



Creative Thinking Practices among Saudi English as a Foreign Language Teachers

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ABSTRACT

This study aims to identify and classify the degree of creative thinking practices implemented by middle school teachers from their own perspective. All English language teachers in Al Qunfudah School District during the academic year (2012/2013) are included in this study. A questionnaire that addresses four areas has been used to achieve the goals of the current study. The four areas are freedom of expression, methods of teaching and learning activities, creativity acceptance, and evaluation techniques. The questionnaires have been randomly distributed to a sample of 86 teachers. The results show noticeable differences with regard to the educational qualifications, especially for participants holding qualifications higher than a Bachelor's degree, except within the area of "methods of teaching and learning activities". Moreover, results show significant differences within the area of "creativity acceptance" with regard to participants classified as experienced with "five years or less". The study presents recommendations to develop aspects of creative thinking such as providing a secure educational environment that promotes and stimulates student thinking and creativity.

Keywords: Thinking; english teaching methods; middle school.

1. INTRODUCTION

Generally speaking, school is regarded as the social institution created to teach students and to provide them with experiences and skills they will need to become active members of

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society. Furthermore, school plays a fundamental role in positively shaping student thinking such that students can then positively contribute to society. School plays a significant role in enhancing the values that students hold within society by adopting various activities and methods to teach and develop the way students think.

Thinking is an important aspect, as it helps students build their own psychological, social, aesthetical and dynamic personalities. Therefore, all forms of thinking contribute to supporting the educational process, to positively influencing the personality of the student, and to developing the way students think, which, in turn, would influence their role within society and affect the way they address various aspects of life. As a result, students will be more creative, selective and innovative in their thinking about the various aspects of life. In addition, thinking increases the student's ability to self-reflect and to engage in research especially when dealing with unknown resources, thereby preparing them to face current obstacles [1].

The concept of thinking, which emerged at the beginning of the 1970s, created a new dimension within cognitive psychology by opening a new sphere for experimental and theoretical studies of concepts such as intelligence, memory, thinking and learning skills. In fact, the concept of thinking gained considerable interest as scholars began to develop the concept as a method that could teach someone how to think. Henceforth, once someone thinks, he/she will become more aware of one's actions, and it will then be easier to intentionally modify one's actions. Based on the previously mentioned ideas, students can easily grasp all types of thinking in such a way that it allows them to develop their abilities to think, in general, and to think creatively, in particular. This concept could also be applied when teaching English and when training students on the methods of creative thinking while performing related exercises [2].

1.1 Problem of the Study

While issues such as educational development and creative thinking became the center of concern for scholars throughout most of the world, such topics are still in their initial phases in the Arab world, as these countries have limited experiences with regard to the methods of teaching students how to learn and think in school environments. Scholars who are concerned about education assert that the process of teaching students how to think and how to develop their thinking skills is regarded as inefficient. As a part of the educational process, scholars assert that students should be taught in school how to think because creative thinking is one of the main objectives for those societies that seek creativity and development. In addition, if creativity is not encouraged and enhanced when students are in school, it would be difficult to encourage or develop this skill once they have left formal education. Teaching creative thinking requires experienced and qualified teachers to first discover those students who demonstrate creative talent and then supporting them and providing them the appropriate environment so they can improve and develop their creativity.

Based on the aforementioned factors, the topic of creative thinking is an urgent matter that requires more attention, especially for those students enrolled in elementary and intermediate schools. Therefore, English language teachers at middle schools, for example, should provide strong foundations and suitable environments that encourage creative thinking by adopting a number of activities. As these activities should be integrated, flexible and comprehensive, thereby allowing students to think creatively about the subjects in which they are interested, all teachers should be well trained in teaching the art of creative thinking.

1.2 Questions of the Study

This study will discuss the practices middle school English language teachers use to teach creative thinking and the influence these practices have on the development of creative thinking. Accordingly, the study will answer the following questions:

- 1 What is the degree of creative thinking practices among middle school English language teachers based on their own perspectives?
- 2 Are there any significant differences, at $\alpha=0.05$, among middle school English language teachers regarding the practices of creative thinking methods that can be explained by educational qualification?
- 3 Are there any statistical variations, $\alpha=0.05$, among middle school English language teachers regarding the practices of creative thinking methods that can be explained by teaching experience?

1.3 Significance of the Study

Such studies have great significance with regard to developing and improving creative learning among students. The significance of this study is evidenced through a number of aspects. For example, this study basically shifts attention from mimic learning, which relies on simply memorizing information and repeating it, to creative process learning, which focuses on developing creative solutions to problems any student could face. Needless to say, creative thinking has significant influence on the development of society because it helps find and create solutions to any problem that people and society might encounter. Moreover, the current study explores the effect that educated people have and the creative abilities they acquire to prove that creativity is something that all individuals can develop if they are provided with the appropriate circumstances and environment.

1.4 Objectives of the Study

The main objective of this study is to recognize the self-perceived practices of creative thinking among middle school teachers. Moreover, this study seeks to familiarize teachers with creative thinking skills so they can adapt and incorporate them into their teaching strategies.

1.5 Delimitations of the Study

With regard to human limitations, the study focuses on teachers of English at the middle school level, and accordingly, the sample for the study includes English teachers at middle schools located in Al Qunfudah city. The study was conducted during the first semester of 2012-2013 academic year.

