IJBPAS, December, 2014, 3(12): 2875-2880

ISSN: 2277–4998

International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)

'A Bridge Between Laboratory and Reader'

www.ijbpas.com

COMPARISON OF THE EFFECT OF BASED ON MULTIPLE INTELLIGENCES AND METHODS OF LEARNING SCIENCE 7-8 YEAR FEMALE STUDENTS PRIMARY SCHOOLS IN SHIRAZ IN THE 2013-2014 YEARS

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ABSTRACT

The main objective of this study was to compare the effectiveness of teaching strategies and methods based on multiple intelligences, learning science 7-8 years of elementary school students in Shiraz in the 2012-2013 years. The population included all children 8-7 years old girl Shiraz School District 4 the 66 students in two different classes in the second grade of elementary participated in this study were selected through stratified random sampling. And of these, 33 patients in the experimental group and 33 in the control group. The experimental group received training through multiple intelligence based teaching strategies and a control group using traditional teaching methods or conventional methods. For a period of eight weeks. The results showed that students who have been trained through multiple intelligence based teaching strategies, in terms of overall academic achievement as well as on measures of cognitive levels of knowledge, application, synthesis and evaluation, higher mean than the control group received, but of understanding and analysis, there was no significant difference between the two groups.

Keywords: Multiple Intelligences, Science, Education, Elementary School

INTRODUCTION

The purpose of training students in areas of academic progress is formed. Study on factors affecting academic achievement is a complex issue; in this talk because of a multidimensional approach comes in the form of delicate physical, social, cognitive and affective student is concerned **[9]**. In this talk because of a multidimensional approach comes in the form of delicate physical, social, cognitive and affective student is concerned. In this talk because of a multidimensional approach comes in the form of delicate physical, social, cognitive and affective student is concerned. Many scholars on the impact of mental ability and cognitive achievement is measured and evaluated and monitored given **[3]**. However, over time it becomes clear although the mental and cognitive abilities of students to have a relationship with academic achievement and largely predict academic achievement, But not only the key to predicting academic success. For this reason, in recent years researchers have discovered a number of no cognitive factors. Academic achievement and overall success that can be helpful. **[11]** The authors explain the importance of no cognitive factors in the success achieved considerable results have shown that as the size of the no cognitive Added to predict success as cognitive intelligence, we successfully predicted significantly more likely to be possible, Use only the size of capability rather than cognitive intelligence. Identify and foster human intelligence all and all its compounds are of great importance. We are all human beings differ. I believe it is diagnosed, it can be more appropriate to deal with life's challenges **[5]**. Each country's school system is a device that makes its future, because the future of the country's children as thinkers and philosophers have potential. Being thrown into the education system and consequently the mold form. Currently million students are enrolled in schools in the country and much of the burden and the responsibility of schools and the education of children are flourishing. The outcome of academic achievement and academic satisfaction the deepening problems in education is very important and worthy Factors associated with academic achievement and academic satisfaction is most known. So we can get, there are several factors that affect academic achievement and satisfaction of students by creating a positive attitude also affect Some of these factors can be pointed to the role of multiple

intelligences, which seems to be required to teach the kids. According to Gardner, intelligence is "the ability to solve problems or produce products that are considered valuable in one or more cultures" **[6]**. Teaching based on multiple intelligence can enhance satisfaction, improve academic achievement, and improve the learning and retention. Also, many teachers and researchers confirm this to be stated or that is based on the multiple intelligence education, students' attitudes towards learning improve **[7]**.

METHOD

Research, applied research and quasi-experimental study with two parallel groups design with pre-test and post-test. For homogenization of the experimental group and the control group, similar to how they were in classes based on grade point average.

Statistical Sample

The population included all students 7-8year's old girl 4 school districts in Shiraz The school year is 2013-2014. Sample selection by random cluster sampling, so that the elementary school is a school district were randomly selected, As one of the classes were randomly assigned to implement the pilot (training based on the theory of multiple intelligences) And other classes as the control group (conventional method) were considered. The number of students in experimental group of 33 students and the number of students in the control group of 33 patients, a total of 66 patients were included.

Research Tools

To collect data in this study, the following questionnaires were used.

