The Effect of Using the Six Thinking Hats Method on the Development of EFL Female Eleventh Grade Students' Writing Skill in Southern Al- Mazar Directorate of Education

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Abstract

This study aimed at investigating the effect of using the six thinking hats method on the development of EFL female eleventh grade students' writing skill in Al- Mazar directorate of education during the academic year 2013/2014. Also it aimed to investigate if there was an effect for using this method due to the student's level in English Language (high, intermediate and low). The sample of the study consisted of 50 female eleventh grade students from Mu'tah Secondary School for Girls which was selected purposefully and assigned randomly into two groups; an experimental group of 24 students and a control group of 26 students. To achieve the purposes of the study, two topics were chosen from the eleventh grade textbook .The instrument of the study was designed according to the characteristics of the six thinking hats, and then it was assessed for validity and reliability. To guarantee the equivalence of the two groups, the researcher administrated a writing ability pre-test, and then the experimental group was taught using the six thinking hats, whereas the control group was taught according to the conventional method. Descriptive statistics, One Way ANOVA and Scheffe for Multiple comparisons were used to analyze the results of the study. The findings of the study indicated that there were statistically significant differences at α≤0.05 in favor of the experimental group taught according to the six thinking hats. Also it indicated that there were statistically significant differences at α≤0.05 on the post test between the students in the high and intermediate levels in comparison with the students in the low level and in favor of the students in the high and intermediate levels, which means that using the six thinking hats method was more efficient for the students in the high and intermediate levels.

Key Words : Six Thinking Hats **,**EFL Students ,Writing Skill , Applied Linguistics , Psychology

Background of the study

Thinking is the ultimate human resource, yet we can never be satisfied with our most important skill. No matter how well we become, the only people who are very satisfied with their thinking skills are those poor thinkers who believe that the purpose of thinking is to prove yourself right –to your own satisfaction (De Bono, 1995).

People need thinking to sort things out, to bring in information, to explore the situation, to look at things in different methods, to challenge their dogmatism, to decide what they want, to choose, etc. Most practical thinking occurs in this perception area of trying to see things clearly.

Creativity has been defined as more than just divergent thinking for it converges on one solution. It doesn't only generate possibilities but also chooses among them, it is as much asking the right question as finding the right answer (Young, 1985).

Sternberg and Lubert, 1996 mentioned that at the individual level, creativity deals with problem solving on the job and daily life, and at the social level, it deals with new scientific findings, inventions and social programs. Creativity involves judgment and evaluation that might be achieved through divergent and convergent thinking.

A number of authors have described characteristics common to creative thought. Gregory, 2009 for instance, claimed that the following qualities were representative of creative thought: "flexibility; fluency; sensitivity to problems; originality; and the ability to analyze, synthesize and redefine materials and problems and organize them coherently". The famous Torrance Tests of Creative Thinking are based on four comparable creative thinking categories: (1) fluency or number of ideas, (2) flexibility or different categories of ideas, (3) originality or unusualness of ideas, and (4) elaboration or extent of detail provided in ideas (Torrance, 1974).

Developing students thinking skills is considered as one of the most important objectives in Jordanian's curricula in the recent years. As a result of this, many sessions have been conducted by the Ministry of Education to improve teachers' abilities to teach using thinking skills. One of the strategies that could be essential   in developing students' thinking is using six thinking hats, which is an updated and an innovative method to teach thinking skills.

As a part of its interests in developing thinking skills, the Ministry of Education in Jordan created 'The Intel Teach Program' to train teachers on using thinking skills which aims at improving teachers' effectiveness through professional development, helping teachers integrate technology into their lessons and promoting students' problem-solving, critical thinking, and collaboration skills, also this program focuses on enhancing higher thinking skills using a set of thinking tools available on the internet (Ministry of Education , 2006).

Beyer, 1997 suggested that in order to nourish students' thinking, a thoughtful classroom should be created. A thoughtful classroom engages students continuously in purposeful thinking in the pursuit of meaningful learning. It provides encouragement, support, and motivation for students. In a similar sense, a thinking-friendly environment should be created in the organization to support, motivate and encourage employees to think and reason freely. In thinking-friendly environments, people are engaged in the collection, analysis, evaluation and synthesis of information. People in the organization inquire and pose questions about current procedures and operations, search for, produce and evaluate information, knowledge and new mental models, also they venture, carefully consider, and evaluate ideas and explanations and critically examine them in terms of evidence, reasoning, assumption, and implication.