1.6 Literature Review

Torrance defines creative thinking as the process of feeling problems, the understanding of weakness and a lack of harmony. That is, creative thinking essentially involves studying problems, reframing new theories, and then testing and modifying the theories to identify the suitable solutions based on the available data [2].

2. METHODOLOGY

2.1 Creative Thinking Interpretation Theories

2.1.1 Guilford theory

Guilford, an American scholar, is considered to be one of the leading figures within the field of psychological measurement, innovation, creativity and mental ability. Guilford's study about mental abilities, in which he discusses the reinforcement of the initial features of the mind, creativity and thinking, is one of the most significant theories in the second half of the twentieth century. Guilford believes that the abilities of the human mind are the result of the interactions among four types of information (auditory, visual, symbolic, semantic/behavioral) and five mental processes (cognition, memory, divergent production, convergent production and evaluation). The interactions then lead to the production of six mental types: unit, class, relation, system, transformation and implication. Together, the traditional and creative mental abilities total one hundred and twenty abilities, which would equate to $4 \times 5 \times 6 = 120$. The one hundred and twenty abilities would be divided into twenty-four creative abilities and ninety-six traditional abilities. While these abilities are integrated and interconnected with each other, humans rarely use these abilities [3]. In 1975, Guilford claims that the brain of the human consists of a visual and an audible part, i.e., two distinguishable parts.

In his research, Guilford [3] increases the number of abilities of the human brain to one hundred and eighty. While framing his theory, he depends on the fact that human memory consists of two processes, namely, recording memory and retention memory. Consequently, this means that the number of creative abilities is approximately thirty and the number of traditional abilities is approximately one hundred and fifty.

Guilford greatly influenced the field of creative and innovative studies by shifting the attention of the researcher toward the need to concentrate on man's creative and innovative abilities. In addition, he shows that creative abilities cannot be separated from general abilities, as the creative aspect takes into consideration the extent to which the individual excels in one or more of the information types and the interactions with one or more of the mental processes.

Furthermore, Guilford argues that all human beings are equal in their mental and creative abilities and claims that any individual can be innovative in any given field, such as science, literature art or sport providing he/she receives the suitable strategies and teaching to do so. However, creativity cannot be acquired without the appropriate knowledge required for the specific field of study. With regard to this point, scholars such as Torrance and Barnes Zoller confirm their theory, which states that creative thinking skills can be increased via suitable strategies. Russian and Japanese psychologists and scholars as well as experts in education concur with this argument regarding the development of creative thinking [4].

2.1.2 The factors theory

The factors theory summarizes and explains an aspect under study using a correlation of various factors. Spearman, one of the scholars who support the factors theory, clarifies that creativity is a mental process that relies upon an unknown ability. He relates his explanation about the process of creativity to experience, relations and specifics, the three basics of any mental activity of individuals. Guilford, however, asserts that the process of thinking is basically a mental activity that is interconnected with creative thinking. He further clarifies a

significant issue about creativity and creative productions, confirming that any human being can think creatively and therefore may possess creative abilities. However, at the same time, these individuals cannot be creative if they are not provided with a suitable environment. Considered one of the leading figures of the twentieth century with regard to creativity theories [1], Torrance claims that individuals can build their creativity once they become sensitive to the problems they face. Thus, he enthusiastically conducts studies regarding information and cognitive evidence from which he then frames assumptions, tests the validity of those assumptions and modifies them accordingly. Torrance argues that it is important to note the features that characterize creative individuals, as he attributes these features to his belief in reward and enhancement within the individual's creative life. He discusses creativity from the vantage point of the mental creative abilities (fluency, flexibility, originality and elaboration).

2.1.3 Multiple intelligences theory

Studies conducted by Gardner reveal that there are more than seventy-two types of multi-intelligences that present several styles of intelligences, and they all have the same significant level. Generally speaking, intelligence can be taught and improved during the very early stages of ability development. The significance of the theory comes from the fact that it relies on describing the student's grades and whether he gets higher grades than his peers and whether he cooperates with his teacher. This theory does not rely on the evaluation of individuals or on traditional tests of intelligence. Rather, it evaluates whether the student solves problems using innovative and creative methods, and whether the student uses logical strategies to solve problems by replacing or adding information and investing any available opportunities. This certainly makes the theory more inclusive with regard to the large number of students who receive attention and who want to be creative and to excel at any aspect of the multi-intelligences. Accordingly, this will lead to easy discovery of talented and creative students. Gardner states that every child can be talented in one or more types of intelligences. In addition, multi-intelligences theory has several educational concepts regarding children with disabilities, as it takes into consideration that they could be creative and strong in several aspects that could allow them to avoid their disability by using other strong and creative alternatives to invest their intelligences [5].

2.1.4 Psychoanalysis theory

Freud believes that creativity is interconnected with the psychological tension in its basics and dynamics and confirms that creativity is a psychological human struggle. That is, it would be a challenging defensive method to face the libido, which leads to unacceptable thoughts, within society. In other words, the struggle between instinctive desires, the id, and things that are accepted socially will usually result in the production of a defense mechanism called displacement. The function of this mechanism is to assess actions and make them more acceptable within society, i.e., creativity. Scholars of this theory claim that creativity mainly releases tension, which in turn develops the connection between the ego and the id. This will unconsciously improve the ideas and result in creativity due to the complicated psychological mechanism of regression where the ego serves to stop the temporal restrictions, thus allowing the unconscious to express itself in an image of productive creativity. This would occur via the following steps.

