have to educate children to become citizens who can participate in discussions and reach to conclusion with respect and acceptance of differences. At the time of playing, there may be a positive correlation between children's confidence and motivation and their language development. Children who are motivated by play and try to expand their play actions tend to be more linguistically developed and confident [2].

All these positive effects hold good for children with special needs like hearing impairment; and they are helpful in easing the learning process which is made difficult due to certain impediments occurring due to the presence of the disability. With this premise, the investigators of the reported research were curious how play-way activity could be helpful in the evaluation of young learners with hearing impairment. And the field of learning that they chose to experiment with this notion is instruction in preposition.

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II. AIM

The current study was undertaken to investigate the comparative effectiveness of play-way exercises against traditional paper-pencil exercises in stabilising learning of preposition in primary school children with hearing impairment. The component objectives focused on studying the efficacy of play-way exercises in enhancing the skills for –

- Recall Skills for
 - Identifying preposition on, in, at, before, after, above, below etc
 - Identifying preposition names of on, in, at, before, after, above, below etc
 - Matching prepositions with their written names
- Comprehension Skills for –
 - Matching preposition with corresponding action
 - Matching preposition names with corresponding action

III. METHOD

Participants

For the purpose of experiment, the study included ten young learners with hearing impairment in the age range of 5 to 6 years. The participant children included 5 boys and 5 girls. All the children were having hearing loss of 60 dB or above and had been exposed to formal primary school training for a period of more than 6 months. Following pre-test of baseline abilities in preposition skills children were randomly assigned to two experimental groups, one exposed to fortification exercises in the traditional paper-pencil format and another using play-way technique. By deriving information from their clinical reports of psychological, listening, speech and language development it was also ensured that the participant-children in both the groups had comparable levels in cognitive and communication skills; thus resulting in stratified random sampling of the participants.

Tools

For the purpose of experiment, play way materials had been self developed by the researchers for the play way activities designed for the purpose of teaching prepositions.

Procedure

The study was carried out in five distinct steps – the first step involved adaptation and/or development of play materials for training and testing which were validated by experts, the second phase involved formal instruction in preposition to ten children with hearing impairment undergoing primary school; the third step involved pre-test in the preposition skills followed by stratified random constitution of two experimental groups from among the ten subjects; the fourth step involved carrying out fortification exercises for children of the one experimental group through play-way technique and for children of the other experimental group through traditional paper-pencil exercises for a duration of one fortnight; and the final five step involved conducting post-test in the number skills which was parallel to the pre-test.

Data Collection & Analysis

The pre and post-tests were conducted on individual basis. The alternate fortification training in traditional and play-way methods were carried out in small group of five children each. As the sample size was small and normality could not be evinced in their performance, non-parametric measure of Mann-Whitney U test was employed to compare the performances of the two experimental groups. The difference between the post and pre-test performances had been computed to arrive at the gain scores so that baseline differences among the two groups could be nullified the overall gain in performances was also analysed. All analyses were carried out after converting the raw scores into percentage scores for ease of comparison.

IV. RESULTS AND DISCUSSION

As described herein above, the gain scores of the two experimental groups were compared. To begin with the overall improvement in number skills was compared by computing the average gain in performances. Figure 4 presenting the mean gain scores of the two experimental groups evinces a mean difference of 32.5% in favour of the play-way technique thus underlining its efficacy in promoting learning in young preschool children with communication disorders like hearing impairment.

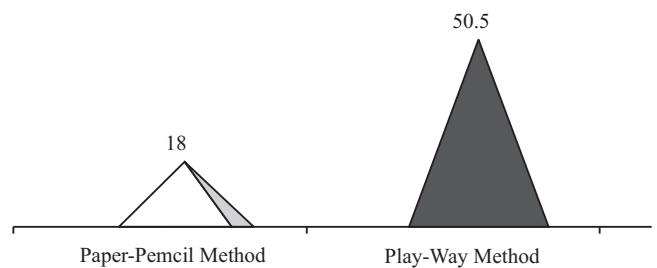


Figure 4: Comparison of overall advancements in number skills between the two groups.

The data was further subjected to non-parametric statistical measure of Mann-Whitney U test the results of which have been presented in table 1 (a) & (b) that displays the mean rank of the two groups along with z-score and statistical significance of the difference among them.

Table 1: Comparison of overall gain performance with Mann-Whitney U test

(a) Ranks			
Training Options	N	Mean Rank	Sum of Ranks
Play-Way technique	5	7.50	27
Paper-Pencil	5	3.50	11
Total	10		

(b) Test statistics	
	Overall Gain
Mann-Whitney U	0.000
Wilcoxon W	11.000
Z	2.309
Asymp. Sig. (2-tailed)	0.021
Exact Sig. [2*(1-tailed Sig.)]	0.029 ^a

a. Not corrected for ties.

Substantial difference gained by play-way exercises over paper-pencil exercises, in the form of a mean rank advantage of five in a total of eight participants, and that too with the significant advantage ($p < 0.05$) proves beyond doubt its efficacy in stabilising learning of preposition in primary school children with hearing impairment.

V. CONCLUSION

In spite of conciseness, the findings of the investigation say again the unquestionable fact that play-way technique is the natural and most suitable way for instruction of young children, especially those with special needs. Pedagogists have highlighted the multifarious effect of play-way teaching for typically developing children like – arousal of curiosity to learn; alertness for better absorption and comprehension; sustenance of interest in the (covered) teaching-learning activity; effective retention of learnt information for longer; enhancement of ability to apply learnt skills in practice; and ultimately display of learning outcomes optimally without conscious fear of assessment procedures. More intensive research to experiment teaching-learning through a wide range of play-way activities across different areas of curricula and over longer durations may provide more concrete evidence to make primary education, especially for children with diverse kinds of special needs a joyful and meaningful experience.

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