The Effects of Using Multiple Intelligences in Teaching on Academic Achievement of Eighth-Grade Students in a History Course

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This study aims to identify the impact of the use of multiple intelligences in teaching, on the achievement of eighth-grade students in the history curriculum in Jordan. The study sample consisted of 52 students from King Abdullah II School for Excellence. The experimental method was used to achieve the objectives of the study. The results showed that there were statistically significant differences in the post-test due to the group (control, experimental). The differences were in favour of the experimental group studied by the experimental group. The results showed that there were statistically significant differences in the post-test due to gender (male and female). The differences were in favour of females studied using multiple intelligences on student achievement. The results also showed statistically significant differences in the test. The study recommended that the authors of the social studies curriculum in general and particularly, national education curriculum must be directed to the need to implement the Multiple Intelligences Strategy in teaching the courses.

Key words: *Multiple Intelligences, Achievement, Grade 8.*

Introduction

The twenty-first century education places emphasis on process for improving learner's skills, capacities and enhancing their mental abilities, as fully as possible. In addition it also focuses on the impact of human resources and its role in developing society. Modern education has realised the differences in individual capabilities, so it has sought to consider those capabilities when implementing modern educational approaches. Recent studies have confirmed that there is a difference in types of intelligence between individuals, which is due

to genetic differences and the environment where an individual lives. These intelligences are subject to change and training during the study.

Modern educationalists have criticised many of the traditional teaching methods which are not sufficiently focused on learner's capacity. Instead its focus is only on the teacher, who is restricted by weak curricula, that doesn't consider individual differences between students. Such critiques derive from numerous theoretical research aligned with the cognitive and scientific fields, which are represented in educational field such as psychology, teaching methods and the political/social arena. (Zaki, 2000).

The diversity of modern teaching methods is one of the most significant topics that several modern studies have addressed, especially the subject of students' intelligence. Several educational and psychological studies have confirmed the existence of differences between students' intelligences, which essentially results in differences in student-learning methods. Hence, these studies have called for developing and implementing various teaching strategies that focuses on the types of intelligence among students. One of these methods is the multiple intelligence theory that was first posited by Harvard psychologist Howard Gardner (Al-Tawisi& Al-Badour, 2009).

What distinguishes multiple intelligence theory, is the way it changes traditional processes of teaching students into a broad learning environment, where the teacher interacts with the learner. The teacher who taught the lesson ina rhythmical way, uses musical intelligence, the teacher who draws on the board during teaching is using visual intelligence, and who who paces in class in a circular way uses motor intelligence. The implementation of multiple intelligence theory in teaching, enhances personal intelligence through the method of dialogue and discussion, and social intelligence through implementing group work strategies (Al-Sanafi, 2012).

Therefore the teacher's role in the pursuit of best methods and procedures to teach students and to use the appropriate method in the learning process, makes education more pleasant for teacher and students. The teacher acquires a positive experience that enhances self-confidence and ability to achieve the objectives of the lesson in an interactive way.

The History curriculum is one of the significant curricula in the educational learning process, as it focuses on developing concepts, skills, customs and traditions rooted in society. It also plays a significant role in instilling the values of citizenship among learners. It aims to develop social, religious and moral values through studying the past and linking it to the present. Thus getting acquainted with the achievements of historical figures in different eras and how they used mental intelligence to confront problems they were exposed to is important, and how they managed to change outcomes (Zayed, 2009).

Al-Tawisi and Al-Badour (2009) emphasise the importance of implementing multiple intelligence strategies when teaching history, by studying historical events and interpreting them. He also stressed the need to use appropriate methods, procedures and multiple educational activities. These include using maps, role play, storytelling and other methods and activities that play a great role in encouraging student participation and stimulating student's multiple intelligences. This method enables students to acquire a deep understanding of the history curriculum.

Al-Tawisi and Al-Badour (2009) Several studies indicate that there was a relationship between the use of multiple intelligence strategies and raising the level of student achievement, due to the implementation of multiple intelligences theory, and multiple methods and activities. Other studies reveal the effect of using multiple intelligence activities on increasing students' motivation to learn and achieve effective learning, that facilitates their understanding of the curriculum and develops their thinking skills.

Rashid et al (2018) aim at identifying the effect of using electronic maps and illustrations on developing spatial intelligence and achievement among fifth graders' literary section in a natural geography course. The study sample consisted of (69) students. The researcher applied a final assessment test on a group of students. The results of the study as concluded by the researcher were:

• Maps and electronic pictorials give an interesting and attractive sensory image that shows the reality of nature and current events, that are difficult for students to perceive, and difficult for the teacher to explain verbally.
• The process of engaging two educational methods during the teaching process, provides better results and has a longer impact for the learner than using one educational method. This is because each educational method complements the other method, and fills any deficiency that exists in it.