- **Inspiration level**

Creative individuals within this level distinguish and recognize the realizations of children that can be composed through motivated activities that imaginatively improve free thinking.

- **Elaboration level**

Within this level, the initial scientific substance will be transferred as a system through the ego which will, in turn, control and direct unconscious substances towards problems to motivate individuals to find creative solutions. Scholars of psychoanalysis mainly concentrate on three concepts, namely, the id, the ego and the super ego, with an interest in the emotional and affective aspects while ignoring the mentality of creativity [6].

2.1.5 Behaviorism theory

Behaviorism theory addresses human behavior as a group of stimulations and their responses. These behaviors could be developed to reach the creative levels based on the enhancements that the individual receives. Therefore, enhancements and behaviors are elements that are strongly connected where the relation between a response and stimulation acts as the foundation. Accordingly, the responses that are stimulated would be enhanced, while responses that are not stimulated would be excluded (operant conditioning) [7]

2.1.6 Human capital theory

This theory proposes that creative thinking is the result of the experiences that the individual passes through during his lifetime. Therefore, scholars of human capital theory believe that all humans have the ability for creativity if they are provided with a creative environment and are mentally healthy. Al-Zayat [8] states that the theory relies on the degree of open-mindedness of society. Furthermore, individuals understand themselves based on their abilities, which are characterized by their creativity [9].

2.1.7 Creative thinking abilities

With regard to creative thinking abilities, there are a number of cognitive tasks that stimulate individuals to engage in creative activities. Similarly, Guilford describes the cognitive form as the accumulation of various modifications and productions of distance thinking abilities [9]. Some of these abilities are:

2.1.7.1 Fluency

Hussein (f2005) concludes that Torrance illustrates fluency as the established ability to present the largest possible number of responses that could occur within a limited period of time. Guilford classifies more subtypes of fluency:

2.1.7.1.1 Verbal fluency

Verbal fluency is the quick productive ability to engage in verbal activities, such as using words that convey meaning and concepts. That is, meaning dominates verbal fluency.

2.1.7.1.2 Associational fluency

Associational fluency expresses the distant production of the relations between meanings to form and shape cognitive ability. It represents the ability to produce suitable relations, correlations and associations in meanings regarding specific ideas. For example, poets and writers enjoy such ability, as associational fluency requires a good cognitive comprehensive base.

2.1.7.1.3 Figural fluency

Figural fluency is an ability that can occur quickly when dealing with several examples, explanations or formations based on figural stimulations or descriptive qualities. This ability occurs when specific words must be put together to create appropriate sentences.

2.1.7.1.4 Ideational fluency

Ideational fluency is responsible for quick thinking with regard to producing connected speech with good linguistics, i.e., the continuous sequence of sounds forming utterances or conversations in spoken language. Furthermore, this ability is responsible for expressing distance thinking with respect to the unity of meaning.

2.1.7.2 Flexibility

Guilford believes that flexibility addresses the "how" and the diversity of responses. Fluency differs from flexibility that fluency concentrates on the quantity and speed of the responses. Flexibility can be divided into two categories, as classified by Guilford, namely, spontaneous flexibility and adaptive flexibility. Spontaneous flexibility includes the ability to create suitable responses for problems that are classified as non-typical as well as the ability to control and guide our ideas.

2.1.7.3 Originality

In his model of thinking factors, Guilford states that originality, considered to be the ultimate factor, does not depend on the aspect of content. Moreover, originality has been found to require indirect responses that are unique, interesting and extraordinary with respect to their type. Originality can be defined as the ability to simultaneously produce the ultimate number of indirect responses or unusual interesting responses. Furthermore, originality expresses the conveyance of meanings and, therefore, is measured according to three aspects - unfamiliarity, skills and associations.

2.1.7.4 Elaboration factors

Elaboration factors include figural and conceptual content. Therefore, elaboration factors are usually measured using figural and verbal tests that assess figural and verbal details.

2.2 Hindrances and Delays in Creative Thinking

Hindrances and delays related to creative thinking are several. The following are some of the factors that could obstruct creative thinking.

2.2.1 Internal hindrances

This type of hindrance includes personal and environmental delays as well as hindrances regarding problem solving. As such, a lack of confidence, a person's resistance to use the imagination, one's inability to handle difficulties or to accept new ideas and other opinions, a lack of information, a weakness in potentialities, the absence of making effort or consulting experts, strict traditions and fear of failure are all examples of internal hindrances.

2.2.2 External hindrances

There are numerous external factors that may obstruct an individual's creative thinking ability. Feeling unsafe; experiencing serious economic problems in the family; living under a dictatorship or in a non-democratic society; being constrained from expressing one's opinions; working under tight constraints due to curriculum governed by time, tests, results, or intensity; working under stressful situations due to negative relations between teachers and students; learning in an environment where traditional teaching techniques are dominant are examples of external hindrances [10].

2.2.3 Individual hindrances

Al-Howaidi et al. [10] indicates that some obstacles and barriers can be linked directly to the individual. The following examples are individual obstacles that could delay or hinder the creative thinking process.

