

## Effectiveness of Cognitive (active and inactive) and Training on Recalling of Children with Special Mental Needs

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### Abstract:

*Aim: This study investigated effectiveness of cognitive (active and inactive) training on recalling of children with special mental needs. Research's method was semi-empirical and 60 students with mild mental disability in Third grade of exceptional schools in Tehran City were selected. Sampling method was cluster random which sample was divided into three experimental groups and one control group. Visual cards were used in pre-test and post-test for evaluation of recalling's variable. Educational intervention was done in experimental groups during a week and 12 sessions which including cognitive strategies (active and inactive) to control group was given same unrelated program. Data were analyzed by using descriptive statistics, ANOVA, and tracking by Tukey test. Results showed that cognitive strategies (active and inactive) in comparison with the control group improved recalling in children with special mental needs.*

**Key words:** cognitive strategies, Recalling, Special Mental Needs

## **Introduction**

Children with mild mental retardation, as children with mental disabilities who are educated are more backward than other groups who have training in the forehead were noted. Children with special needs, mental or words of mentally retarded children have difficulties in thinking and problem solving is identified (Van der Molen et al, 2007). The main difficulties for children when scientific activities as well as reading and writing (Halahan et al, 2005).

Studies have proven that the level of deep thinking and retention problems of children with special needs in mind his peers will be higher than the normal children (Halahan et al, 2009). The most consistent findings in comparison to non-disabled individual learning abilities and mental disabilities when takes special people with mental wish list of words, sounds or images that a group of a few seconds before they are presented to recall, weaker than non-disabled persons acting (Yousefi, 2009). One of the main reasons that children with intellectual disabilities about the things to have trouble remembering complex, is that they do not know effective learning methods such as mediation which used. When individuals are given list of words to memorize it, they often try to practice it aloud and then maintain. However, such methods do not use students in general retardation (2002). Accordingly, many studies showed retarded children have difficulty in using cognitive strategies (Yousefi, 2009). Therefore, research should be directed to go to the children's cognitive aspects of learning strategies able to use (Martin, Craft & Sheng, 2001).

Studies show that an important part of cognitive strategies are learnable, and in particular the effect of cognitive strategies - learners with learning difficulties are faced in a way that is significant (Van der Molen et al, 2007). Further

research revealed that the cognitive training on academic performance and retention in memory is affected (Halahan et al, 2005).

For this reason, many researchers' findings indicate retention failure and subsequent reminder that enabled by the use of cognitive strategies, i.e. strategies in which children are taught methods to directly and continuously encourages children to the experimental strategy used in practice to improve (Yousefi, 1999). However, research has shown that children with special needs did not mind using cognitive strategies to keep their minds off the drug retention (Beckman, 2002). In other words when the Examiner strategies did not directly teach children the educational opportunity to learn using Ta Recommend syllabus, retention of material to memorize, they could not recall the content.

Accordingly, it can be concluded that students with disabilities are active learners, especially mentally, because they could not automatically cognitive strategies) to review, develop and organize) use. Thus, it can be stated that these students probably do not use self-regulatory strategies (Ruthanne & VonThaden, 2010) and not In other words of cognitive awareness (Henry & MacLean, 2010).

In addition to demographic characteristics on learning, children with mental disabilities have special motor and sensory feature that can affect their learning. If we accept the claim that many children in the sense of one or more specific problems, and these problems can be solved with special training (Chan, 2007); so it might be a different approach that involves the senses improve retention difficulties, memory and learning can help them (Cantrell, Chambers, Carter & Margaret, 2011).

Learning usually starts to provoke a sense of knowing looks, lack of attention to non-active cognitive strategies to enhance the retention of students with intellectual limitations of the former of the due to the up tested reminds children. The

purpose of this study was to investigate the effectiveness of cognitive training enable, disable reminders on children with special needs is subjective. According to this study, question whether active cognitive learning disabled children with special needs, mental effect on reminders?

