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## Effect of cognitive intervention on classroom adjustment of children with learning disabilities

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### Abstract

The objective of this investigation was, to study the Effect of cognitive intervention on classroom adjustment of children with learning disabilities. A sample of 160 academically low achieving students studying in the grade 3 were selected from Four large Government Primary Schools belonging to Amberpet and Malakpet Divisions of Hyderabad. Students in the age range of 8-10 years were selected for the study. Total 160 sample were pretested with Classroom adjustment intervention by Sinha & Singh (2006) was used to test the adjustment of learning-disabled students before intervention. After pretesting, students from 2 experimental groups were given intervention for period of 10 months and same questionnaires were used for post-test. The results of the study revealed that there was significant improvement in classroom adjustment of subjects belonging to both Reading and Maths Experimental Groups was highly improved after intervention which could be due to improved academic performance, improved self-esteem and better self-concept after improving academic performance.

**Keywords:** Cognitive abilities, school children, intervention, learning disabilities

### Introduction

Education is the fundamental right of every child. Programmes on universalization of primary education are being carried out world wide. In India, with initial efforts of (DPEP) District primary education programme, followed by (SSA) Sarva Siksha Abhiyan the elementary education has become the priority of the government. The primary education scenario in India is very encouraging with increase in number of school, enrolment now out of 200 million children in age group of 6-14 years, 144 million children are attending school (UNESCO 2014). The government is improving the country's education status to enhance the standard of living of the people and also to achieve other goals like, overcoming the problem of poverty and unemployment, social equality, equal income distribution, etc. Infrastructural facilities have improved, dropout rates are negligible at the primary level, and many more teachers have been appointed.

Learning disabilities can be extremely frustrating for children. Children with learning disabilities may have trouble expressing their feelings, calming themselves down, and reading nonverbal cues from others. This can lead to difficulty in the classroom and with their peers. Many areas of life are affected, including the role of the person with learning disabilities in their family, relationships with friends, non-academic functioning such as sports or dancing, self-esteem and self-confidence to handle daily situations. Learning disabilities, and their accompanying academic challenges, can lead to low academic achievement and behavior problems. Individuals who have learning disabilities may be less observant in their social environment, may misinterpret the social behavior of others at times, and may not learn as easily from experiences or social "cues" as their friends. Some children may exhibit an immaturity and social ineptness due to their learning disability. While seeking acceptance, their eagerness may cause them to try too hard in inappropriate ways.

Failure to diagnose learning problems can have adverse educational and psychological consequences for the child and family. A mild difficulty unattended to in the early years, could lead not just to severe learning problems later on, but also to secondary emotional and behavioral problems.

Effective teaching strategies which provide progress for all children in the fundamental subjects has dual benefits of academic success and also nurtures the psychological well-being of the students and their families. The necessary emotional adjustment together with the removal of scholastic backwardness can be effected using appropriate remedial measures. If remedial teaching is given, dropout, failure and wastage can be avoided.

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It takes the children at his own level and by intrinsic methods of motivation leads him to increased standards of competence. It is based upon careful diagnosis of defects and in general to the needs and interest of pupils.

Most Indian schools have a strong focus on academic subjects, with little scope for creativity and few or no extra-curricular activities. Traditional schooling methods tend to emphasize rote learning and memorisation, rather than encouraging independent or creative thinking. There is a strong focus on examinations from an early age and making school and family atmosphere at Indian schools competitive.

**Review of Literature**

Zaher, A., and Mahmood, K., (2016) [6] conducted a study on The Socio-Emotional Adjustment of Learning-Disabled Students Undergoing School Transitions. The study revealed that students are liable to have emotional, psychological and social problems: they are prone to anxiety, depression, and behavioral disorders, as well as feelings of low self-esteem and social isolation. These may lead to genuine crisis during the already difficult transition from elementary school to junior high.

Jumani, N.B., Rahman, F., Dilpazir. N., Chishti, S. and Malik, S. (2011) [3] aimed to find out the effectiveness of remedial techniques on the performance of the dyslexic students. The study revealed that 60% students showed positive family history for dyslexia. 30% dyslexic students showed birth problems. 20% suffered from head injuries. 50% students suffering from dyslexia have emotional crises in their early lives. It was further found 67 that 10% dyslexic students have sleeping disorders and wrong eating habits. 90% suffered from dyslexia have behavioral problems and they were aggressive.

Aboras, Y.A., Elbanna, M., Abdou, R.M (2012) [5] developed a remediation programme of intervention for dyslexic children through improving phonological awareness using appropriate materials. There was a highly significant difference between Experimental and Control Group after implementing remediation.

Andersson, U. and Rickard, O. (2012) [1] studied Number magnitude processing and basic cognitive functions in children with mathematical learning disabilities (MLDs). This study revealed that Mathematical Learning Disability group displayed weaknesses with most aspects of number processing (like subitizing, perceive total number without counting symbolic number comparison and number-line estimation) and also visual and spatial working memory. The correlation found among the subitizing measure, the number line estimation task and the number naming tasks, suggests that some children with Mathematical Learning Disabilities of cognitive processing.

Bhawana, S. and Anshu (2013) [2] carried out an intervention study on children with learning disabilities and assessed the impact of intervention. Results revealed that severity of dyslexia and dyscalculia were reduced significantly after intervention with (X=0.859,p It was also observed that boys reflected significant for boys and for girls improvement in reduction of learning disabilities after intervention. Results also revealed that children from nuclear families were improved significantly after intervention.