- Over time, an individual may adapt a dominant way or pattern of thinking that causes the individual to think in the same way day after day. For example, an individual is likely to respond in the same way every time he/she faces similar problems even though there could be easier and more appropriate solutions if one's way of thinking were to change. Therefore, providing individuals with effective training programs regarding suitable ways of thinking could minimize or eliminate such obstacles.
- A lack of challenge and motivation as well as excitement may also reduce the ability of an individual to creatively solve problems.
- The lack of communication with others is also an obstacle that may delay the creative thinking process. This is attributed to the fact that, with the lack of communication, individuals do not share their ideas with each other, and consequently, cannot learn from each other. A lack of communication could be attributed to many reasons, such as differences in language and culture among individuals.
- The individual's fear of failure and lack of confidence.
- The use of only one sense during the thinking process and a disregard for other senses and other sensory stimuli.

2.3 Previous Studies

There are a number of studies related to this topic, as it is considered to be an issue of significance even though it is regarded as relatively new. Trad [11], for instance, conducts a study to identify and determine the impact that Costa and Kallick have on developing and improving creative thinking through the use of mental processes for third year sport students. The aim of his study is to determine the differences among students in developing and improving their creative thinking processes, which then leads to the study and improvement

of the gender variable. Within the study, the empirical approach as well as the technique of equivalent sets, known as the regulator set and empirical set, have been used because both are considered suitable for this study. The study consists of a sample of sixty male and female students in their third year of study in the college of sport at Babel University. The researcher has divided the sample into thirty males and twenty-two females. The students are divided randomly into two groups, an experimental and a control group. Each group has been divided to include fifteen male students and eleven female students, and all members of the sample have previously been tested for creative thinking using the Torrance measurement. The study contains ten actual and effective units that engage the mental processes of the participants. Every educational unit takes sixty minutes, and one unit is administered every week. Thus, the administration of the program takes approximately ten weeks. After the two groups have completed the ten units of the experiment study, the researcher conducts tests to examine the creative thinking processes via the use of the Torrance measurement. The researcher determined that the Costa and Kallik program positively influences teaching and improves the mental processes – originality, fluency, and flexibility - as related to creative thinking of students for males and females studying in the college of sport.

Furthermore, Al-Sulaiman [12] has conducted a study aimed to identify creative abilities, namely originality, fluency and flexibility. Within Al-Sulaiman's study, the tests for verbal and figural creativity were administered to a sample of males and females in their third secondary class (scientific branch) at Al Riyadh. The study concluded that both genders prefer the figural tests because they allow for more originality, while male students prefer the verbal tests with regard to flexibility. Moreover, it seems that there are numerical differences between the responses of males and females with respect to the adoption of creative figural tests for originality and fluency abilities because female students scored better for both. It also appears that there are significant differences between the responses for males and females regarding the application of verbal creative tests for fluency and flexibility, in which female students again outperformed male students. In addition, the study revealed that there is a clear numerical difference with respect to family economic status, thus indicating that it has an effect on the figural creative tests for originality, fluency and flexibility abilities. However, such significant differences do not seem to exist with respect to the verbal creative tests.

Al-Khadra [13] has conducted a study aimed to determine the efficiency of a specific suggested program to teach creative thinking to females in the eighth grade studying at a middle school in Jeddah. This study is conducted to enhance critical thinking skills, creativity, and innovation with respect to the outcomes of teaching a history unit on the Umayyad. Within this study, the sample consists of 70 eighth-grade female students. The students chosen for the study are divided into three groups. The first group has received critical thinking training, the second group has received creative thinking training and the third group represents the conventional (traditional) way and has not received either critical or creative thinking training. The study reveals that there are no differences in the efficiency of the suggested program when integrated with the Umayyad unit with regard to the enhancement of improving creative and/or critical thinking skills.

Amor [14] has conducted a study aimed to determine the influence of a thinking process program designed for practical life situations on improving the creative thinking skills of students in primary schools. The sample of the study consists of one hundred and sixty students, both males and females, in the sixth primary class. The first and second groups consist of forty-five male students and thirty-five female students each, while the third

conventional group has the same number, forty-five males and thirty-five females. The study reveals that significant differences appear between the groups as the first and second groups, which trained on the Torrance test for verbal creative thinking, received higher percentages than the third group. In addition, it appears that there are no differences based on gender.

Via her study, Edith [15] tries to identify the perception of the teachers in Ontario City, Canada, towards creative thinking skills for talented students. To achieve the goal of the study, the researcher has adopted the quality approach as she conducts qualitative interviews with twenty teachers who teach students at the primary level. During the interviews, she asks the teachers about the creative thinking techniques and learning methods preferred by their students. She investigates the characteristics for talent identified among the outstanding students for whom she has examined the data and then quantitatively analyzes the data. She determined through her analysis that most students are characterized by persistence and by the ability to self-express. However, teachers stated that when students engage in self-learning technique, they learn more flexibly and demonstrate creative energetic characteristics such as innovation and brainstorming. The study also concluded that teachers engage in lyric and enrichment activities with both talented and regular students, as they are important activities that improve creative thinking.

Caeve [16] has conducted a study aimed to identify the relationship between the characteristics of teachers regarding their techniques during the teaching process and the performance of students including their achievements of the Torrance test for creative thinking. The sample used for this study consists of twenty American teachers who teach two hundred and fifty male and female students studying at a middle school in Louisiana. The methodology used within the study is to record the lectures and activities of teachers on video tapes and calculate the grades of students using the Torrance assessment for creative thinking. The study concludes that the teachers are characterized by the use of group method teaching, the practical application of theories and the intention to learn creative thinking.