## **Method**

This is quasi experimental with pre-test – post-test and control group.

## **Sampling**

The population is all children with special and mental needs in third grade boys in Tehran City that enrolled in 2011-2012. Community through use of random sampling multi-stage cluster of four schools from different districts of Tehran selection of these four schools, 60 children, mentally retarded boy, grade III sampling randomly selected 60 children who were selected to randomly into three groups (Control group, Inactive Cognitive group, Active cognitive group) and control group of 15 subjects were assigned to each group. Children placed in different groups were done randomly.

## **Measure**

Recalling method to measure term is used with series of images. Adopted in this study to measure recall tests, post-test were used in each of 12 cards.

The theme of card is fruits, animals and the equipment. And 4 of each card were presented.

It was a way of grading cards for every correct answer a score considered was otherwise a score of subjects was not. Sum of individual scores is for each test score as he was reminded.

A total of 18 cards for intervention in these categories (fruits, animals and tools) were used. Recalling pre-test, 12 cards were included to assess children's learning before we can determine level of recall was done. After recall test, 12 cards

were included after training; children were evaluated to determine effectiveness of training.

Instructions pre-test and post-test are as follows: The child is going to do play together. I'll show you some photos and called one by one to tell them. Good look at the photos and try to remember the names of them. When I show you all the photos I have seen the photos say what?

Thus, the shape of the card is card was shown to the child was 5 seconds, giving him the opportunity to see card and next card was offered after 2 seconds. The results in table for each test were recorded.

## **Procedure**

After placing groups of subjects considered for each training group received 12 sessions in weeks. Active cognitive training group, experimenter was involved during learning techniques and strategies taught to children. And child continued to be encouraged to use these strategies in experimental tasks. These groups every three types of active cognitive training (over-elaboration and organization) received. In every part of learning strategy training to child, he would also repeat their strategy to increase awareness.

That had to be done at each step; child was strongly encouraged to use strategy. For this purpose, children were told: "Whenever you see words you're repeating yourself (Review) / Every word is associated with task in mind of (extended) and / or when you are putting words in their class (organization), words come much better than you remember. Later education and strategy, position child was tested activities and guided by instructor was encouraged to use strategies learned in similar situations. Education end and pilot training success charts visual feedback was given to child who has done much good.

It will constantly remind him of this so when faced with task like this can make use of these methods. Learn strategies to ensure that children were asked questions about form of incomplete sentences. During training, ratters' cognitive learning disabled children did not have any interference would only provide conditions for children. In this manner, group learned words with Recommend Syllables (card directs students to put words in right location), examiner shall receive. This reminds Recommend Syllables were prepared in manner that would lead child to certain number of cards desired to review to show his location. With proper understanding of the meaning of the expansion card to remember sweetheart remember writing (including writing the sweetheart remember) and take picture together. (When friend had written memory card section rabbits receiving rabbit runs fast) reminds Recommend Syllables was chosen so that relationship between card and prompt child to establish. So your child is developing means. Finally, sector classification, cards will be subject to recall Recommend Syllables place. The group will not have any incentive for deployment strategy. Only child's performance in each phase diagram is shown in his video. The child was placed in front of the curve operation was explained to him. If child was brought to him for all cards have been drawn diagram shown and instructor said, you have to see progress you make. It means that you've got to be able to show Stopping high. Good cards to Remembrance. And other explanation was not given.