Agha and Abu Salem (2018) aim to identify the impact of a proposed program in teaching geography on developing map reading skills and spatial intelligence skills for eighth graders. The researchers used an experimental approach. The study sample was chosen intentionally and consists of (70) eighth grade students distributed in two groups. The study revealed that there were statistically significant differences at the significance level (0.01) in favour of the experimental group in the two post-tests.

Pratiwi et al (2018) conducted a study focused on the impacts of learning, based on multiple intelligence theory, as an educational approach to students' understanding and interest in the issue of learning. The researchers used the pre and post-test for one group. The sample consisted of (13) seventh grade students, from a private school in Bandar Seri Begawan. The

student's mastery was measured using the achievement test. The two tests pre-post-test were applied on the study sample and the students' level of interest was measured by using a Likert scale of benefit. The results of the study indicate, that learning based on multiple intelligence theory improves students' knowledge and the impact of learning endures.

Abdullah & Aziza (2017) conducted a study aimed to identify the effect of using multiple intelligence strategy on developing geographical skills among sixth graders. The study sample consisted of (60) students, divided into two groups, experimental and a control group. The researchers developed a unit of geography and a test that measures geographic skills. The result of the study showed the superiority of the experimental group over the control group.

Mashhoot (2013) aimed to identify the effect of multiple intelligence strategies on history achievement tests and developed inferential thinking among fifth grade female students "literary section." The study sample consisted of 89 female students, divided into two groups, experimental and a control group. The inferential thinking test was applied before and after the application. T-test for the two independent samples was applied at the significance level (0.05) to test the hypotheses of the zero study. The results show that there are statistically significant differences in the development of inferential thinking and the achievement test in favour of the experimental group attributed to the teaching method.

Tashman et al (2012) conducted a study aimed at identifying the impact of using multiple intelligence strategies and conceptual maps. The study focused on developing contemplative thinking in the study of geography in the Arab world, for student teachers in a class at Isra'a University in Jordan. The sample consisted of 121 class teachers. The study used the meditative thinking test and the tool was developed by the researchers. The results indicated statistically significant differences between the strategies of multiple intelligences on the one hand, and between the conceptual mapping strategies and the usual method on the other hand. The result showed in favour of multiple intelligences theories. The results also revealed that there were statistically significant differences between the conceptual mapping strategy and the usual method in favour of conceptual mapping. This was where the results did not show interaction between both gender and teaching strategies (multiple intelligences and conceptual maps).

Al-Sanafi (2012) conducted a study that investigated the effect of the use of multiple intelligence strategies in teaching on the achievement of eleventh grade students in the subject of Islamic history. The sample of the study consisted of (96) female students from the eleventh grade of literary secondary school. The sample was divided into two groups: experimental and controlling. An analytical test was designed for different cognitive levels. The results of the study revealed that teaching strategy based on the multiple intelligence theories had more effect than the traditional method. It also showed that there is a statistically

significant difference in the achievement of the study sample (0,002), due to the variable of the multiple intelligence strategies and in favour of the experimental sample.

Commenting on Previous Studies

- Previous studies varied in terms of objectives. Most studies focused on achievement, such as Rashid et al (2018), Agha and Abu Salem (2018) and Al-Sanafi (2012). Mashhoot (2013) addressed the development of thinking and this study addressed a sample of female students from primary eighth grade.
- The instruments of the study varied. Some applied the tests as a tool of the study such as Al-Sanafi (2012), Pratiwi et al (2018), Rashid et al (2018), Agha and Abu Salem (2018), Mshahoot (2013) and other studies. While some studies focused on preparing a scale such as Pratiwi et al (2018) and, Agha and Abu Salem (2018). The current study is consistent with some previous studies, in terms of preparing an achievement test.
- All the previous studies and the current study agreed on the importance of using the multiple intelligence strategies to raise and develop students' academic achievement.
- The current study differed in terms of implementing the study in the educational area in Jordan, as well as the study sample that dealt with eighth grade students in Jordan.

In brief, the previous studies indicated that there was a relationship between the use of multiple intelligence strategies and raising the level of student achievement, through the activation of multiple intelligence theories and diversity in the use of methods and activities. They also have indicated an increase in students' motivation to learn and achieve effective learning, and facilitate students' understanding of the curriculum and the development of thinking skills Rashid et al, (2018), and Agha and Abu Salem (2018).

