MULTIPLE-INTELLIGENCE-BASED LEARNING INFLUENCE ON DEVELOPING CREATIVE THINKING IN SOCIAL STUDIES AMONG NINTH-GRADE STUDENTS IN ABU DHABI

SHORAH AHMAD YOUSEF ALJARABAH

SULTAN IDRIS EDUCATION UNIVERSITY

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Allah (SWT) says: {*If you are grateful, I will surely increase you* [in favor]} (Surah Ibrahim, verse 7). Additionally, it was narrated by Abu Hurayrah that the Prophet (peace be upon him) said: "He who does not thank Allah does not thank people" (Al-Tirmidhi, 281). Firstly, I would like to thank Allah (SWT) for His help in completing my studies and that He has blessed and honoured me for this research and granted me success in it. I would like to thank and send my highest gratitude and appreciation to all my respectful lecturers in the Education department, as well as the library and postgraduate institute staff (IPS). Moreover, I would like to send my special thanks and appreciation to my supervisor, Doctor Mohammed Yousef Mai for his supervision, advice, encouragement, understanding and support. I am deeply grateful to him for his time and patience with me. I would also like to send my sincere thanks to the faculty and students of the school to which the study was applied, as well as to my school administration, which gave me the opportunity to develop myself with confidence and guidance. Many thanks, appreciation, and gratitude to my family members for bearing with me and their great patience throughout the work of this dissertation, especially my dear children, Lana, Abdel Rahman, and Layan. My heartfelt thanks also go to my beloved husband, my companion, the shoulder on which I lean without tiring. My deepest thanks to my parents, who are my source of strength; they have always been my strong and lasting support. I would also like to thank everyone who helped me in completing this research, especially my close companions, Catherine, Layali, Nadia, Kim and Shafaq. I would also like to thank my friend and sister Abeer, who was the spirit that inspires hope in me and provides me with strength and perseverance. I dedicate this thesis to the soul of my brother Ashraf Aljarabah**.** In conclusion, I pray that Allah accepts this thesis for His sake. I do not claim that I have reached the top of knowledge, I have tried, but perfection belongs to Allah alone. I ask Allah (SWT) to grant us all success in what is good. All praise be to Allah (SWT), the Lord of the worlds, the Guardian of guidance and success.

ABSTRACT

This study aims to examine the influence of multiple intelligence-based learning on the development of creative thinking for ninth-grade students in Abu Dhabi private schools. This study uses a quantitative research design, particularly, a quasi-experimental design. Also, this study uses two samples/groups (60 students in total); a control group (30 students) and experimental group (30 students) of ninth grade students from private schools in Abu Dhabi. Two schools were selected using simple random sampling, the control and experimental groups were from the same school, but different sections. An experiment of multiple intelligence-based learning in Social Studies and Civics & Citizenship Education subjects were applied to the experimental group. The instruments used were pre and post-tests in creative thinking skills. Data was analysed using descriptive statistics (mean scores and standard deviation), ANCOVA and t-test. The findings revealed that there was a significant difference in the creative thinking post-test mean score after controlling for the effect of pre-test between the experimental and control groups. The experimental group (M = 82.97, SD = 9.98) exceeded the control group (M = 61.20, SD = 15.85) after controlling the effect of the pre-test of creative thinking on both groups, F (1, 57) = 38.31, p = .000. The t-test revealed that there was a significant effect for gender in the elaboration skill (post-test), t (28) = -2.12, p = .043, with females (M=22.50, SD=1.95) receiving higher scores than males (M=20.25, SD=3.53). In conclusion, these findings reveal the influence of multiple intelligence-based learning on the students' creative thinking skills. Additionally, this study suggests the need for conducting further similar studies on different levels of school grades and checking the influence of multiple intelligence-based learning on different thinking skills. Besides, developing new curricula based on the multiple intelligences theory for Social Studies subjects in the United Arab Emirates.