**Materials and Methods**

Purposive sampling method was used to select schools for the study. Total 160 sample of 160 students studying 3rd standard were selected from Amberpet and Malakpet Divisions from four government Primary schools. A total number of 80 students were selected for conducting intervention after screening. Both experimental and control groups were pretested using Classroom adjustment intervention by Sinha & Singh (2006) was used to test the adjustment of learning-disabled students before intervention. After pretesting, students from 2 experimental groups were given intervention for period of 10 months whereas students from control group were not exposed to any intervention but just pre-post-tests of the study.

**Results and Discussion**

**Table 4.1:** Shows frequencies and percentages of experimental and control groups children on educational adjustment inventory

Educational adjustment	Experimental Groups n=80 (R&M)				Control Groups n=80 (R&M)			
	Pre test		Posttest		Pre test		Posttest	
	N	%	n	%	n	%	n	%
Low	62	77.5%	13	16.25%	64	80%	62	77.5%
Moderate	18	22.5%	50	62.5%	16	20%	18	22.5%
High	-	-	17	21.25%	-	-	-	-

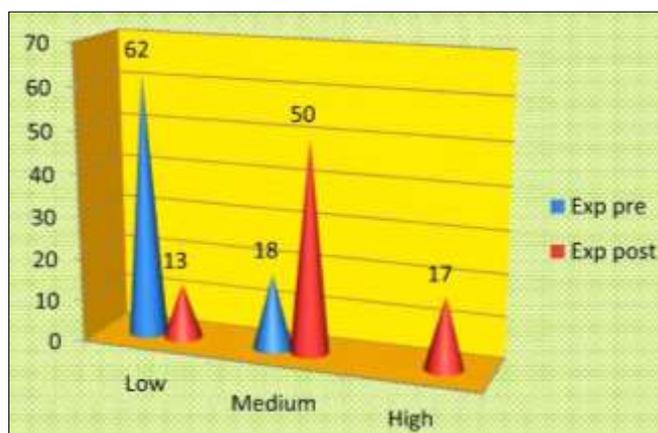
R= Reading disabled, M= math disabled.

An attempt was made to assess the adjustment levels of both reading and Maths learning disabled children in the classroom. An educational adjustment inventory for school children was administered on them and obtained scores during the pre and post test conditions and they had been compared to find out whether there was any significant improvement in classroom adjustment after intervention. High Scores indicate low adjustment. The results had been presented in the following table.

The results of pre intervention classroom adjustment scores from the above table indicate that 77.5% (i.e.,62) of the students of the Reading & Maths Experimental Groups fall in low adjustment category. 22.5% (18) of the subjects fall in

medium adjustment category. No student was found to have high adjustment among the Experimental Groups. In control group 80% of the subjects i.e., 64 had low adjustments and 20% i.e., 16 had medium adjustments during the pre-test.

During post intervention majority of the Experimental Groups i.e., 62.5% (50 students out of 80) fall in medium adjustment category whereas 16.2% (i.e.,13) students fall in low adjustment and 21.12% (i.e.,17) were found to have high adjustment. But the control group which didn't receive any kind of intervention 77.5% i.e., 62 of subjects had low adjustments and 22.5% i.e. 18 of them had medium adjustments.



**Fig 14** Classroom adjustment of experimental group pre and post intervention

**Table 4.17:** Showing Mean, S. Ds and f values for class room adjustments of both Reading and Math Experimental (R&M) and control groups (R&M)

Groups	Experimental			Control group			Experimental			Control group(M)		
	Pre	Mid	Post	Pre	Mid	Post	Pre	Mid	Post	Pre	Mid	Post
Mean	39.35	37.47	26.9	38.8	38.8	38.4	38.27	33.42	26.2	38.4	38.3	37.67
SD	5.63	5.28	4.94	3.8	3.8	4.1	4.2	4.1	3.6	4.62	4.4	4.3
f ratio	80.15			0.653			89.02			0.344		
Pvalue	0.00*			0.522			0.00*			0.710		

The findings in the above table 4.17 depicts that the pre test mean score of the Reading Experimental Group for class room adjustment was 39.35 and Standard Deviation was 5.63. The analysis of mid intervention results showed a mean score of 37.47 and Standard Deviation 5.28. After intervention the analysis of post test results revealed a mean score of 26.9 and S.D.4.94. The difference in the pre to mid to post intervention stages is was found to be statistically significant as indicated by F-value 80.15 ( $p < 0.01$  level). This indicates improvement in class room adjustment with increase in math and reading performance.

Further, the study of the mean score revealed that the post scores of the Reading Experimental Group were less when compared to pre test score (as higher scores indicate low adjustment and low scores indicate high adjustment). The scores obtained by the subject belonging to Control Group R on classroom adjustment inventory clearly indicate that scores remained almost same in pre, mid and post intervention conditions. There was no change in the adjustment of these children.

Hence, it was proved that there was appreciable improvement in classroom adjustment score obtained by Reading Experimental Group after the intervention with increase in academic performance in reading and math improved the class room adjustments simultaneously. From the findings shown in the above table, it was also clear that the Maths Experimental Group obtained a mean score of 38.27 in pre-test (SD=4.2), 33.42 in mid test (SD=4.1) and 26.2 (SD=3.6) in post-test. When 3 test mean scores were compared using 'f' ratio F value obtained was 89.02 and  $p=0.07$ . There was in significance difference observed in Control Group on Classroom adjustment score which indicates no improvement in classroom adjustment of Maths Control Group after intervention.

Hence, it is proved that the Classroom adjustment of subjects belonging to both Reading and Maths Experimental Groups was highly improved after intervention which could be due to improved academic performance, improved self-esteem and better self-concept after improving academic performance.

In conclusion the aim of this study was to evaluate the effect of cognitive intervention on classroom adjustment of children with learning disabilities. The results of the study showed that cognitive intervention programme had positive and significant improvement in class room adjustment with increase in math and reading performance after intervention. This intervention helped the primary school's students in reduced their learning problem.

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