Despite the significance of the history curriculum in shaping members of society and developing their ideas, the teaching of the curriculum of history is still based on indoctrination, narration of information, dialogue and discussion. This in turn does not encourage motivation or pleasurable learning. One the other hand the role of students is limited to memorisation and recalling information, which leads to forgetting information in the long term. Through the researcher's acquaintance with previous studies that addresses the development of the history curriculum, they realised the importance of applying modern educational methods, and their great role in the enrichment of multiple intelligences. Hence, the study came to identify the effect of the use of multiple intelligences in teaching on the achievement of the eighth-grade students in the history curriculum.

The Study Problem

Despite the growing interest in planning and organising the content of the history curriculum, it was found that teachers are still applying traditional pedagogical methods in teaching. They do not have sufficient capacity to employ modern pedagogical methods clearly and that the effort made in the classroom is lost without accomplishing the learning tasks. The role of the student is limited to receiving the information and that reflects negatively on the students' motivation and academic achievement. Unfortunately, social studies teachers in general and history teachers particularly, are still using dialogue, discussion, indoctrination and paper maps in their teaching strategies. This means they can't properly achieve the general objectives of the history curriculum (Ahmad, 2018).

Generally, modern educational theories emphasise student-centered learning. Previous studies have shown that employing multiple intelligence strategies proves its effectiveness in increasing student achievements (Al-Sanafi 2012), and (Al-Ahdal and Rashid et al, 2009).

However, some studies have confirmed that the traditional methods of teaching do not develop thinking or intelligence among students. The focus is limited to two types of intelligence, such as linguistic intelligence and logical-mathematical intelligence, and the rest of multiple intelligences are dropped (Allam, 2007).

Several studies also indicate that low or moderate grades in student performance, is due to the traditional assessment tools that focus on paper and pen, direct questions and short answers. Whereas when using assessment tools that focus on drawing and nature, students get high grades, which raises the question of the validity of traditional intelligence tests (Hussein, 2003).

There is also a lack of interest from teachers in planning and implementing various educational activities that develop student's skills and performance. The idea of a unified curriculum is still influencing teacher's decisions. Hence, the researchers found there is a necessity for teachers to be aware of the appropriate methods, for implementing multiple intelligence strategies within the classroom. Thus, the study problem is limited by the following questions:

- How does eighth-grade students' academic achievement in the history curriculum vary due to the use of teaching strategies (traditional, multiple intelligences)?
- How does eighth-grade students' academic achievement in the history curriculum vary due to gender (traditional, multiple intelligences) of the learner?

- Is there a significant effect on the interaction between teaching strategies variables, and the learner's gender, on the eighth-grade students' academic achievement in the history curriculum?

The Importance of the Study

The importance of this study appears in both theoretical and practical aspects:
Theoretical aspect:

● Lack of theoretical literature and previous studies, within the limits of the researchers' knowledge, to address the multiple intelligence strategies and its role in raising the level of academic achievement in the history curriculum for the eighth grade.
● Providing theoretical literature on multiple intelligence strategies in teaching the history curriculum. The researchers aim is that specialists, educators and researchers will benefit from this study in developing new studies that focus on the same issue and developing the learning strategies used in social studies in general and the history curriculum in particular.
The practical aspect:
● Providing a procedural model for those in charge of developing social studies curricula. This model was applied in history lessons, using the multiple intelligence strategies for the achievement of sixth grade students in Jordan.
 ● Empowering educational supervisors and school administrators to direct teachers towards adopting appropriate modern teaching strategies when teaching social studies courses and history courses, which develops different learning and motivation skills, and academic achievement for students.
● This study enhances the awareness of history teachers of the importance of multiple intelligence strategies, and its effectiveness in teaching, increasing students' motivation towards learning, and raising their academic achievement level.
 ●Identifying talented students and developing their intelligence according to their abilities.

Study Limitation

The generalising of study results was limited to the following:
1 -Spatial limitation: First Irbid Education Directorate.
2 -The objective limitations: the study tool used by the researcher.
3 -Time limits: The academic year 2019-2020.
4- Human limitation: the eighth-grade students in King Abdullah II Schools of Excellence for the academic year 2019-2020.