PENGARUH PEMBELAJARAN BERASASKAN PELBAGAI KECERDASAN DALAM MEMBANGUNKAN PEMIKIRAN KREATIF DALAM KAJIAN SOSIAL PADA PELAJAR TINGKAT KE-9 DI ABU DHABI

ABSTRAK

Kajian ini bertujuan untuk mengkaji pengaruh pembelajaran berasaskan kecerdasan pelbagai terhadap perkembangan pemikiran kreatif untuk pelajar kelas sembilan di sekolah swasta Abu Dhabi. Kajian ini menggunakan reka bentuk penyelidikan kuantitatif, khususnya reka bentuk eksperimen kuasi. Juga, kajian ini menggunakan dua sampel / kumpulan (60 pelajar keseluruhan); kumpulan kawalan (30 pelajar) dan kumpulan eksperimen (30 pelajar) pelajar kelas sembilan dari sekolah swasta di Abu Dhabi. Dua sekolah dipilih menggunakan persampelan rawak mudah, kumpulan kawalan dan eksperimen berasal dari sekolah yang sama, tetapi bahagian yang berbeza. Eksperimen pembelajaran berasaskan kecerdasan pelbagai dalam mata pelajaran Pengajian Sosial dan Pendidikan Sivik & Kewarganegaraan diterapkan pada kumpulan eksperimen. Instrumen yang digunakan adalah ujian pra dan pasca dalam kemahiran berfikir secara kreatif. Data dianalisis menggunakan statistik deskriptif (skor min dan sisihan piawai), ANCOVA dan ujian-t. Hasil kajian menunjukkan bahawa terdapat perbezaan yang signifikan dalam skor min ujian pasca pemikiran kreatif setelah mengawal kesan ujian pra antara kumpulan eksperimen dan kumpulan kawalan. Kumpulan eksperimen (M = 82.97, SD = 9.98) melebihi kumpulan kawalan (M = 61.20, SD = 15.85) setelah mengawal kesan ujian pra pemikiran kreatif pada kedua-dua kumpulan, F (1, 57) = 38.31, p = .000. Ujian-t menunjukkan bahawa terdapat kesan yang signifikan bagi jantina dalam kemahiran menguraikan (ujian pasca), t (28) = -2.12, p = .043, dengan wanita (M = 22.50, SD = 1.95) menerima skor yang lebih tinggi berbanding lelaki (M = 20.25, SD = 3.53). Kesimpulannya, penemuan ini mendedahkan pengaruh pembelajaran berasaskan kecerdasan pelbagai terhadap kemahiran berfikir kreatif pelajar. Selain itu, kajian ini menunjukkan perlunya melakukan kajian serupa yang lebih lanjut mengenai tahap gred sekolah yang berbeza dan memeriksa pengaruh pembelajaran berasaskan kecerdasan pelbagai terhadap kemahiran berfikir yang berbeza. Selain itu, mengembangkan kurikulum baru berdasarkan teori kecerdasan pelbagai untuk mata pelajaran Pengajian Sosial di Emiriah Arab Bersatu.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter provides a brief explanation of the study. It includes the background of the study, problem statement, research objectives, research questions, and research hypothesis. It also explains the conceptual framework, the significance of the study, the scope of the study, operational definition, and summary.

1.2 Background of Study

Students are the essence of the educational and learning processes. All curriculum, teaching methods, and educational plans in educational institutions are designed to suit the students according to their wants, tendencies, needs, and abilities. Therefore, knowledge is renewed

according to this, which vary according to time, places, and individuals. This confirms the need to move the educational process from the stage of indoctrination, which depends on the conservation and repetition of information, to the stage of addressing the thinking. This stage prepares individuals who are able to cope with the rapid developments and the implications of future changes and positions that require understanding, analysis, synthesis, evaluation, classification and judgments to reach critical constructive conclusions that are capable of developing new knowledge or criticising old knowledge. Al-Kharabshah (2016) indicated that the methods of teaching, which depend on indoctrination and memorization, distance students from the spirit of research, inquiry and creativity (Al-Kharabshah, 2016). Furthermore, Winarti, Yuanita, and Nur (2019) explained that while information becomes old, the thinking skills are new. Thus, thinking is the tool by which one directs the variables of the era, and consists of the individual's tendencies, beliefs and outlook of surroundings. Therefore, the interest of societies has become focused on the development of people's thinking skills.

