

GARDNER'S THEORY OF MULTIPLE INTELLIGENCES IS  
BASED ON THE EVALUATION AMOUNT DIFFERENCES  
IN EDUCATION, IN THE AREA OF MATHEMATICAL  
REASONING AMONG SIXTH GRADE STUDENTS

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**Abstract**

This study aims to study the impact of education based on multiple intelligences renewed interest in the areas of math reasoning sixth grade students performed. The study of the functional nature of the data and a survey of the study and the research methods, experimental (test) of the pre-test - post-test. The population studied in this research is the sixth elementary school students in the city government have formed Dehagh ,The experimental nature of the project, of which 40 students selected by random sampling and random assignment were classified, Results showed that the different effects of education based on the theory of multiple intelligences, in the area of mathematical reasoning, the logical-mathematical intelligence of students with high and low levels was confirmed.

**Keywords:** Multiple intelligences. Field argument. Sixth grade students of elementary logical-mathematical intelligence with high and low levels.

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## Introduction

History of the notion that the human mind has the ability to measure, at least to Francis Galton's book in 1869 titled "Hereditary Genius" returns. The theory of the beginning of a new psychometric theory in relation to his mental abilities. Many experts after they entered the arena and advances the cause of many provided. It including Stanford Binet-Simon, Terman Merrill, Wechsler, Heb, Thurston, Sternberg noted, after that, in 1983, Howard Gardner's theory of multiple intelligences proposed and the field of education in general changed. He is a man of great intelligence who started his seven types of intelligence are: 1. Physical Intelligence movement 2. Interpersonal intelligence 3. Verbal intelligence – linguistic. 4. Logical-mathematical intelligence 5. Intrapersonal intelligence. 6. Space Intelligence 7. musical intelligence, noted that later in the course of their studies as two other intelligence and intelligence-oriented nature of intelligence and also added to the list, that later in the course of their studies as two other intelligence and intelligence-oriented nature of intelligence and also added to the list.

### *Statement of Problem*

Intelligence as one of the aspects in compromise with human Horizon "environment" and of the important factors in the difference men with each other. According to Friedlander intelligence agents thereof is a subject that the experts this field. Some intelligence as no legal obligation can introduce unit. Some of the other factors because it qualified and countless issues they know. Traditional view for human intelligence, essentials, simple and integrated single factor and has roots in the attempt of the observer to identify the main factors of success of the student in the early twentieth century. This effort has led to the design of assessment as a tool called to extensive educational systems in use. Gardner this means that

intelligence has different kinds of shapes and forms, and emphasized the fact that this individual could have different profile of intelligence are intellectual movements start (view) practical and dampened enthusiasm in some of the education and training systems in the world that by relying on the concept of multiple intelligence to create a variety of programs and the variety its training step they have taken (Mehrmohamadi, 1385).

Importance of study on the role of education based on the multiple intelligence and its effect on the mathematical learning is. In this research the answer to this question that we are affected by the amount of education based on the theory of multiple wits Gardner on the mathematical realm in the students based on VI elementary levels with up and down intelligence logical-mathematical form.

*The internal and external research conducted recently that some of them refer* Ranjbar et al (1392) study entitled, Determining effectiveness based on multiple intelligences Gardner students with learning disabilities did on spelling errors. Methods of test and pretest-posttest control group was used. For this purpose, 30 students with learning disabilities in elementary third grade spelling multi-stage random sampling method selected and randomly assigned to experimental groups of 15 and 15 were controls. The instruments used to collect data such as Raven's Progressive Matrices test, a questionnaire spelling test Gardner's intelligences. Training on the experimental group were presented in 12 sessions. Covariance analysis showed that multiple based education of students with learning disabilities Gardner on spelling errors. These results can be fully effective as an intervention to improve spelling errors in students with learning disabilities fully used.

Deborah, (2000, quoting the Rohani, 1385) over 16 weeks, multiple intelligences theory taught in the classroom teachers, resulting in a reduction of inappropriate

treatment by teachers with students and increase their motivation was to improve their scores.

Sntrvk In another study aimed to evaluate the success and failure of students in the subjects of art, language, math, science and social studies using the theory of multiple intelligences in one of the high schools in the US state of Kentucky in 2000 by the Association of Research - educational. Tenth of the students of literature, mathematics and social sciences, two groups of 60 people were selected. In each be capable of intelligence in literature studies, social, mathematics and science were identified. Each completed four questionnaires, multiple intelligences. There are many differences between successful and unsuccessful (Sntrvk, 2000 According to the Rohani, 1385).

According to what was said the following hypothesis is considered

*Gardner's theory of multiple intelligences is based on the impact of education on the field of mathematical reasoning among sixth grade students of elementary logical-mathematical intelligence with high and low levels, is different.*

### **Research design**

The purpose of this study is to compare. This research is a practical nature and quantity of the data type is descriptive study and the research methods, experimental (test) of the pre-test - post-test.

### *Target population*

The population studied in this research students sixth grade public school in the city Dehagh academic year 93-94 up. The number of students is 215.

*Sample size and sampling*

Since the experimental or quasi-experimental method of pre-test - post-test have benefited. For proper implementation and application of methods to master all the components of the 40 students selected by random sampling and random assignment were classified.

*Data collection tools and determine the validity and reliability*

In this research, basic math textbook for the sixth grade text, published in 1392 in the length and angle as the mathematical training and educational software prepared by the Office of Educational Technology of the Ministry of Education and with different slides of objects natural the teaching aids were used.

In this study, Cronbach's alpha reliability coefficient method for each of the elements (components) specified in the table below have been calculated separately. Equal to 0/76 of the total alpha obtained indicating a satisfactory level of reliability and internal consistency that is the questions in the questionnaire.

For the achievement of the questions by the sixth grade teachers in Dehaqgh three years (1391- 1392 - 1393) and the Ministry of Education textbooks written questions offices in the length and angle are designed, The three levels of Bloom's taxonomy (knowledge application and reasoning), which is used to ensure the content validity of the Delphi technique was used in a number of teachers and math specialists and 0/80 index Cronbach's alpha reliability above it was confirmed.

**Results**

Gardner's theory of multiple intelligences is based on the impact of education on the field of mathematical reasoning among sixth grade students of elementary logical-mathematical intelligence with high and low levels, is different.

Table 1. Comparison of the mean scores of pre-test and post-test in both the upper and lower areas of the arguments of Bloom's taxonomy

Mean error	standard	Standard Deviation	Average	Group	Cognitive level	
0/69		2/17	50/4	Top	Reasoning	Pretest
1/08		3/43	20/9	Down		
1/51		4/76	4	Top	Reasoning	Posttest
	0/93	2/94	5	Down		

Table 2. Results Table paired t-within reason

T-test to compare averages					Levine test to check the equality of variances			
Difference between the standard error	Difference Averages	Confidence level	Degree freedom	t	Confidence level	F		
0/641	5/3	0/001	18	4/132	0/165	2/092	Reasoning	Pretest
0/787	-1	0/533	18	0/636	0/07	3/714	Reasoning	Posttest

The same as in the table above can be seen in the level argument knowledge test in no meaningful difference between the two groups up and down there in the test. Based on this reason for removal the average difference meaningful two groups at

this level after the period of training and the difference between the impact on education based on the theory of multiple intelligence of the, in the realm of mathematical, the students with high and low intelligence levels logical-mathematical confirmation. With regard to the increase in the average after test group and lower in the level argument knowledge to group up it can be concluded that the Education based on the theory of multiple intelligence of the Gardner school progress in mathematics students with logical intelligence-down in the realm of mathematical reasoning by the.

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