Procedural Definitions

Multiple intelligence strategy is a theory posited by the educational scientist Howard Gardner, as a result of conducting research and several studies. This theory reveals that every person has several types and degrees of intelligence that is called "profile" intelligence, not IQ. It indicates that the quality of student education increases if we consider the different intelligences they have. This means that one lesson can be presented in different ways to fit the different intelligences and individual differences between students (Bayoumi, 2018).

Procedurally it is defined as a set of lessons that the researcher has partially prepared, selected and organised on the basis of multiple intelligence strategies. This confirms that learners have different types of intelligence, which are independent from each other and are represented in the following: linguistic intelligence, logical mathematical intelligence, interactive intelligence, self-intelligence, motor physical intelligence, musical intelligence, spacial visual intelligence, natural intelligence, environmental intelligence and social intelligence. Implementation is done by asking the students to watch video lectures in their homes before class time. While the teacher's role is limited to providing an active learning environment in terms of good guidance and students apply what they have learned outside the classroom.

According to Ahmed (2018) academic achievement is a set of information and knowledge that students obtain through the school curriculum, in order to adapt to the school environment and work. This concept is limited to what information students receive, according to a prepared program that aims to make the learner more adaptive to their social environment.

Procedurally students acquire knowledge after scientific material is presented, that was prepared based on using the multiple intelligence strategies. It is measured to the degree that students obtain in the academic achievement test of the history course.

The eighth grade: It is one of the levels of the upper basic stage according to the educational level in the Hashemite Kingdom of Jordan. The average age of students at this academic level is 14 years.

Study Methodology

The semi-experimental approach was used to achieve the objectives of the study. To answer the questions that were raised, the researchers used the design of the two groups (control-experimental) and pre-post test.

Study Population

The study population consisted of all (eighth) basic students in the Ministry of Education schools in Irbid Governorate, who are (1120) students according to the Ministry's statistics for the year (2018)

The Study Sample

King Abdullah schools were chosen for excellence, due to the cooperation of the school administration with researchers to conduct the study. The study sample consisted of (52) male and female students who were divided into two groups experimental group (28) and control group (24).

Study Methodology

Depending on the nature of the research and its objectives, the researchers used the semi-experimental approach in this study, as it is appropriate to achieve the objectives of the study.

Study Design: To achieve the objectives of the study; the semi-experimental study design was used with two groups (experimental group and control group). A pre-application of the tool for the experimental and control groups, and then exposing the experimental group to treatment (multiple intelligences), and the control group was left without training. Then a post measurement was made on the two groups according to the following design:

Group1:	O_1	X	O_2
Group2:	O_1	-	O_2

Which is represented as following:
Group 1: the experimental group
Group 2: the control group
O_1: pre-measurement
X: the treatment (multiple intelligence)
O_1: post measurement

Study Tools: The study tools are represented in the achievement test, where the test was built according to the following steps:
 -Refer to the educational literature related to building achievement tests, such as the study of Teshman et al (2012) and Al-Badir (2001),
 -Determine the achievement test skills from the unit analysis and the specification table.

-Analyse the content of the study unit entitled (The History and Civilisation of Andalusia) that was taught to students according to multiple intelligences strategies, to determine the questions that measure their achievement skills.

Test Validity

Face Validity: The face validity of the test was verified by presenting it to a group of arbitrators, experts, university professors, educational supervisors and specialised teachers.

Content Validity: The researchers applied the test to an exploratory sample from outside the study members and calculated the discrimination coefficient for the test items. All the items originated with a moderate degree in discrimination. This indicated validity for the objectives of scientific research, as shown in Table (1)

Table 1: Discrimination and difficulty coefficients for analytical thinking skills test items

Items	Discrimination coefficients	Difficulty coefficients
1	.454*	0.447
2	.558*	0.449
3	.456*	0.373
4	0.344	0.154
5	.539*	0.452
6	.242*	0.379
7	.449*	0.433
8	.620*	0.592
9	.365*	0.544
10	.281*	0.673
11	.623*	0.563
12	.478*	0.467
13	.460*	0.519
14	.575*	0.515
15	.326*	0.702
16	.501*	0.551
17	.554*	0.65
18	.58*	0.55
19	.356*	0.333
20	0.54	0.567

Table (1): shows the discrimination and difficulties coefficients of items of the study tool, which are appropriate for the objectives of this study.

Tool Reliability

The researchers calculated the reliability coefficient using the internal consistency method according to the alpha equation. Table (2) shows the internal consistency coefficient according to the Cronbach's alpha equation and test – retest reliability of the study tool. These values were considered appropriate for the purposes of this study.