There are indications that some individuals are still practicing the wrong and irrational ways of thinking and this leads to the emergence of incorrect and contradictory concepts, which impedes the intellectual progress of the communities (Winarti, Yuanita, & Nur, 2019). Al-Otaibi (2007) has referred to Necveson who pointed out that the failure of university students is due to their inability to think abstractly in solving problems efficiently. This deficiency is the imbalance due to what teachers in the classroom do and focus on (what to think?), while it is supposed to be based on the understanding and evaluation of scientific material (how to think?). This process needs training and practice in thinking skills, and must intensify efforts in training students on how to think and practice the actual thinking skills in accordance with their abilities, wants, tendencies and needs (Al-Otaibi, 2007).

Yi, Sulaiman, and Baki (2015) described thinking elements as visualization, imagination, symbols, instructions, muscular activities, and brain functions. However, educators consider that the elements and tools of thinking are to expand the student's horizons by looking at ideas including the pros and cons. Moreover, Widiana and Jampel (2016) encouraged students to move towards creativity by placing them in educational positions that require the use of activities and programs to challenge their abilities and ideas in a safe environment (Widiana & Jampel, 2016). This process should be done according to the intelligence of the students and within the framework of a healthy educational environment, high educational efficiencies and appropriate approaches to the development of thinking. Also, adopting appropriate methods to develop students' thinking skills and an educational environment that encourage opinion, judgment, decision-making, analysis, classification, problem solving, and classroom situations that encourage students to show their talents and creativity and to overcome their fears of failure (Yi, Sulaiman, and Baki, 2015).

Khedr (2015) mentioned that the interest in innovation represented in rapid change in societies in all areas require the use of creative abilities to solve problems and face them properly. Facing these problems corresponds to the essential need of individuals and creative minds, such as the tendency to work independently, exploring and discovering the unknown, and conducting experiments, which provides students with an internal motivation beyond all external motives. The interest in creativity and development of creative abilities of students contributes to improving their mental health because the practice of creative activity contributes to meeting some of their needs and satisfying the inherent tendencies in them (Khedr, 2015). Al-Eid (2018) said that the school can increase the creative abilities of students by adapting creative educational methods and programs that provide students with

educational experiences and enrichment educational activities which provide them with training in creative thinking (Al-Eid, 2018).

According to Humaid and Mohamed (2019), every human being has a certain amount of excellence and talent that can be crystallized and polished with education and training (Tomlinson, 1995). The development of creative thinking was one of the priorities of educational issues in the Arab world. Many studies and researches emphasized the role of the teacher in the development of creative thinking among students, including the World Thinking Conference 1997 and the Conference of Educational Curricula and Thinking Development (2000). The Arab Innovation Development Society held a training workshop that included the development of creative thinking skills and the importance of developing the skills of human mind (Humaid & Mohamed, 2019).

Darrar (2019) has highlighted that the interest in teaching social studies and civic education has shifted from memorization-based educational programs to creative educational programs that come from essential ideas and new solutions to the daily problems of individuals and society. Students are then able to make decisions and find ways to solve problems (Darrar, 2019). Furthermore, Khamis (2014) showed that there has been a great change in the philosophy of teaching social studies and civic education based on several factors and elements, including preparing the student to practice different intellectual and technical processes to help him/her researching by self-learning and not being limited to memorizing information, but to be able to create, predict and make decisions (Khamis, 2014).

Al- Alhamuddin and Bukhori (2016) noted that social studies is a field that focuses on the development of thinking skills and strives to provide students with these skills. It is

necessary to have methods, enrichment activities and teaching strategies that are consistent with the content of the curriculum and provide intellectual experiences to students (Alhamuddin & Bukhori, 2016). Additionally, Al-Tamimi (2019) explained that social studies and civic education clearly contribute to the development of a generation of students to be active and effective members of their societies (Al-Tamimi, 2019). Also, Abdi and Rostami (2012) recommended that schools should be provided with all necessary labs, projectors, videotapes, models, samples and maps. It is also important to train the teachers on using them (Abdi & Rostami, 2012).