The De Bono Hats system also known as six hats or six thinking hats is a thinking tool for group discussion and individual thinking. Combined with the idea of parallel thinking which is associated with it, it provides a means for groups to think together more effectively, and a means to plan thinking processes in a detailed and cohesive way (De Bono, 1999).

The six thinking hats method and the mapmaking style of thinking extended from De Bone's perceptual method of how the brain works. According to De Bono, the brain is an active (self-organizing) patterning system. De Bono developed the six thinking hats method based directly on this perceptual model. The six hats set up six artificial contexts for thinking which can be put on or removed, metaphorically (De Bono, 1999). The switching of the hats directs the attention to another mode of thinking.

Thinking has various modes: objective thinking, emotional thinking, negative thinking, positive thinking, critical thinking and creative thinking. (De Bono, 1995) used six different colors to represent these different thinking modes and created the six thinking hats method. Each thinking hat is a different style of thinking. These are explained below:

In response to these thinking challenges, Edward De Bono regarded as the leading international authority in the field of conceptual thinking and also the direct teaching of thinking as a skill, created a useful model of thinking called the six thinking hats. The six hats do not cover all aspects of thinking, but they do cover the main modes (De Bono, 1995).

De Bono began by distinguishing six modes of thinking; each is identified with one colored hat:

White Hat - facts, figures, and objective information
Red Hat - emotions, feelings, hunches, intuition
Black Hat - logical negative thoughts, "devil's advocate," why something will not work.
Yellow Hat - logical constructive thoughts, positive aspects of why something will work

Green Hat - creativity, generating new ideas, provocative thoughts, lateral thinking
Blue Hat - control of the other hats, thinking about the thinking process, directs attention to other hats to facilitate "mapmaking" thinking.

Employing the Six Thinking Hats method by De Bono with language is a fun way of solving behavioral problems in class. This method is more effective on students as they are more receptive to this type of approach compared with the direct authoritative and disciplinary approach practiced by many language teachers in the past. Most importantly, it helps to improve students' thinking skills which could be transferred to solving problems in other areas of their life beyond their secondary education (Ren, 2007).

According to (De Bono ,1999), people tend to wear one single color hat while thinking of a problem. This will result in a narrow understanding of the whole issue under consideration. The most effective method of thinking is to wear all six color hats to look at an issue or a problem from all six directions. Where De Bono (1995) argued that to get the full flavor of this role play, it would be ideal to have learners working in groups, it is still valuable to go through the process of looking at an issue or topic from a variety of angles. Six thinking hats help learners think about and analyze topics, problems and situations from multiple points of view. Six thinking hats help learners to look at a given topic systematically, objectively and creatively (Prpic, 1999).

Learning a foreign language allows learners to communicate by using the four skills of English; listening, speaking, reading and writing. Speaking and writing are productive skills, which need a lot of knowledge and fluency to perform them. Students need a good amount of input to speak or to write. Smith- cited in (Goodman, Epsey &Angela, 1998) stated that writing is an important part of language: it is a tool of thinking, reasoning, discovering, creating and sharing of ideas .Writing can be viewed as a mode of learning to convey creative knowledge through various strategies.

According to Brown ,1987 the field of second language pedagogy has developed and matured over the past few decades. In the last twenty five years of the twentieth century, there were great efforts to make use of the communicative approach in EFL as a substitute of the product approach. The communicative approach considers writing a conscious activity that requires mental effort in order to produce something meaningful and communicative.

In the view of the development of the educational system in Jordan and in light of the information age and the scientific challenges of the 21st century, it is necessary to develop Jordanian students' thinking skills to be able to guide economic growth which in turn enables Jordan to compete effectively in the global marketplace (Ministry of education, 2001).

One of the effective instructional methods that helps teachers in creating situations in which students can practice language creatively, is using six thinking hats. De Bono, 1999 argued that we do not have a simple language as a control system for our thinking. He developed the metaphor of six thinking hats to emphasize different kinds of thinking. This process has been widely used in schools to encourage students to think about their own thinking (metacognition). The six thinking hats assist teachers to engage their students in metacognition and they provide a scaffolding tool to assist in this 'thinking about thinking'. The use of this thinking scaffold can also assist students to consider different perspectives on a topic.