Van Antwerp [17] has conducted a study where the researcher examines the influence that the teacher's use of imagination and portrayal to improve creative thinking has on the achievement of students. Within this study, the researcher uses a sample eighty-eight male and female students who study at schools located in the suburbs of Keep town in South Africa. Van Antwerp classifies the students into two groups, namely, the conventional and the empirical, and the study has concluded that there are numerical differences between the two groups, as the empirical group received a higher percentage on the assessment.

Ogawa [18], in his study, determines the variations in responses between students in a sample taken from the American society and students in a sample taken from Japan with respect to both verbal and figural creative tests. The sample consists of one hundred and fourteen 11- to 12-year-old students of both genders in their fifth and sixth primary grades. The study consists of thirty-five males and thirty-eight females from Japan and seventeen males and twenty-four females from the United States. The study reveals that there are no numerical variations between the Japanese and American students regarding the figural tests, a finding that is not consistent with previous studies because no significant differences are revealed regarding creative ability on verbal tests between the American and Japanese students. However, American students surpassed the Japanese students regarding originality on the figural tests.

2.4 Comments on the Previous Studies

The majority of the previous studies have a concern about both teachers and students with respect to the same topic, such as that in the study conducted by Al-Khadra [13]. Moreover, it is clear that some studies, such as that of [15], notably aim to identify the awareness of teachers regarding the issue of creative thinking skills. It is also clearly evident from the studies that the role of teachers in enhancing creative thinking skills in students is crucial. However, the studies still vary, with differences in their objectives, their samples and their tools, as they try to identify and evaluate the creative thinking practices in middle schools from the perspectives of English language teachers. Upon examining the previous studies, the researcher determines that further study is needed, and a new tool must be built to study and explain the results.

2.5 Methodology

The descriptive analytic approach is used in this study because it completely fits the subject and the nature of the study. Data and questionnaires administered to middle school English language teachers in Al Qunfudah City for the year 2012-2013 are analyzed and conclusions drawn accordingly.

2.6 Population

The population of the study includes all English language teachers at schools that are under the administration of the Ministry of Education in Al Qunfudah City. There are one hundred and ninety-three teachers, according to the statistics of the Ministry of Education in Al Qunfudah for the year 2012-2013.

2.7 Sample

For the study, 44.56% of the population has been randomly chosen as the sample for the study, which translates to eighty-six teachers. Table 1 identifies the distribution of the sample population based on specific variables.

2.8 Instrument

One questionnaire is administered by the researcher for the “degree of creative thinking practices among English teachers at middle schools from their perspectives”. The questionnaire consists of thirty statements distributed among four dimensions: freedom of expression, creative acceptance, teaching methods and activities, and evaluation techniques.

Table 1. Distribution of the population of the study sample based on the variables

Variables	Levels	Frequency	Percentage
Educational qualifications	Bachelor's degree or less	63	73.26%
	More than a Bachelor's degree	23	%26.74
Years of experience	Less than 5 years	25	%29.07
	5- 10 years	36	%41.86
	More than 10 years	25	%29.07
Total		86	%100.00

2.9 Reliability of the Questionnaire

The reliability of the questionnaire was assessed by the researcher through application and reapplication. The questionnaire was administered to a sample of twenty-six teachers who were not from the study sample. The researcher calculated Pearson's correlation among the results as they varied within the four dimensions between the values of (0.84- 0.91). The value of the correlation for the total questionnaire was calculated at (0.88) where Cronbach's alpha was applied by the researcher to identify the consistency of paragraphs. Moreover, the values varied within dimensions between (0.83) and (0.90) and was (0.90) for the total questionnaire. Thus, the two ways were deemed acceptable with regard to this questionnaire.

A five-point Likert scale was applied with the following levels (very strong, strong, medium, low and very low). The researcher used the numbers (1,2,3,4,5) as digital estimations to evaluate the degree of creative thinking practiced by middle school English language teachers. The researcher used the statistical scale report to distribute the arithmetic means.

- (1.00 - 2.49), low level of practice.
- (2.50 - 3.49), medium level of practice.
- (3.50 - 5.00), high level of practice.

2.10 Variables of the Study

The study contains dependent and independent variables. The first independent variable is the qualification degree, which is divided into two categories - Bachelor's degree or less and more than a Bachelor's degree. The second independent variable is teaching experience, which is divided into three levels: less than five years, five to ten years and more than ten years. The dependent variable is the degree of creative thinking practices among middle school English language teachers.

2.11 Statistical Procedures

A number of statistical processes have been used in this study, including arithmetic mean, standard deviation, the t-test for the independent sample, a one way analysis of variance and the Scheffe's test.

3. RESULTS AND DISCUSSION

The results of this study are presented and revealed upon the collection and analyses of the data to the extent that they answer the following three questions, each of which is addressed with the aid of tables that show the results.

3.1 First Research Question

- What is the degree of creative thinking practices among middle school English language teachers based on their own perspectives?

Within the study, the arithmetic means and standard deviations are calculated to evaluate the creative thinking that is self-perceived by middle school teachers of the English language

within the dimensions of the questionnaire, as this will answer the aforementioned question. This is clearly presented in Table 2.

