

Impact of Enriched Environment on Language Performance of Pre-Schoolers

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INTRODUCTION

Language is an important tool to express feelings and thoughts. It is an important part of all school experiences and should be given high priority. It is acquired through talking, listening, and responding to others. A room full of meaningful conversation is far more desirable than a quiet room. With each planned experience – art, science, dramatic play, field trip, poem recitation and story telling – the teacher adds new vocabulary to children's cognitive repertoire. As experiences are repeated throughout the year, the words will gradually find their way into a child's usage and understanding. If they get answers to their questions, they will ask further questions. Through conscious efforts teachers can raise the level of conversation in their groups.

The pre-school years are crucial years in a child's life span since the rate of development is rapid. It is important to provide a stimulating and enriched environment to the child during this period. If the child is brought up in a deprived environment during early years of life, it is likely to have adverse effects on his/her development. This can be compensated by providing an intervention programme to these children, with stimulating experiences for language, which can help the child build a strong foundation, which would later facilitate the development of his/her full potential. So, with the purpose to test the level of language skills of 3 ½ years old and to compensate their deficiency by providing intervention programme, the present study was undertaken; the main objective was to measure the impact of intervention programme and to standardize the programme.

METHODOLOGY

In order to develop a need-based intervention programme and to standardize it, one group

pre-test post-test action oriented research design was implemented. Study was conducted in two phases. The first phase included the development of intervention programme based on children's pre-testing results, that is, existing level of language development. The second phase comprised, first, the implementation and evaluation of the impact, and second, to standardize the above said programme.

Sample Selection

Bal Bhawan Nursery school was selected purposely due to easy accessibility and availability of required number of children. Seventy eight children, 39 male and 39 female, in the age group of 3 ½ years $\pm$ 2 months were selected at random.

Procedure and Measure

To assess existing status of language development of selected children, revised Reynell Language Development Scale (1985) was used. Children were assessed individually at a quiet place. Before assessment rapport was developed with children.

On the basis of the performance on language test, 52 children who performed below average were selected as a sample for experimental design. These 52 children were randomly divided into two groups - Experimental Group 1 and Experimental Group 2. Remaining 26 children comprised the Control group. Both the experimental groups were imparted intervention programme by two trained persons for the purpose of standardization of the intervention package. The class teacher was trained by the principal investigator for implementing the programme. The principal investigator imparted the intervention programme to Experimental Group 1 and the class teacher imparted the programme to Experimental Group 2. The programme was given for three weeks to both the experimental groups. Children were

individually post-tested after a gap of two weeks and the impact was assessed.

Intervention Programme

Intervention Programme was planned and prepared for all the three components of language, based on revised Reynell Language Development Scale (1985). These three components were: a) *Verbal comprehension A* – It included recognition and identification of the surrounding objects by name. Objects such as animals, birds, fruits, vegetables, household articles, means of transportation were the main aspects, b) *Verbal comprehension B* – This part of the intervention included not only recognition and identification of the objects, but also classification of the objects on the basis of their characteristics, sorting out objects and to make use of them on the basis of directions given to them, c) *Expressive language* – The main components were naming of objects in the surrounding, sentence formation, description of events and expression of thoughts and feelings. For language expression the stress was given on vocabulary building, correct pronunciation and formation of meaningful sentences along with description and free expression. Items included toy objects, photographs of various events, excursions, stories and poems. Spontaneous conversation for each component and the events were also given emphasis. Question answer sessions were conducted in all the aspects.

RESULT AND DISCUSSION

The results are presented in three parts - first, before intervention; second, post intervention results and finally the impact of intervention programme are described.

Before Intervention

A two-way MANOVA was performed using all three groups (Control, Experimental Group 1, and Experimental Group 2) and sex of child (male, female) as independent variables and children's performance in language components (Verbal comprehension A, Verbal comprehension B, and Expressive language) as dependent variables. This was followed by univariate analyses of variance (ANOVAs) and

Post-hoc Scheffé test (with alpha set at 0.05 level of significance) to clarify significant multivariate effects. *F* statistics for Wilk's Lambda are reported.