This study tries to investigate the most effective methods that might be used to teach English as a foreign language. The researcher noticed that there is a lack in the instructional methods and strategies that teachers use to develop writing skills and help students to express themselves using English language. Therefore, it is very important for the teachers to create an environment that encourages students to think logically and creatively while expressing themselves in writing texts.

Statement of the problem
From their experience a professor of teaching English as a foreign language and a teacher of English language, and during correcting the exams of secondary certificate in general examination, the researchers noticed that students' marks in the writing skills were very low compared with their marks in the rest parts of the exam. Students lack the ability to write meaningful or produce correct texts, also some students don't know how to organize and structure their thoughts for writing in English, and also they have weakness in sentence structure and communicating ideas coherently with grammatical usage. Therefore it is of great importance that teachers should be aware of many instructional methods and strategies that promote students' writing ability, develop their writing skills and encourage them to write correctly.

Writing skill has been given appropriate weight and time in the English curricula (MOE, 2004) but according to the researchers' experience, the achievement is still far from being satisfactory. The researchers believe that, although the content might be relevant both linguistically and topically but the method of instruction is one of the main factors behind the low achievement. Therefore, this study aimed to investigate the effect of using the six thinking hats method on the development of EFL female eleventh grade students' writing skill in Southern Al-Mazar Directorate of Education**.**

Purpose and questions of the study

The purpose of the study is to investigate the effect of using the six thinking hats method on the achievement of EFL eleventh grade students' writing in Al-Mazar Directorate of Education during the second semester 2013/2014.To achieve the purpose of the current study, the following research questions were addressed:

1. Is there an effect of using six thinking hats method on the development of EFL female eleventh grade students' writing skill in Al-Mazar Directorate of Education?
2. Are there any statistical significant differences between the results of the students in the control group and the experimental group due to the effect of the six thinking hats method?

Significance of the study

This study was chosen on the basis of the orientation of the Ministry of Education which shows that developing students thinking is one of the most important skills that Jordanian students need to acquire in order to improve the quality of education and enable new generations to communicate effectively using English language.

Through our experience as specialists of EFL, the researchers noticed that students are unable of producing a meaningful written text using the English language. For example, most of secondary and high school students have problems in writing about any topic and they lack the confidence to express themselves or to write accurately based on the limited knowledge that is gained during learning English, also the conventional methods of teaching writing are no longer effective as they emphasize on a series of steps that students follow to get their final product.

This study is significant for many reasons; first, according to the researchers' best knowledge, there were no studies conducted in Jordan regarding using the six thinking hats in teaching EFL students particularly in writing. Second, it provides teachers with innovative and effective instructional methods in teaching English as a foreign language, as well as developing students to be open minded, and having the ability to make their own decisions and solve their problems in their daily life.

Operational definition of terms:

A. **Six Thinking Hats**: It is a method designed by Edward De Bono which requires students (and teachers), to extend their way of thinking about a topic by wearing a range of different "thinking hats:" The six thinking hats are:
B. White hat thinking focuses on the information available and needed.

1) Black hat thinking examines the difficulties and problems associated with a topic.
2) Yellow hat thinking focuses on benefits and values.
3) Red hat thinking looks at a topic from the point of view of emotions, feelings and hunches.
4) Green hat thinking requires imaginative, creative and lateral thinking about a topic.
5) Blue hat thinking focuses on reflection, metacognition (thinking about the thinking that is required), and the need to manage the thinking process.

For the purpose of this study, six thinking hats is a method used by the researcher to help students develop their writing skill by distributing the roles of thinking on the six modes of thinking through problem solving.

B. **Conventional Method**: the method that is used in the classroom where the teacher follows the suggested procedures of the teacher's guide in the teaching process.
C. **Students' level**: it is the level of eleventh grade students in writing skill which is divided, according to their achievement, into three levels (high above 80%, intermediate from 61-80% and low below 61%).
D. **Eleventh Grade**: It is the first class of the secondary stage .The students are about seventeen years old. They have spent eleven years studying English Language according to the regulations of the Ministry of Education.