Table 2. Means and standard deviations: Degree of creative thinking practices

Rank	Number	Dimensions	Mean value*	Standard deviation	Degree of practice
1	1	Freedom of expressing opinion	3.75	0.55	High
2	2	Acceptance of creativity	3.33	0.58	Middle
3	3	Educational activities and teaching methods	3.25	0.49	Middle
4	4	Evaluation methods	3.10	0.50	Middle
Total			3.35	0.33	Middle

**Highest value out of (5)*

Within Table 2, one can see that "Freedom of expressing opinion" ranks first according to its mean value (3.75) and its standard deviation (0.55). Furthermore, "Acceptance of creativity" is positioned in second place with a mean value of (3.33) and a standard deviation of (0.58). "Educational activities and teaching methods" with a mean value of (3.25) and a standard deviation of (0.49) comes in third, while "Evaluation methods" assumes last place with a mean value of (3.10) and a standard deviation of (0.50). It is significant to note that the average mean value of the estimations for the middle school English language teachers on this dimension is (3.35), and the average standard deviation is (0.33), reflecting a mid-degree with respect to practice.

The researcher believes that freedom to express one's opinion is one of the most important dimensions, as it reveals the significant role that teachers play in guiding students toward a way of thinking. Such freedom allows teachers to easily discuss any educational difficulties that students are facing. Accordingly, this allow teachers the freedom to use and discuss current events within the educational setting and thereby suggest and present knowledgeable, relevant educational issues to students. This, in turn, contributes to the enhancement of students' literacy and knowledge as well as to the ability for teachers to be trained on discussion and dialogue techniques regarding various educational situations they may encounter in the classroom. One more important aspect is the acceptance of creativity, as this means that teachers encourage and motivate students to use inference and dialogue as they explore and evaluate situations or problems suggested by students. Acceptance of creativity suggests that teachers will usually accept the opinions of students because doing so encourages students to be more innovative and to discover appropriate solutions without interference. Evaluation methods include the practices of actual evaluation methods adopted by teachers during any educational situation, including student training on creative questions with qualitative answers. This result is quite similar to that of [12].

The mean values and standard deviations for the estimations of middle school English language teachers are calculated in this study according to the teachers' degree of practicing creative thinking with regard to the items on the questionnaire. These items are separated into four dimensions.

3.1.1 First dimension

The mean values and standard deviations for the estimations of middle school English language teachers regarding the points for this dimension are presented in Table 3.

Table 3. Means and standard deviations: Freedom of expression

Item	Mean value*	Standard deviation	Binding degree
3 Avoid using methods that hinder student thinking	4.23	0.95	High
6 Discuss ideas suggested by students	4.07	1.17	High
4 Give students time to listen to their answers	4.00	1.07	High
5 Accept the opinions of the students no matter how strange	3.67	1.24	High
1 Accept ideas suggested by students	3.62	1.28	High
2 Urge students to speak about their rights	3.53	1.20	High
7 Allow students the freedom to express themselves	3.15	1.05	Middle
Total	3.75	0.55	High

**Highest value out of (5)*

Table 3 indicates that point (3), "Avoid using methods that hinder student thinking", ranks first with a mean value of (4.23) and a standard deviation of (0.95), while point (6), "Discuss ideas that students suggest" follows in second position with a mean value of (4.07) and a standard deviation of (1.17). Finally, point (7), "Allow students the freedom to express themselves", is in last place with a mean value of (3.15) and standard deviation of (1.05). It is notable that the average mean value for the estimations of middle school English language teachers with regard to this dimension is (3.75) and the standard deviation is (0.55). This indicates that freedom of expression is perceived by middle school English language teachers to be of great importance, and they implement the strategies to a high degree.

3.1.2 Second dimension

The mean values and standard deviations for the estimations of middle school English language teachers are described according to the items for this dimension.

As previously mentioned, the results regarding acceptance of creativity are revealed through the points presented in Table 4 in descending order. It is clear that point (8), namely, "motivate students to search for creative and alternative explanations to a situation" ranks first with a mean value of (3.77) and a standard deviation of (1.23). Point (12), "Praise students' creativity when solving a creative problem" is in second position with a mean value of (3.65) and a standard deviation of (1.18). Finally, point (13) "Give students the opportunity to learn from their mistakes" ranks last with a mean value of (3.07) and a standard deviation of (1.19). The average mean value of the estimations is (3.33), and the average standard deviation is (0.58), indicating that strategies have been implemented to a moderate degree.

Table 4. Means and standard deviations: Acceptance of creativity

	Items	Mean value*	Standard deviation	Binding degree
8	Motivate students to search for creative and alternative explanations to a situation	3.77	1.23	High
12	Praise students' creativity when solving a creative problem	3.65	1.22	High
14	Reinforce creative students logically and physically	3.26	1.18	Middle
10	Suggest cases to students that require they find connections between concepts and facts	3.21	1.12	Middle
11	Give students the opportunity to exchange opinions about offered cases	3.21	0.90	Middle
9	Give students the opportunity to add/remove suitable solutions regarding the educational situation	3.16	1.26	Middle
13	Give students the opportunity to learn from their mistakes	3.07	1.19	Middle
	Total	3.33	0.58	Middle

**Highest value out of (5)*

3.1.3 Third dimension

The mean values and standard deviations for the estimations of middle school English language teachers are calculated for each item as presented in Table 5.