Table 2: The Cronbach's alpha equation, test – retest reliability and the overall total

Area	test – retest reliability	the internal consistency
Students' achievement in the history course	0.91	0.89

Groups Equivalence

To verify the equivalence of the groups (control and experimental) in the achievement test, the mean and standard deviations on the pre-test were extracted according to the method variables as shown in table (3):

Table 3: Means, Standard Deviations, and T-Test for Student Achievement in the Pre-test for Student Achievement in History

Groups	No.	Means	SD	T value	P value
Control	28	43.8571	7.83494	0.033	0.974
Experimental	24	43.9167	4.22124		

Table (3) indicates that there is an apparent variation of the means according to the group for the pre-test which consist of (20) items and a score of (100) points.

A T-test was used to show the statistically significant differences between these averages. The results showed that there were no statistically significant differences on the pre-test attributed to the group. Therefore there is an equivalence in the students' scores on the pre-test for both the control group and the experimental group on the achievement test in the history course.

Preparing the test map: the researchers prepared the test map in the light of content analysis based on the underlying facts included, the behavioural and special objectives of the first three levels in the knowledge area of Bloom's taxonomy:

Study Procedures

These procedures followed in this study are:
1 -Define the study problem, its questions and its variables.
2 -Refer to the previous educational literature related to multiple intelligences.
3 -Define the academic unit entitled (The History and Civilisation of Andalusia) to be taught according to multiple intelligences.
4 -Prepare the achievement test, consisting of (20) items, and verifying its validity and reliability.
5- Specify the study sample, where two of the (King Abdullah II for Excellence) schools were chosen in a random manner, Division (A) to represent the experimental group, while Division (B) to represent the control group.
6- Apply the achievement test to the control and experimental groups.
9 -Implement the multiple intelligences strategies. The researchers followed the learners during implementation to guide and provide feedback
10 -After completing the study, the post-test achievement test was applied to the students of the control group and the training group at the school.
11 -The researchers corrected the answers of the students of the two groups in the achievement test.
12 -Analyse the results according to the statistical program (SPSS).
13 - Provide appropriate recommendations.

Study Variable

The variables of the study are:
 1- Independent variables:
The study method that has two levels (teaching with multiple intelligence and the traditional methods).
 2- Dependent variable: (students' academic achievements.)

Statistical Processing

The following statistical methods were used in the analysis of the statistical data of the current study in the SPSS program. Where Cronbach alpha coefficient was used to determine the coefficient of reliability, the means, standard deviations and T-test were also used.

Discussion of Results

This study aims to use a training program to reveal the impact of the multiple intelligence strategy on the academic achievement of (eighth) grade students in a history course. The

study data was collected with tools prepared for this purpose, and data was entered into the computer, and analysed by statistical, descriptive and inferential statistical methods. By following these procedures, the researches discover the answers to the study questions. The results are presented according to the order of the questions.

The Results of the First Question: Does the eighth-grade student's academic achievement in a history course vary due to the use of teaching strategies (traditional, multiple intelligences)?

To answer this question, the researchers extracted the mean and standard deviations for the achievement test for each of the two groups (control, experimental).

Table 4: Means, SD, and T-test for Student academic achievement in the Post-Test for Achievement Score by Group (Control, Experimental)

Groups	No.	Mean	SD	T value	P value
Control	28	58.0714	22.93942	6.37	0.000
Experimental	24	90.9167	11.36706		

Table (4) shows that there is an apparent variation of the means according to the group for the post-test which consist of (20) items with a score of (100). To demonstrate the statistically significant differences between these two means, a T-test was used. The results indicate that there are statistically significant differences on the post-test due to the group (control, experimental), and the differences are in favour of the experimental group using multiple intelligences strategies.

The researchers attribute this result to different factors such as the implementation of several procedures and the multiple intelligence strategies in teaching. This contributed significantly to the development of scientific and cognitive aspects of students from remembering, understanding, applying and analysing, and the multiple interest activities that motivated effective involvement of the students in learning processes and raised their academic achievement level. Additionally, teaching according to the strategy of multiple intelligences raises students desire to learn, because it gives students an opportunity to discover their mental abilities by realising the type of intelligence they have. Then they can apply this within the classroom and strengthen their weak intelligence aspects, all led to raising their level of educational attainment.

Also, providing the appropriate educational environment, using the multiple intelligence strategy enhances communication skills between one group and other groups. This is because the strategy facilitates the process of expressing ideas, information, participation, exchange of facts and skills; all of which increase students' academic achievement. The multiple

intelligence strategy plays a big role in this. The student-teacher strategy implemented in teaching their classmates, drives students to focus and motivates them to learn what was entrusted to them, which contributes to increasing academic achievement. The results of the research were consistent with some previous studies, such as the study of Agha and Abu Salem (2018), Pratiwi et al (2018) and Aziza (2015) and other studies.