A strong significant main effect resulted for group, $F(6, 143) = 9.71, p = 0.000$ and sex of the child, $F(3, 70) = 2.77, p < 0.05$. The interaction of sex of child by group was not significant, $F(6, 143) = 1.42, p = 0.14$.

For the main effect of group, univariate *F*-tests were significant for the Verbal comprehension A, $F(6, 143) = 9.27, p = 0.000$; Verbal comprehension B, $F(6, 143) = 9.99, p = 0.000$ and Expressive language, $F(6, 143) = 9.09, p = 0.000$. For the main effect of sex of child, univariate *F*-tests were significant for the Verbal comprehension A, $F(3, 70) = 6.77, p < 0.05$ and Verbal comprehension B, $F(3, 70) = 7.62, p < 0.01$.

The results presented in table 1 clearly show that the mean scores for control group in all the three components of language were significantly greater than those of experimental groups. With regard to sex of the child, mean scores for boys were higher for Verbal comprehensions A and B than those of their female counterparts (Table 2).

Post Intervention

A two way MANOVA was performed using groups (Control, Experimental Group 1 and Experimental Group 2) and sex of child (male, female) as independent variables and children's post intervention performance in language components as dependent variables. This was followed by univariate analyses of variance (ANOVAs) and Post-hoc Scheffé test (with alpha set at 0.05 level of significance) to clarify significant multivariate effects.

The results revealed that the main effects for group, $F(6, 143) = 1.12, p = 0.35$ and sex of child, $F(3, 70) = 2.07, p = 0.11$ were not significant. The interaction of sex of child by group was also not significant, $F(6, 143) = 1.36, p = 0.24$.

Means and standard deviations for three groups, after imparting intervention programme to experimental groups are presented in Table 1. The results revealed that there was no significant difference between the scores of control and experimental groups. With regard to sex

Table 1: Means and standard deviations for control and experimental groups before and after intervention programme

Language Components	Control Group		Experimental Group 1		Experimental Group 2	
	Mean	SD	Mean	SD	Mean	SD
<i>Before Intervention</i>						
Verbal Comprehension A*	53.37 ^a	5.97	46.37 ^b	7.60	47.59 ^b	6.80
Verbal Comprehension B*	50.74 ^a	3.98	44.26 ^b	5.9	45.11 ^b	7.78
Expressive Language*	47.07 ^a	3.90	37.89 ^b	3.70	38.85 ^b	5.74
<i>After Intervention</i>						
Verbal Comprehension A	57.07	5.30	53.83	5.63	54.93	5.37
Verbal Comprehension B	53.56	3.57	51.22	4.74	52.33	5.28
Expressive Language	50.63	3.36	48.15	3.25	48.85	4.75

Note: * $p < .001$; a is significantly different from b.

Table 2: Means and standard deviations for male and female children before and after intervention programme

Language Components	Male		Female	
	Mean	SD	Mean	SD
<i>Before Intervention</i>				
Verbal Comprehension A*	51.08 ^a	6.40	47.2 ^b	7.87
Verbal Comprehension B*	48.58 ^a	5.48	44.8 ^b	7.27
Expressive Language	42.23	5.81	40.34	6.32
<i>After Intervention</i>				
Verbal Comprehension A	56.45	5.12	54.15	5.75
Verbal Comprehension B	53.50	4.21	51.27	4.80
Expressive Language	50.05	3.60	48.39	4.13

Note: * $p < .001$; a is significantly different from b.

of child, there were no significant differences between mean scores for boys and girls after imparting the intervention programme (Table 2).

Impact of Intervention Programme

Impact of the programme was examined by computing the gain scores in language components. Two-way MANOVA was performed using groups and sex of child as independent variables and the gain in language components as dependent variable.

A strong significant multivariate main effect resulted for group, $F(6, 143) = 19.31, p = 0.000$. The main effect for the sex of child was not significant, $F(3, 70) = 2.44, p = 0.07$. Similarly interaction effect for group by sex of child was not significant, $F(6, 143) = 1.42, p = 0.21$.