Limitations of the study

This study is limited to the female eleventh graders in Southern Al-Mazar Directorate of Education during the second semester of the academic year 2013/2014.

Theoretical framework

De Bono, 1999 developed tools kit, in which he explained the function of these tools through different programs that he developed to improve creative thinking.

The advantages of using six thinking hats

Over the years the results of using the six thinking hats method have become increasingly clear and efficient. The results fall into four broad categories that are summarized here (De Bono, 1999; Pace,2009).

Power: With the six hats method, the intelligence, experience and knowledge of all the members of the group are fully used. Everyone is looking and working in the same direction.

Time Saving : Using the Six Hats method compared with the conventional method saves the time of discussion. Meetings take half the time. Meetings take a third or a quarter of the time. If the Six Hats method reduced all meeting times by 75 percent, you would have created 30 percent more manager time at no extra cost whatsoever.

Removal of Ego: Perhaps the biggest obstacle to quick and effective thinking is the ego. People tend to use thinking to parade their egos. Thinking is used to attack and put down other people. Thinking is used to get your own way. Thinking is used to show others how clever you are. Thinking is used to express personal antagonisms.

Someone will choose to disagree on a point simply to show up the person who has made that point. If another person had made the point, there would have been full agreement. In general, we do not fully realize just how obstructive the ego is in preventing effective thinking.

Confrontational and adversarial thinking exacerbate the ego problem. Six hats thinking remove it. With the six hats method you exert your ego by performing well as a thinker under each of the hats. The six hats method provides neutral and objective exploration of a subject.

One Thing at a Time : Confusion is the biggest enemy of good thinking. We try to do too many things at the same time. We look for information; we are affected by feelings; we seek new ideas and options; we have to be cautious; we want to find benefits. Those are a lot of things that need doing.

With the Six Hats method, we try to do only one thing at a time. There is a time when we look for danger (black hat). There is a time when we seek new ideas (green hat). There is a time when we focus on information (white hat). We do not try to do everything at the same time.

With color printing, each color is printed separately, one at a time, and in the end the full color effect is obtained. It is the same with Six Hat thinking, we do one thing at a time and in the end the full picture emerges (De Bono, 1999).

Also McAleer, 2006 stated the following benefits of using six thinking hats in classroom:

1. The colors and hats provide a visual image that is easy to learn, remember and use.
2. Thinking is visible, focused, in depth, and at higher levels of critical and creative thinking.
3. The strategy can be used on a simple, concrete level or abstract, sophisticated level.
4. Listening, speaking, reading and writing improve with a strategy for focus.
5. Interdisciplinary connections integrate the curriculum.
6. Problem solving, decision making, leadership and independence are developed.
7. Create awareness that there are multiple perspectives on the issue at hand.
8. Students ask quality questions.
9. Student led discussions and projects are focused and in depth.
10. Self-evaluation is systematic.
11. Students develop confidence.
12. Cooperative groups and teamwork are effective and organized.
13. Removal of ego.
14. Time saving".(p.44)

Shortcomings of using six thinking hats in teaching

1. It needs highly capable teachers.
2. It needs extensive preparations such as training students on how to use the six thinking hats and preparing the hats with different colors, also selecting special topics that have divergent ideas.
3. It needs a friendly classroom atmosphere because it is a method based on cooperative learning.
4. It doesn't suit all kinds of topics but only those which need critical thinking and enable students to express their opinions.
4. It might be efficient with some skills for example, speaking whereas it is less efficient with other skills such as listening and reading.

Research on writing emphasizes the connection between writing, thinking and learning .Writing is seen as a tool of thinking and learning (Dolly, 1990). Gregory and Masters,2011 mentioned that writing is a discovery of one's inner thoughts through the medium of thinking, reasoning and communicating. Thinking is related to language as a special mental activity of which thoughts are influenced by the language as it is expressed.

De Bono, 1994 stated that writing is a powerful thinking tool since it encourages supplemental readings, electronic database browsing, and general self-interest explorations. Writing assignments can encourage students to break away from old thought patterns, while personalizing and integrating information presented (Alternatives-Possibilities-Choices (APC) is a useful writing tool for extending student thinking beyond right answers. Though writing activities foster creative thinking, they are even more strongly linked to the development of critical thinking skills. De Bono, 1994 added that there are other strategies that involve a writing component. For instance, Plus-Minus-Interesting (PMI) and Considering-All-Factors (CAF) strategies are both useful for sorting out key ideas prior to initiating a writing assignment. In using the PMI strategy, the student would list pluses or strengths, negatives or weaknesses, and interesting or unusual points prior to starting the writing assignment. Thus, this technique may help refocus students from frequent negative commenting to positive experiences.