The Result of the Second Question: Does the eighth-grade students' academic achievement in the history curriculum vary due to gender (traditional, multiple intelligences) of the learner?

To answer this question, the researchers extracted the mean and standard deviations for the achievement test of the experimental group according to gender (male and female), as well as performing the T-test, and the results were as shown in the following tables:

Table 5: Means and SD, and T-Test for Student Achievement in the Post-Test for the Experimental Set of Achievement Score by gender (Male, Female).

Gender	No.	Means	SD	T value	P value
Male	12	83.5000	11.18847	4.82	0.000
Female	12	99.0833	.28868		

Table (5) shows that there is an apparent variance of the means by gender for the post test of the experimental group which consist of (20) items and a score of (100).

The T- test was used to show the statistically significant differences between these means. The results illustrated that there are statistically significant differences in the post-test due to gender (male, female). The differences are in favour of females, who studied by using multiple intelligence for student achievement. This is despite that male and female students are taught according to the same plan; the same specific methodology and teachers are trained to teach one mechanism in accordance with the multiple intelligences strategy for both. In addition to that they are exposed to the same educational environment. The researchers explain this difference, which may be due to the extent of students' interest in academic subjects, as female students are more interested in learning than male students.

Keri (2000) confirms that male students tend to appropriate learning than females, and that females prefer learning based on the conceptual curve. The difference of the learner's gender, especially at the beginning of adolescence (eighth grade), is followed by the difference of the teacher's gender, and this is another indication of difference which is statistically significant according to gender. The researchers did not find previous studies dealing with differences according to gender.

The Result Related to the Third Question: Is there a significant effect in the interaction between the teaching strategies variable and the learner's gender variable, on the eighth-grade students' academic achievement in the history curriculum?

To answer this question, the researchers extracted the mean and standard deviations for the achievement test for each of the two groups (control, experimental) according to gender, and the results were as follows:

Table 6: Means, SD, and T-Tests for Students' Achievement in Post-Test scores for Achievement Test by Group (Control, Experimental) and Gender (Male, Female)

Group	Gender	Mean	SD	No.
Control	male	47.7333	3.28344	15
	female	73.7692	25.77516	13
	total	59.8214	21.81072	28
Experimental	male	83.5000	11.18847	12
	female	99.0833	.28868	12
	total	91.2917	11.10221	24
Total	male	63.6296	19.66674	27
	female	85.9200	22.33443	25
	Total	74.3462	23.63023	52

Table (6) shows that there is an apparent variation of means according to the group, for the post test that consist of (20) items and a score of (100). To show the statistically significant differences between these means a two-way analysis of variance was used. The results are explained in the following table:

Table 7: Two-way analysis of variance of the interaction between gender and teaching method

Source	SS	DF	MS	F value	sig	Eta value
Corrected model	18976.612(a)	3	6325.537	31.957	.000	.666
Intersection	298038.106	1	298038.106	1505.693	.000	.969
group	12025.087	1	12025.087	60.751	.000	.559
gender	5582.996	1	5582.996	28.205	.000	.370
Group* gender	352.148	1	352.148	1.779	.189	.036
Error	9501.158	48	197.941			
Total	315900.000	52				
Overall total	28477.769	51				

The results showed that there were statistically significant differences on the post-test due to the group (control, experimental), as well as the presence of differences according to gender. The results also showed that there were no statistically significant differences for the interaction between the method and gender type. This indicates that there is an interaction between strategy and gender, and it confirms that the multiple intelligence strategies are appropriate for both males and females, as they both attain the same benefit regardless of gender. The impact on male performance parallels its impact on female performance, since the improvement recorded the same percentage (male and female). This is consistent with Teshman et al. (2012).

Recommendations

● Direct those in charge of writing social studies books in general and national education in particular, on the necessity of applying the multiple intelligence strategy in courses.
● Hold training courses for social studies teachers in designing and implementing lessons using the multiple intelligence strategy.
● Apply the multiple intelligences strategies in teaching social studies for students on both the basic and upper secondary levels.
● Direct researchers to conduct similar studies dealing with the effect of using multiple intelligence strategy on students' academic achievement in the rest of the subjects of social studies (history, geography), in addition to the need to address other variables such as creative thinking, self-thinking and critical thinking.

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