Gardner (2011) has showed in his book “Frames of Mind”, a new concept of intelligence as an ability of solving the problems faced by the individual with unique and creative abilities that solve the problems creatively and in a natural position. Gardner also believes that the processes of the mind in dealing with the content of the situation is to reach a solution, Gardner's learning style is the group of individual intelligences. Thus, the development of one or all of them facilitates the thinking processes of students. He showed that multiple-intelligence-based teaching has a significant impact on people's learning, understanding information and capability of choice (Gardner, 2011). Also, Al-Binali (2005) noted that the theory of multiple intelligences helps teachers to access the individuals’ learning styles and needs, which can adapt to the diversity of learners' styles (Al-Binali, 2005).

Hussein (2012) pointed out that teaching based on multiple-intelligence makes the students the main focus of the educational process and increases their positivity, activity and interaction during teaching, which leads to students’ love of the scientific materials and the development of their thinking. The teacher must give the students specific activities that are

sensitive to their abilities. Also, strong intelligences can strengthen the weak intelligences. Therefore, the educational material must be presented in a variety of different ways and methods in order to take into account the individual differences between students and evaluate the students in different ways based on the strengths and weaknesses of their intelligence. The perception of students as intelligent and vulnerable is then changed to be regarded as different intelligentsia (Hussein, 2012).

According to the above, it was found that there is paucity in the studies that dealt with employing the strategy of multiple intelligences in the development of creative thinking in social studies and civic education in private schools in Abu Dhabi. Thus, this study aims to reveal the influence of the multiple intelligences' strategy on the ninth-grade students in private schools in Abu Dhabi. We must harness the efforts and activate multiple intelligences to apply them in curricula and educational gates for effective training that meet the needs of learners, and exclude the imposition of ready knowledge in favour of work discovery, research and experimentation by trial. Moreover, students can adopt their knowledge and experience through group research and dialogue with a degree of independence taking into account the mental and personal development of students.

1.3 Study Rationale

The importance of the development of creative thinking among students in social and civic studies is the reason for choosing this topic. The focus was on the influence of multiple intelligences-based learning as an independent variable, because it is one of the most important factors that develop students' creative thinking in social and civic studies.

Furthermore, the focus on the influence of the multiple intelligences-based learning as an independent variable helps the teacher to expand his/her learning strategies and design curricula that address educational content based on creative thinking and skills in accordance with the needs of the age, students' needs, desires, abilities and tendencies.

1.4 Problem Statement

Thinking is one of the most important characteristics that distinguish humans and transcend them from the rest of other creatures, the Almighty said: [Those who remember Allah while standing, sitting or (reclining) on their backs, and reflect in the creation of the heavens and the earth, 'Our Lord! You have not created this in vain. Glory to You! Save us, then, from the chastisement of the Fire]. (Surah Aal 'Imran 3:191)

The need for a person to think is a matter of life that accompanies him in all life stages. The ability of a person to think at various levels depends on what he is exposed to and the factors surrounding him, such as the material, social and cultural factors. Descartes said "I think, therefore I am" because thinking has a direct, interrelated and close relationship with human existence. The world has become more complex as a result of contemporary challenges imposed by information technology. That is why success in facing these challenges does not depend on the amount of knowledge as much as it depends on how to use and apply knowledge. Teaching thinking has become a necessity as the best solution to face these challenges. It has become the most important goal of contemporary education in the educational institutions. The study of Al-Hababi (2013) confirmed that interest in

thinking helps to reinforce positive trends among students and gives them the ability to gain new experiences through these skills that they gain by researching, investigating and reasoning, finding solutions, adjusting their directions, which increases the student's self-confidence and improves ability of self-learning.