1 Ekpiner questionnaires Learning Sciences and colleagues (2009)

2 Questionnaire science learning lessons

Analysis of data

In addition to survey data analysis, descriptive statistics (frequency, mean, standard deviation) and inferential statistics to test hypotheses used Ancova.

RESULTS

Table 1: Analysis of covariance effect on attitude toward science teaching based on multiple intelligences

η^2	P	F	MS	DF	SS	Source of variance
0/19	0/001	12/70	1047/63	1	1047/63	Pretest (control variable)
0/46	0/0001	46/43	3831/22	1	3831/22	Groups (independent variable)
			82/52	55	4835/63	Error
				57	8445/72	Total

Table 2: Analysis of covariance for the effect of multiple intelligences teaching based on the scores of the joy of learning science

η^2	P	F	MS	DF	SS	Source of variance
0/10	0/02	5/94	114/79	1	114/79	Pretest (control variable)
0/34	0/001	28/88	558/17	1	558/17	Groups (independent variable)

			19/33	**56**	**1082/21**	**Error**
				58	**1642/03**	**Total**

Table 3: Analysis of covariance for the effect of multiple intelligences-based teaching of science anxiety scores

η^2	P	F	MS	DF	SS	Source of variance
0/10	**0/02**	**6/03**	**121/98**	**1**	**121/98**	**Pretest (control variable)**
0/28	**0/0001**	**21/73**	**439/18**	**1**	**439/18**	**Groups (independent variable)**
			20/21	**55**	**1111/79**	**Error**
				57	**1560/22**	**Total**

Table 4: Analysis of covariance effect on interest in science teaching based on multiple intelligences

η^2	P	F	MS	DF	SS	Source of variance
0/19	**0/001**	**13/19**	**46/15**	**1**	**46/15**	**Pretest (control variable)**
0/28	**0/0001**	**22/03**	**77/05**	**1**	**77/05**	**Groups (independent variable)**
			3/50	**56**	**195/89**	**Error**
				58	**285/56**	**Total**

Table 5: Analysis of covariance-based teaching multiple intelligences impact on the enjoyment of science experiments

η^2	P	F	MS	DF	SS	Source of variance
0/12	**0/01**	**7/62**	**25/65**	**1**	**25/65**	**Pretest (control variable)**
0/21	**0/0001**	**14/97**	**50/38**	**1**	**50/38**	**Groups (independent variable)**
			3/37	**56**	**188/48**	**Error**
				58	**244/64**	**Total**

DISCUSSION AND CONCLUSIONS

Based on the results of the survey data showed that based on the multiple intelligence teaching strategy than traditional teaching method, generally speaking, the factors influencing student learning in science is It can be concluded that based on the multiple intelligence learning compared to traditional classroom because students are more involved in the show, Taking advantage of the talents and creativity of individual students and learning at a deeper level will be smoother. Also, teachers can use in classroom teaching methods for students to grow and develop weaker intelligences using their abilities, encourage; so learn to improve and increase. The results of the research results **[14, 3, 8, 7, 2, 4, 9, 5, 6, 12, 13]** similar processes. According to the test results also showed that, at low levels, particularly in the cognitive domain (knowledge and understanding) scores of students has decreased noticeably. The explanation for this difference can be told in a more traditional way of learning and memory but low levels of cognition are based learning Multiple intelligences as students are more actively engaged in learning the concepts are therefore of higher levels of cognitive learning are better. The results and the actual results **[3, 6],** were aligned. The results of the research showed that based on the multiple intelligence teaching strategy

compared to conventional teaching methods, Students' attitudes to science class significantly improved, therefore it can be concluded that the traditional teaching methods aim to Knowledge to learners with language-verbal intelligence and lectures frequently on the basis of logical-mathematical done; Therefore, students who are not strong in this intelligence is a bad attitude to learning. The education using multiple intelligences as learners are offered by individual differences of students enjoyed learning. The results of the research results **[13, 2, 5]** are consistent.

ACKNOWLEDGMENT

This article is extracted from my thesis under the title of "Comparison of the effect of Based on multiple intelligences And methods of learning science 7-8 year female students Primary schools in Shiraz In the 2013-2014 years". Hereby, I extend my sincere appreciation to Islamic Azad university of Arsanjan for the efforts and supports they provided to me.

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