## Results

**Table 1. Descriptive data related to the pre-test and post-test, research subjects**

Descriptive Statistics		Number	Mean	Standard deviation	The lowest score	The highest score
pre-test	Control group	15	7,40	1,29	6.00	9,00
	Inactive Cognitive group	15	7,46	1,06	6.00	9,00
	Active cognitive group	15	7,93	1,09	6.00	10,00
post-test	Control group	15	7,86	0,74	7.00	9,00
	Inactive Cognitive group	15	10,33	0,97	8.00	12,00
	Active cognitive group	15	11,13	0,91	9.00	12,00

For effects of other variables are not affected by independent variable, with variance analysis when attempting to evaluate the homogeneity of age, mental age, IQ score, subjects were reminded. As Table 2 makes clear, F values for these variables in the control groups, cognitively disabled, cognitively disabled, subjects at the 0.05 is not meaningful. The subjects of same age and in a similar condition when, mental age, IQ scores were noted in pre-test to test.

**Table 2. Results of analysis of variance to assess the homogeneity of the age, mental age, IQ, and scores on the recall test groups**

variable	Source of change	sum of Square	of df	Mean square	F test	Significance level
Age	Between-group	6.243	3	2.081	2.438	0.074
	Error	47.805	56	0.584		
	Total	54.049	59			
Mental age	Between-group	1.752	3	0.584	2.010	0.123

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	Error	16.268	56	0.291		
	Total	18.020	59			
IQ	Between-group	0.000	3	0.000	0.000	1000
	Error	0.000	56	0.000		
	Total	0.000	59			
Pretest	Between-group	2.583	3	0.861	0.673	0.572
	Error	71.600	56	1.279	F test	Significance level
	Total	74.183	59		2.438	0.074

**Table 3. Results of the analysis of variance on the mean of remembering: control, cognitive passive, active cognitive, active cognitive**

Source of change	sum of Square	df	Mean square	F	Significance level
Between-group	127.117	3	42.372	65.669	0.0010
Error	36.133	56	0.645		
The total	163.250	59			

According to Table 3, values of F obtained is equal to 65.669 and significance level equal to 0.001 indicates that average 4 significant difference exists, therefore, to compare paired groups follow up Tukey test was used for results as shown in table 4.

**Table 4. Results of Tukey's follow-up to evaluate the mean difference between the control groups, cognitive, passive, active cognitive recall**

Descriptive Statistics	Mean difference	Significance level
Control group	Control group	0.001
	Inactive Cognitive group	-3.267 (*)
	Active cognitive group	-3.800 (*)
Inactive Cognitive group	Control group	0.001
	Inactive Cognitive group	-0.800 (*)
	Active cognitive group	-1.333 (*)
Active cognitive group	Control group	0.001
	Inactive Cognitive	001
		0.800 (*)



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group			
Active	cognitive	0.276	-0.533
group			

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Results of follow up Tukey test (Table 4) shows that there is significant difference cognitive and control group (2.467), cognitive activation (3.267) in 0.001, according to Table 1, mean score of group cognitive reminded disabled, cognitively active than control group. This finding suggests that training at all - test was effective in improving children's recall.

The difference between the average active Cognitive Turn (0.800) in the 0.05  $p < .05$  is significant.

## Discussion and Conclusion

Cognitive problems of children with special needs, mental difficulties, increasing use of cognitive strategies and along with weakness, sensory problems in sense that it has major role in the learning of children with special needs and mental problems have doubled (Sharifi, 2006). Trying to use other senses as well as strategies that less attention has been paid to them could be a step in advancing the education of these children. The results of this study show that cognitive strategies enable, disable approach in all groups compared to the control group, children with special needs and mental recall is improved (Torgesen, 2008).

The findings of this study will determine whether the active cognitive strategies and what they can recall when provided to disabled children with special needs, mental to increase. More training, repetition and practice, meaningful content, organization and classification of the material is effective in children remember. When these strategies were presented in the form of active learning could improve rates of retention and recall of children. Homework or practice of teaching children with learning disabilities is essential and can

consolidate basis. These findings, the vast majority of the research have been achieved. Therefore, in line with results from other studies (Chan, 2007; Riggs, 2008), children with special needs and mentally able to employ these strategies. So that children with special needs, mental although later than normal children, but the ability to use strategies to achieve, and can after training, utilize strategies into practice is reasonable and acceptable. These findings are an important part of well-known cognitive strategies are learnable.