Learning depends on the students' responses to the educational attitudes provided by the school on the knowledge, preparations, capabilities, skills, previous experiences and the general personality traits they possess. This means that the student's input determines the quality and number of his responses, and the student's inputs in fact are the product of thinking (Al-Obaidi, 2010). Although those in charge of education in the Arab world frequently talk about development and teaching thinking skills, there is still an actual deficiency in changing the teaching and learning approaches as they still test their students in most school subjects with questions that measure stored information and not the ability to think. Mahmoud (2016) pointed out that the majority of our schools in the Arab world and the third world do not pay much attention to the development of thinking, and most of their interest is limited to indoctrinating learners with a quantity of knowledge that the student is often unable to employ in his working life. Qatami (2014) has confirmed that the student is not a traveling book anymore in the developed world.

Thinking is a human behavior that cannot be dispensed with. Any defect in it leads to a disturbance in the learner's performance in solving the problems and obstacles that face him in his life and prevents the realization of his innate and acquired needs and motivations. Without thinking, these needs are not satisfied, which leads to a defect in the psychological balance and failure to adapt to the environment. This will consequently lead to a loss of ability to pay attention and acquire new experiences, habits and trends due to the inability to

differentiate, relate, conclude, analyze and interpret. (Ruzzuqi and Latif, 2018). Many studies, such as (Al-Bulushi, 2010), (Darrar, 2019), (Al-Binali, 2005) and (Ahmed, 2018) indicate that huge numbers of students graduate from schools with mental abilities that are limited to remembering and recalling information, and they lack the ability to use information in reaching informed choices, alternatives or decisions. This reflects negatively on the development of societies in general and individuals in particular.

Several studies, such as Mahmoud (2013), Abu-Nada (2016), Al-Juraidi (2017) and Najm (2012) have confirmed the lack of interest in educational institutions in developing thinking among students; they rather use the prevailing pattern in the educational process and the low student practices of thinking skills in the classroom. All previous studies have confirmed that educational institutions must strive to advance the educational and learning process from the culture of indoctrination to a culture of creativity and thinking. Additionally, they must work to provide all educational opportunities that help to develop thinking for students, and to use all available means for that, whether by developing curricula and educational resources or by following modern teaching styles and evaluation methods.

It is necessary to refer to the annual report of the Knowledge and Human Development Authority in the United Arab Emirates, which revealed the results of school control process over the past ten years. The results showed common features between private schools with acceptable or poor performance. One of these features is the lack of focus on active and practical learning that encourages creativity and innovation which is likely to deprive many children and students of developing thinking skills and high-quality independent learning. Also, a minority of teachers did not plan to offer activities capable of developing students' skills effectively based on individual differences. Moreover, teachers

do not possess the necessary proficiency in using questioning methods in a way that enables students to achieve a deeper understanding which enhances their thinking skills. They do not initiate open-ended problems and applications for their students during classes and assessments. The higher-order thinking skills of students in most private schools are not adequately developed, including inquiry, critical thinking, creative thinking and research skills. This is also the case in private schools with curricula that require a strong focus on students' acquisition of these skills. Teachers do not always plan to provide activities that effectively promote the development of these skills in a sequential and gradual fashion for students, taking into account individual differences (Knowledge and Human Development Authority, 2011).

The lack of social studies teachers' use of thinking skills, such as critical thinking and creative thinking in the introductory and advanced levels and the combined skills in general, as demonstrated by Al-Binali's study (2005) and Assaf's study (2013) who found that students often participate in learning the subject of social studies and show interest in the topics taught to them, but the use of critical thinking and creative thinking skills and the challenges facing students are less compared to the rest of the subjects. The focus of the evaluation processes was narrow and limited to assessing students' knowledge acquisition and preservation of knowledge rather than focusing on students' understanding of concepts and developing their skills and thinking (Knowledge and Human Development Authority, 2018).

It is necessary to develop educational policies and use strategies and means to enhance thinking in the classes. One of the means that can contribute to the development of creative thinking among students is the application of multiple-intelligence in the classroom.