Univariate F-tests for groups were significant for the Verbal comprehension A, $F(2, 70) = 17.27, p = 0.000$; Verbal comprehension B, F

(2, 70) = 23.46, $p = 0.000$; Expressive language, $F(2, 70) = 60.45, p = 0.000$.

Follow-up Scheffé tests revealed significant differences for language components for control and experimental groups. As presented in table 3, mean gain in Verbal comprehension A was significantly higher for Experimental Group 1 ($M = 7.37$) and Experimental Group 2 ($M = 7.48$) than those of Control group children ($M = 3.59$). Similarly mean gain in Verbal comprehension B and Expressive language were significantly higher for Experimental Group 1 ($M_s = 7.14$ and 9.85 , respectively) and Experimental Group 2 ($M_s = 7.15$ and 10.07 , respectively) than for Control group. This shows that the gain in language components in experimental groups was significantly higher than for control group which shows the impact of intervention programme.

Murlidharan and Kaur (1989) in an intervention programme of eight weeks also found that in the language test, the experimental group gained significantly higher than the control group. In another study, Taharally (1991) investigated the effect of stimulating fantasy play on the level of language and cognitive abilities

Table 3: Mean gain in language components for control and experimental groups

Language Components	Control Group	Experimental Group 1	Experimental Group 2
Verbal Comprehension A*	3.59 ^a	7.37 ^b	7.48 ^b
Verbal Comprehension B*	2.78 ^a	7.14 ^b	7.15 ^b
Expressive Language*	3.56 ^a	9.85 ^b	10.07 ^b

Note: * $p < .001$; a is significantly different from b.

of children in nursery schools. The gain scores for language were highly significant for the experimental group.

The present results further revealed that there were no significant differences between the gain in scores of two experimental groups. Hence this suggests that the impact of intervention was similar on both the experimental groups. It may be inferred that the procedure and the content of the intervention programme were suitable to achieve the reliability and validity of the programme and it is expected that similar results will be obtained if this programme is imparted to other children of the similar age group by other researchers.

Overall we can say that the intervention programme improved children's language abilities significantly. In India, the language deficiency comes in children mainly due to a language deprived home and school environment. Most of the parents and teachers lack knowledge in improving the language skills of children due to lack of training, awareness and an unstructured pre-school curriculum. A well-structured curriculum having sufficient activities for language and cognitive development can bring about improvement in children's school performance. It is observed that in pre-schools major emphasis is on reading, writing and arithmetic and teachers are bound to complete school syllabi. They get hardly any time for conversing with children. Moreover, the teacher-child ratio is also high which makes it difficult on the part of teachers to provide individual attention to children. Beside this inadequate infrastructure, non availability of toy materials, teaching aids, teaching materials are contributing factors for poor language development.

From the present study, it may be suggested that the nursery teacher should be trained and possess ample language interaction skills so that the quality and quantity of language interaction with young children can be improved as also emphasized by Nalini (1982), Anandalakshmy and Sharma (1986) and Sood (1987). Moreover, there should be provision for training of teach-

ers and parents to improve language development of children. Training of mothers should be emphasized on fostering mother-child interaction, replying questions/queries of children as much as possible and correctly. This will improve their verbal comprehension as well as expression.

KEY WORDS Language. Development. Assessment. Children.

ABSTRACT Seventy eight pre-school children (39 male and 39 female) from Bal Bhawan Nursery School, Hisar participated in the present study. Revised Reynell Language Development Scale (1985) was used to assess existing status of language development. These children were divided into three groups; one control group ($n = 26$) and two experimental groups ($n = 52$), on the basis of their performance. Performance of the 52 children of experimental groups was below average on language assessment test. The two experimental groups were imparted intervention programme by two different persons for a period of three weeks; control group children were not exposed to any intervention programme. It was found that gain in language components was significantly higher for experimental group children than control group which shows the impact of intervention programme. The results further revealed that there were no significant differences between the gain in scores of two experimental groups, suggesting that the impact of intervention was similar on both the experimental groups indicating that method of imparting intervention programme by two different persons was valid and reliable.

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