It seems that children's inability to remember material, more it is caused by inability of children to learn use of Recommend Syllables and implementation of strategy (Broadley, 2003). This result indicates that children with disabilities can use strategy due to deployment strategies. The results in all experimental groups similar to what is seen as good practice and experiment with educational content as well as tester and test content similar to content of training strategies of learning strategies and reminder undeniably. Seems to apply training exercises for children with mental disabilities must be trained before they completely overlap and the more of them become less overlap. This strategy can be extended in the future to help.

Based on findings of this study can be concluded that active cognitive training - takes recall of children with special cognitive training better mentally disabled. In other words, these two methods of training, they were superior. Although the descriptive data, difference between two groups, but difference in means indicates statistical significance is not reached. Descriptive Analysis of data shows that resulting averages roughly mean recall scores are close to maximum. Therefore it well reflects strength of both methods, lack of significant other is not due to weakness caused by one of two methods, but reminder of females.

It is suggested that addition of cognitive strategies enable teachers, other senses, especially sense of touch and

movement data as well as interfering with proper Recommend Syllables iconic image of card and use content of at least four to teach to the single card also by creating an incentive, promote and facilitate children learn to utilize to disabled. During training exercises, as well as strategies to try and test content strategy is similar enough training exercises.

## REFERENCES

- Beckman, P. 2002. "Strategy instruction. ERIC digests (Digest number E638)." Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education. *Council for Exceptional Children*. (ERIC Document Reproduction Service. ED474302).
- Broadley, I. M. J. 2003. "Teaching short term memory skills to children with Down's syndrome." *Down Syndrome Research & Practice* 1(2):56-62.
- Cantrell, S. Chambers, A.J.E., Carter, J.C., Margaret, M.A. 2011. "The impact of strategy-based intervention on the comprehension and struggling readers." *J of Educational Psychology* 102(2):257-280.
- Chan, L., Kle, P. 2007. *Methods and strategies in the education of Retarded children*. Translated by Maher, F. Tehran: Jaihoon Press, 60-88.
- Halahan, D.P., Kaufman, J. 2005. *Exceptional Children*. Translated by M. Javadian. Mashhad: Astan Quds Razavi Press.
- Halahan, D. P. and Kaufman J. 2009. *Exceptional Children*. Translated by F. Maher. Tehran: Roshd Press.
- Henry, L. A. & MacLean, M. 2010. "Working memory performance in children with and without intellectual disabilities." *American Journal on Mental Retardation* 107(6):421-432.

- Martin, D. S., Craft, A. & Sheng, Z. N. 2001. "The impact of cognitive strategy instruction on deaf learners: An international comparative study." *American Annals of the Deaf* 146(4):366–378.
- Riggs, F.R. 2008. *Multi – sensory approaches to spelling and reading, in saturation for students with learning disabilities*. M.A. Dissertation. Washington: Ohio University, Faculty of the College of Education. 44-51
- Ruthanne, H. J. & Von Thaden, K. 2010. "The effect of cognitive education on the performance of students with neurological developmental disabilities." *J of N Rehabilitation*. 17(3): 201-209.
- Sharifi, D. P. 2006. *Mentally Retarded Children*. Tehran: Oroj Press, 66-93.
- Torgesen, L. 2008 "The learning disabled child as an inactive learner: educational implications." *Topics in Learning and Learning Disabilities* 2(1):45-52.
- Van der Molen, J. E. H. Van Luit, M. J. Jongmans, & M.W. Van der Molen. 2007. "Verbal working memory in children with mild intellectual disabilities." *J of Intellectual Disability Research* 5(1):162–169.
- Yousefi, L. M. 2009. "Effectiveness of review training strategies and subjective memory problems in mentally retarded children." Research Project. Center for Exceptional Children, Department of Education, pp. 89-92