Brahams (1997) pointed out the necessity of attributing the educational process to the theory of multiple-intelligence, where Gardner's theory of multiple- intelligence is an excellent framework for finding strength in all students. According to Gardner, all children possess somewhat the seven intelligences, and a variety of these intelligences can be developed from the incorporation of these intelligences into the curricula of social studies. Abraham has also explained that people who discover their unique intelligence or intelligences early in life will be motivated to develop those intelligences and practicing the educational process in a constructive and influential manner more than learning based on indoctrination and lecture, which negatively affects the thinking skills necessary to create a generation capable of making various decisions that affect the ability to meet their educational needs and life skills (Brahams, 1997).

Furthermore, many studies have indicated the best educational methods that contribute to the development of thinking patterns among students and the application of multiple-intelligence in the classroom. For example, Yamin (2013) and Tayeh (2016) pointed out the need to base the educational process on the theory of multiple-intelligence. Howard Gardner's theory on multiple-intelligence is an excellent framework for developing students' thinking and taking into account the different thinking styles and skills. Multiple intelligences have not been integrated into the educational curricula. This is confirmed by the study of Al-Khuzaie and Al-Amrani (2013) that the use of learning strategies based on multiple-intelligence in the classroom at an early stage allow students to develop thinking skills and patterns. Thus, students have the ability to make decisions and solve problems, which leads to meet their educational needs and life skills and acquire new experiences to keep pace with the wheel of development.

The Knowledge and Human Development Authority in its annual report for the year 2011 recommended for schools the necessity of implementing effective teaching and learning strategies that allow students to participate in their learning through the use of appropriate resources that exceed the range of textbooks that reveal students' abilities and capabilities. They also recommended that students should be able to participate in meaningful conversations, read and respond to a wide range of texts, and write for a variety of purposes and a variety of readers.

The researcher shows that the incorporation of multiple-intelligence theory into curricula and its enhancement in the educational process may significantly affect students' thinking skills in general and creative thinking skills in particular, including four skills (fluency, flexibility, originality and elaboration). Additionally, the study of Al-Masry (2003) showed the need to include creative thinking skills in school curricula, including social studies because it clearly influences the development of creative skills through teaching and application of teaching strategies within the classroom, and this is beneficially reflected in the development of creative thinking. Since the curricula of social studies deal with an important aspect of life, the development of thinking in all its dimensions is a matter of great importance if we prepare our children for a better future. Furthermore, the curricula of social studies can participate in building the appropriate personality and democratic participation because social studies contain scientific content that works to develop learners' thinking by enriching educational situations and making them arouse the interest of students and encourage them to think (Al-Laqani, 1979).

Despite these studies, the researcher believes that there is a need to research and investigate the ability of learning based on multiple-intelligence in developing creative thinking skills to ensure the effectiveness of educational programs that are based on the

theory of multiple- intelligence and their suitability for the semesters in the subject of social studies in private schools in particular.

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1.5 Research Objectives

This study concentrates on the influence of multiple-intelligence-based learning on creative thinking. This includes two main objectives as follows:

1. To determine a statistically significant difference between the experimental and control groups in creative thinking skills (post-test).
2. To determine a statistically significant difference between the experiment-group members in creative thinking skills (post-test) based on gender variable.

1.6 Research Questions

This study will investigate the following two questions based on the influence of multiple-intelligence-based learning on creative thinking:

1. Is there a statistically significant difference between the experimental and control groups in creative thinking skills (post-test)?
2. Is there a statistically significant difference between the experiment-group members in creative thinking skills (post-test) based on gender variable?

1.7 Conceptual Framework

The following framework shows the relationship between the variables of the study (the impact of multiple intelligences-based learning) as an independent variable and (the development of creative thinking) as a dependent variable which includes four skills i.e. fluency, flexibility, originality, and elaboration among ninth graders in private schools in Abu Dhabi. Gardner has introduced eight different types of intelligences consisting of: Linguistic, Logical/Mathematical, Spatial, Bodily-Kinesthetic, Musical, Interpersonal, Intrapersonal, and Naturalist.