One model that applies to both speaking and writing in a second language is Anderson's (1985) model of language production, which can be divided into three stages: construction, in which the writer plans what he/she is going to write by brainstorming, using a mind-map or outline; transformation, in which language rules are applied to transform intended meanings into the form of the message when the writer is composing or revising; and execution, which corresponds to the physical process of producing the text. The first two stages have been described as "setting goals and searching memory for information, then using production systems to generate language in phrases or constituents" (O'Malley & Chamot, 1990).

Bottle (1997) believed that prewriting involves energizing student participation in thinking, talking, group interaction and skeletal writing activities that become organic components of the writing task. Specific prewriting activities such as group brainstorming, clustering help students acquire the target language more effectively. De Bono,1992 defined brainstorming as a main part of prewriting stage ,as a method for developing creative solutions to problems .It works by focusing on a problem and then coming up with many unusual solutions by pushing the idea as far as possible.

Writing has a main role in communication. The learner can express their ideas to convey the intended massages clearly. Rossbery,1989 stated that writing is a purposeful act of communication, but conventional English language programs regarded writing as means of language study more than as a means of communicating ideas .Therefore, learners were taught writing with a focus on producing correct language rather than on selecting, organizing and presenting ideas for effective communication to a reader. In the last twentieth century, the proponents of the communicative approach succeeded in considering writing a conscious a activity that require mental effort in order to produce something meaningful. (Barras, 1996) also stated that writing can help the learner remember, observe, think and communicate effectively. Writing is an important communicative language skill.

Review of related literature

Altaua, 2011 conducted a study aimed at investigating the effect of using the six thinking hats on the achievement of the fifth elementary grade students in the Arabic language grammar in Diba schools. The sample of the study consisted of 125 elementary fifth grade students in Al-Moaleh school in Diba. The sample consisted of two groups experimental and control group of 36 students for each. An achievement test was designed and applied on the experimental and control group.

The results of the study, revelead that the results of achievement test was better due to the group in favor of the experimental group. In light of the results of the study, the researcher proposed that it is essential to apply the six thinking hats strategy in all studying stages and different curricula.

Mofadi, 2010 conducted a study aimed at investigating the effect of Science instruction by multiple -intelligences and six hats strategies on seventh graders' scientific concepts and thinking skills acquisition. The sample of the study consisted of (217) male and female students in Jordan, chosen through stratified random sampling. Achievement tests for scientific concepts and scientific thinking skills acquisition and Mackenzie tool for multiple intelligences were prepared. (K-R20) was used to check the test validity and reliability. The results of the study showed that there were significant differences in seventh graders acquisition of scientific concepts due to the teaching strategy in favor of multiple intelligences and six hats.

Kwayotha & Tantriratna, 2008 conducted a study aimed at investigating the effect of using six thinking hats method and mind mapping in developing the reading, thinking, and writing skills .The sample of the study consisted of nine Students of Ban-mon School, Bantan District during the second semester of 2008. The instrument for data collection including 24 learning management plans and lessons, the students performance assessment , the End Cycle Test , the teachers teaching observation form, the students learning behavioral observation form, and interview form. The research findings found that: For the skill in reading, thinking, and writing of students were higher than the specified criterion as 70/70. For writing skill, according to the students work piece analysis of creative writing, they could be able to use thinking performance in writing using Language in communication as relevant to thinking.

Fodah & Abdo,2005 conducted a study investigating the effect of using De bone's thinking hats, in teaching science on developing the skills of creative thinking on fifth graders .The sample of the study consisted of (146) students of fifth graders in a school in Egypt. The sample was divided into two groups (experimental which was taught using De bone's thinking hats and control which was taught by using the conventional method). The researchers used a measure of creative thinking tendency, and test of creative thinking skills which was created by the researcher. The result of the study indicated that there were significant differences in the mean of the two groups for the favor of the experimental group, which shows the effect of the six thinking hats in developing the skills of creative thinking.