Having mentioned that points are ordered in a descending way, Table 5 presents each item according to its mean value and standard deviation. Point (21), "Think aloud in front of students while solving problems" receives the highest ranking with a mean value of (3.47) and a standard deviation of (1.24). Point (22), "Focus on teaching methods that are centered on the learner", is in second position with a mean value of (3.42) and a standard deviation of (1.25), while point (18), "Use activities that are not used in the classroom to encourage students to think creatively", is in last position with a mean value of (2.92) and standard deviation of (1.07). The average mean value of the estimations regarding this field is (3.25) and the standard deviation is (0.49), indicating that such strategies have been highly practiced.

3.1.4 Fourth dimension

This field addresses "evaluation strategies". The mean values and standard deviations for the estimations are calculated via the points presented in Table 6.

Having examined Table 6, it is clear that point (30), "Focus on the development of students' higher order mental skills", ranks first with a mean value of (3.52) and a standard deviation of (1.05), while point (26), "Ask a variety questions in the field of knowledge originality", ranks second with a mean value of (3.15) and a standard deviation of (1.13). Point (27), "Praise the creative answers of students" is in last place with a mean value of (2.85) and a standard deviation of (1.05). The average mean value for the estimations of the English teachers with respect to this field is (3.10) and the standard deviation is (0.50), which indicates that this category of strategies has been implemented at a moderate level.

Table 5. Means and standard deviations: Estimations of middle school english language teachers

	Items	Mean value*	Standard deviation	Binding degree
21	Think aloud in front of students while solving problems	3.47	1.24	Middle
22	Focus on teaching methods that are centered on the learner	3.42	1.25	Middle
15	Use strategies that motivate creative thinking	3.41	1.15	Middle
20	Focus on using teaching methods and techniques that enhance knowledge	3.41	1.12	Middle
17	Direct students to use what they learn in life	3.29	1.24	Middle
19	Urge students to use creative methods to solve problems	3.19	1.03	Middle
16	Improve teaching methods	3.17	0.96	Middle
23	Respond to students' comments in a way that promotes creative thinking	3.01	1.09	Middle
18	Use activities that are not used in the classroom to encourage students to think creatively	2.92	1.07	Middle
Total		3.25	0.49	Middle

*Highest value out of (5)

Table 6. Means and standard deviations for the estimations of middles school english teachers

	Items	Mean value	Standard deviation	Binding degree
30	Focus on development of students' higher order mental skills	3.52	1.05	High
26	Ask a variety of questions in the field of knowledge originality	3.15	1.13	Middle
28	Present problems that promote self-learning	3.10	1.08	Middle
29	Ask effective questions	3.07	1.10	Middle
25	Ask a variety of questions in the field of knowledge flexibility	3.05	0.94	Middle
24	Ask questions that require knowledge fluency such as: What is the reason (that) yields (this)?	2.95	1.04	Middle
27	Praise the creative answers of students	2.85	1.05	Middle
Total		3.10	0.50	Middle

3.2 Second Research Question

Are there any significant differences, at $\alpha=0.05$, among middle school English language teachers regarding the practices of creative thinking methods that can be explained by educational qualification?

To adequately answer this question, the mean values and standard deviations for the estimations of middle school English language teachers with respect to educational qualification are calculated, as shown in Table 7.

Table 7. Means and standard deviations: Educational qualification

Dimension	Teaching experience	Number	Mean value*	Standard deviation
Freedom to express opinions	Bachelor's degree or less	63	3.78	0.57
	More than a Bachelor's degree	23	3.70	0.51
Acceptance of creativity	Bachelor's degree or less	63	3.37	0.59
	More than a Bachelor's degree	23	3.22	0.55
Educational activities and teaching methods	Bachelor's degree or less	63	3.10	0.47
	More than a Bachelor's degree	23	3.50	0.50
Evaluation methods	Bachelor's degree or less	63	3.07	0.50
	More than a Bachelor's degree	23	3.17	0.48
The tool as a whole	Bachelor's degree or less	63	3.35	0.35
	More than a Bachelor's degree	23	3.37	0.29

Based on Table 7, variations are found between the mean values and standard deviations for the estimations of middle schools English teachers with respect to educational qualification. The t-test is used for the independent samples to explain and show the significant differences between the mean values and standard deviations, as indicated in Table 8.

From Table 8, it is evident that differences exist, with a confidence level of $\alpha \leq 0.05$, among the mean values for the estimations of language teachers with respect to study tool. Teachers who have more than a Bachelor's degree have higher mean values for educational activities and teaching methods. This may be attributed to the fact that teachers with advanced degrees (Master's or PhD) have a broader range of activities that promote creative thinking skills and that these teachers encourage students to be fluent and to express their opinions. Furthermore, they are also more tolerant while listening to scientific opinions given by students during fruitful dialogues. In addition, they allow their students to judge educational situations and thereby inspire their students to effectively demonstrate their talents, creativity and mental abilities. This finding is very similar to that revealed by Edith [15].

3.3 Third Research Question

Are there any statistical variations, $\alpha=0.05$, among middle school English language teachers regarding the practices of creative thinking methods that can be explained by teaching experience?

The mean values and standard deviations for the estimations of middle school English language teachers that are related to teaching experience are calculated and shown in Table 9.