The studies conducted by (Abdi & Rostami, 2012; Fleith, Renzulli, & Westberg, 2002; Widiana & Jampel, 2016) showed that creative thinking can be developed in middle school students by training students to enhance creative thinking skills and applying motivational programs for creativity, such as modern multiple-intelligence programs that encourage innovation and learning based on multiple intelligence. The study conducted by Yi, Sulaiman & Baki (2015) confirmed a relationship between multiple-intelligence and the development of creative thinking skills.

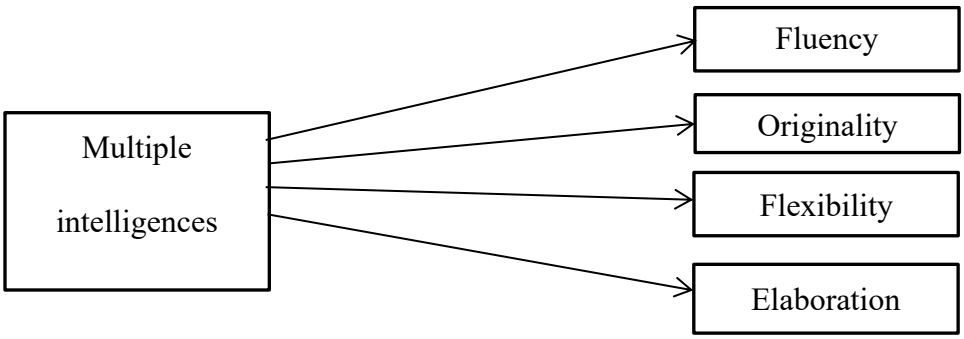

Figure 1.1 Conceptual framework of the study

1.8 Significance of The Study

Generally, the findings of this study will help educators and teachers of social studies and national education subjects to highlight the importance of teaching based on multiple-intelligence in developing creative thinking skills of students. Moreover, this study will contribute to further knowledge and future references for researchers through the findings and data of this study that will help other researchers to understand the effect and influence between multiple-intelligence based learning and developing creative thinking. Furthermore, this study may bring new evidence in developing students' creative thinking using Gardner's theory of multiple-intelligence due to the instrument used in the study to check the influence.

1.9 Study Limitations

The current study is determined by the following variables:

The influence of multiple intelligences-based learning (IV) and the development of creative thinking in social studies (DV), and is determined by the nature of the sample used in the study which are ninth grade students in private schools in Abu Dhabi, UAE.

Time limit: The study began in 2017 and will be completed in 2021.

Human limit: ninth grade students (males and females) in private schools in Abu Dhabi, United Arab Emirates.

Spatial limit: Abu Dhabi, United Arab Emirates.

1.10 Operational Definition

The current research studies two main concepts, namely multiple-intelligence, and creative thinking skills. Therefore, the study will include three operational definitions as follows:

1. **Multiple-intelligence:** This is the score that the student will get in the Gardner Scale of Multiple-intelligences used by the researcher in the present study.

   This scale includes a set of items that classify students according to the type of intelligence to which they belong after answering 64 items.
2. **Thinking:** This is the total score that the student will get in the thinking test used in the current study.
3. **Multiple intelligence-based learning:** It is learning based on a set of class activities and exercises i.e. worksheets, cooperative learning, sports, presentation of visual and auditory presentations, interpretation, investigation, and problem solving related to appropriate strategies for the multiple common intelligence of the study sample (social intelligence, intrapersonal intelligence, logical mathematical intelligence, verbal linguistic intelligence, musical intelligence, naturalistic intelligence, bodily-kinesthetic intelligence, visual spatial intelligence), have been used in this study by teaching the population unit of the Arab world in the subject of social studies for ninth grade students.

1.11 Summary

This chapter provided a brief explanation of the study. It has included the background of the study, problem statement, research objectives, research questions, and research hypothesis. It has also explained the conceptual framework, the significance of the study, the limitation of the study, and operational definitions.