Koray, 2005 investigated the perceptions of the students about the implementation of two of the creative thinking techniques; six thinking hats and attribute listing in science course. The sample of the study consisted of 115 students of the 6th, 7th and 8th graders in primary schools in Ankara. The researcher developed a structured interview form about both of the techniques contained 15 Likert type items (strongly agree, agree, undecided, disagree, strongly disagree). Views and opinions of 3 experts were asked for the face validity of the test. The results of the study revealed that the primary school students (6th, 7th and 8th grade) and pre-service Science teachers had positive opinions about each of the techniques.

Naifeh, 2005 conducted a study aimed at investigating and comparing the effect of the six thinking hats learning method with the conventional teaching method on the achievement of ninth grade students in Mathematics. The sample of the study consisted of (118) students in Ma'an education directorate a multiple choice test was designed by the researcher. The results of the study indicated that there was a significant effect of the six thinking hats on the achievement of ninth grade students in Mathematics.

Zhang and Vukelch, 1998 studied the influences of prewriting activities on the writing quality of male and female students with varying academic achievement across four grade levels. Participants were public school students in grades four, six, nine and eleven. At each grade level, students were assigned to one of two groups: writing with prewriting activities or writing without prewriting activities. Results revealed that students who wrote without prewriting activity received higher scores. Students ' gender and academic achievement level had strong influences on the effectiveness of prewriting with females consistently scoring higher than males.

Most of the studies which investigated the effect of using the six thinking hats that the researcher had reached to, were in scientific specializations, for example, (Mofadi,2010; Koray,2005; Fodah & Abdo,2005) other studies such as, (Naifeh,2005) investigated the effect of six thinking hats on teaching Mathematics, (Pace,2009) investigated the effect of Cort program on creative thinking skills. The findings of these studies indicated that there were significant effects of the six thinking hats method on students' achievements.

One can see that no study was conducted the effect of using the six thinking hats method on the development of female students' writing skills in schools. There were some studies that investigated the effect of using six thinking hats method and mind mapping in developing the reading, thinking, and writing skills (Kwayotha & Tantriratna,2008), whereas this study only investigated the effect of using the six thinking hats on the development of EFL students' writing skill and it was applied on school students.

Design and Methodology

Population of the study

The population of the study consisted of (344) female eleventh scientific graders during the second semester 2013-2014 in Southern Al- Mazar Directorate of Education.

Sample of the study

The sample of the study consisted of (50) female students at Mu'tah secondary school for girls which was selected purposefully during the second semester 2013/2014. Table (1) shows the distribution of the sample of the study.

Table (1)
Distribution of the sample of the study

The groups	No. sections	method	No. Sts.
Experimental Group	1	Six Thinking hats	24
Control Group	1	The Conventional	26
Total	2		50

The instructional material

Two texts of writing skills were chosen from the English text book Action Pack 11 by Haines (2010) assigned for the eleventh grade. Action Pack textbook for eleventh grade consists of four modules, each module contains three units. The book is provided with a wide range of regional and topic –based content and the latest in methodology, designed to meet the educational needs and interest of grade 11 students in Jordan. The textbook provides regular, carefully –staged practice in reading, listening, speaking and writing, where the emphasis is on practice and production of language. There are also plenty of opportunities for students to develop critical thinking and express their opinions throughout every unit. Each writing section develops a particular real-life writing skill that students will be familiar with in their own language. These include writing emails, completing application forms, writing reports, letters notes messages and designing and presenting results of each research topics.

The writing task is set out at the beginning of the section, and the students follow a carefully –planned sequence of exercises which start with a model text and take them through to producing their own texts. Planning and checking are important stages in writing any kind of text.

Research instrument

A pre test was designed by the researchers to ensure the equivalence of the two groups. Also the same writing test was used as a post test to assess students' achievement in writing skills at the end of the experiment.

Test validity

To ensure the validity of the test, it was given to a jury of TEFL specialists, professors, teachers and supervisors of English language. The jury was asked to validate the test items and their relevance to the characteristics of each thinking hat as well as their suitability to writing skills and also the clarity of the test questions. The jury comments and suggestions were studied carefully and the modifications were made.