Table 8. T-test results based on educational qualification

Dimensions	Teaching experience	Mean value*	Standard deviation	Degree of freedom	t value	Statistical indication
Freedom to express opinions	Bachelor's degree or less	3.78	0.57	84	0.590	0.557
	More than a Bachelor's degree	3.70	0.51			
Acceptance of creativity	Bachelor's degree or less	3.37	0.59	84	1.109	0.270
	More than a Bachelor's degree	3.22	0.55			
Educational activities and teaching methods	Bachelor's degree or less	3.10	0.47	84	2.663	0.021*
	More than a Bachelor's degree	3.50	0.50			
Evaluation methods	Bachelor's degree or less	3.07	0.50	84	-0.836	0.406
	More than a Bachelor's degree	3.17	0.48			
The tool as a whole	Bachelor's degree or less	3.35	0.35	84	-0.330	0.743
	More than a Bachelor's degree	3.37	0.29			

*Confidence level of $\alpha \leq 0.05$

Table 9 reveals that there are variations among the mean values for the estimations of middle school English language teachers regarding the study tool, teaching experience. The analysis of variance (ANOVA) is used to show the statistical variations among the mean values, as shown in Table 10.

According to Table 10, there are no differences in confidence levels ($\alpha \leq 0.05$) between the mean values for estimations of middle school English language teachers with respect to the study tool field for teaching experience other than for the field acceptance of creativity. In Table 11, the Scheffe's test was used to determine the differences with regard to acceptance of creativity, as shown in Table 11.

It seems that, according to Table 11, that there are some differences between teachers who have less than five years teaching experience and those who have more than five years of experience. It is evident that there is a relationship between teaching experience and the degree of acceptance of creativity, as teachers with less than five years of teaching experience seem to be more accepting of creativity. This may be attributed to the approaches and strategies that less experienced teachers studied while at the university and, therefore, implemented when teaching. This could result in the less experienced teachers being more creative and possessing more creative teaching methods. Moreover, they have likely been taught creative thinking skills - fluency, originality and flexibility - as well as problem solving skills that would allow them to resolve problems they may encounter

while at the university. This will certainly influence their students and contribute to their ability to solve problems in creative ways without help from others. Such teachers encourage students to indulge in fruitful dialogues and discussions without chastising students for their opinions. By adopting new educational strategies and methods, such teachers also encourage their students to discuss problematic aspects as suggested by the teachers. It is notable that this result is similar to that found in the study conducted by [11].

Table 9. Means and standard deviations based on the teaching experience

Dimensions	Teaching experience	Number	Mean value*	Standard deviation
Freedom to express opinions	<5 years	25	3.79	0.64
	5-10 years	36	3.72	0.55
	>10 years	25	3.77	0.49
Acceptance of creativity	<5 years	25	3.51	0.71
	5-10 years	36	3.25	0.53
	>10 years	25	3.22	0.47
Educational activities and teaching methods	<5 years	25	3.23	0.52
	5-10 years	36	3.34	0.51
	>10 years	25	3.16	0.41
Evaluation methods	<5 years	25	3.04	0.46
	5-10 years	36	3.14	0.53
	>10 years	25	3.10	0.49
The tool as a whole	<5 years	25	3.38	0.37
	5-10 years	36	3.37	0.36
	>10 years	25	3.30	0.25

Table 10. Analysis of variance (ANOVA) for differences between the estimations of middle school english language teachers based on teaching experience

Dimensions	Variance source	Summation of square	Degree of freedom	Mean of squares	Value of F	Confidence level
Freedom to express opinions	Among groups	0.070	2	0.035	0.111	0.895
	Within groups	25.998	83	0.313		
	Total	26.067	85			
Acceptance of creativity	Among groups	3.154	2	0.5771	4.750	0.016*
	Within groups	27.517	83	0.332		
	Total	30.671	85			
Educational activities and teaching methods	Among groups	0.500	2	0.250	1.058	0.352
	Within groups	19.615	83	0.236		
	Total	20.115	85			
Evaluation methods	Among groups	0.156	2	0.078	0.311	0.733
	Within groups	20.826	83	0.251		
	Total	20.982	85			

Table 10 Continued.....

The tool as a whole	Among groups	0.100	2	0.050	0.442	0.644
	Within groups	9.383	83	0.113		
	Total	9.483	85			

*Confidence level of $\alpha \leq 0.05$

Table 11. The results of the Scheffe's test on the differences between middle school English language teachers' estimations regarding the degree of acceptance of creativity based on teaching experience

		<5 years	5-10 years	>10 years
Teaching experience	Mean value	3.51	3.25	3.22
<5 years	3.51		0.26*	0.29*
5-10 years	3.25			0.03
>10 years	3.22			

*Confidence level of $\alpha \leq 0.05$

4. CONCLUSION

As a result of this study, the researcher offers some recommendations and conclusions. It is recommended that English teachers take training courses that are related to practicing and teaching creative thinking skills - fluency, originality, flexibility, and problem solving. Moreover, English teachers must adopt ways to stimulate students and encourage them to engage in creative thinking within the educational setting. In addition, teachers should create a suitable and safe environment for students that allows them to express their feelings and explore their imagination and scientific abilities while studying English. Furthermore, it is necessary to include activities in middle school curricula goals that improve creative thinking skills - fluency, flexibility and originality - and to interpret these goals in the form of various activities that enhance abilities and creativities. It is also recommended that university education departments organize the content for English teacher preparation courses taking into consideration the need to provide sufficient training in the teaching of creative thinking approaches - fluency, flexibility, originality, and problem solving. The researcher further suggests that more studies on this topic be conducted using different samples.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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