Test reliability

To establish test reliability, (test - retest method) was used. The test was conducted on a pilot sample that consisted of (17) students to check the intelligibility and clarity of the test questions, the clarity of the directions and the suitability of the test to the level of the students. This sample was excluded from the sample of the study, two weeks later the same test was implemented again.(Reliability coefficient of the two scores of the test was computed using Person correlation coefficient which was appointed as (0.90) and this value was appropriate to the research purpose.

The Procedures of the study

1. The researchers gained the permission from Mu'tah University and Southern Al-Mazar directorate of education to conduct this study at Mu'tah secondary school for girls.
2. The researchers made all the arrangements with the headmistress of Mu'tah secondary school for girls to conduct this study.
3. One section was assigned randomly and selected to be the experimental group which was taught by using the six thinking hats method and the other section used as a control group which was taught by using the conventional method.
4. The researchers explained to the students of the experimental group the procedures of using the six thinking hats method.
5. The instrument of the study was conducted on a pilot sample consisted of (17) students from Al-Mazar secondary school for girls.
6. A writing test was given to the two groups to check on students' equivalency.
7. The researchers selected the lessons that she was going to use; those were from the English text book Action Pack 11 by the MOE (Haines, 2010) assigned for the eleventh grade.
8. The researchers wrote questions on the six thinking hats relating to the selected topics" water shortage" and ' using mobile phone'.
9. The researchers stated the lesson plans for the two lessons.
10. The researchers stated a writing rubric in order to correct the writing topics using, this rubric consisted of three criteria:
11. Content and comprehensibility which have (40 points), this criterion emphasizes the realization of the writing task, using supporting details and evidence, the relevancy of the content to the writing topic.
12. Organization which has (20 points), this criterion is concerned with the extent to which the ideas are clear; the paragraphs are coherent and well-organized.
13. Grammar and spelling (which have 40 points), it deals with language accuracy such as (subject –verb agreement and word usage) and the mechanics of writing such as (punctuation, capitalization and spelling).
14. The suggested passages were submitted to a jury of specialists in methodology and applied linguistics. They were asked to judge the appropriateness of the questions to check, whether they represent the characteristics of the six thinking hats and whether they are within the students' levels.
15. After gaining the approval of the jury, the researchers conducted their study using six thinking hats as the experimental group and the conventional method as the control group.

In teaching the experimental group using six thinking hats the researchers did the following:

1. The researchers introduced and taught the concept of De Bono's 'Six Thinking Hats'.
2. The researchers conducted a class discussion about the six thinking hats and they used brainstorming method to discuss what kind of thinking each hat represents and also its benefits.
3. The researchers divided students into four groups of six students providing each student with thinking hats and a worksheet containing questions which reflect the characteristics of the thinking hats, and then students answered the questions in each worksheet which reflect the specific Thinking Hat chosen for the lesson.
4. Students discussed all the questions in groups then each student was asked to choose a hat and express her opinion according to the chosen hat, then students were asked to write a paragraph using the given questions about each hat.
5. After that students exchanged the hats and each student was asked to choose another hat and answer the questions in the worksheet about this hat.
6. The students continued exchanging thinking hats until each student in each group answered the questions in all the six worksheets, then each student organized the ideas in the worksheets and wrote a well -developed composition about water pollution and using mobile phones.
7. The researchers collected the papers of the two selected topics then they corrected them using writing correction rubric.
8. A post- test in writing passages, entitled "water shortage" and ' using mobile phone' was given to the control groups after the end of the study.
9. After applying the study, collecting data and analyzing these data using the statistical package for social sciences (SPSS), the researchers inferred the answers of the questions of the study.

Statistical analyses

In order to answer the questions of the study the researchers used the   following statistical analyses:

1. A t-test of the independent samples was conducted to test the   mean scores of the two groups (the control and the experimental) on the pre-test and the post-test.
2. Descriptive statistics were used to describe properties of the variables dependent and independent in terms of (Means, Standard Deviations) to analyze the results of the post -test of the two groups.
3. Depending on the means and standard deviation of the students' results on the post test, One Way ANOVA was conducted to test the significances of the differences between the three levels of the students (high, intermediate, low) in the writing ability; also Scheffe for Multiple comparisons was used.

Findings, Discussions and Recommendations

Findings of the study

Before carrying out the statistical analysis to answer the questions of the study, the researchers ensured the equivalence of the two groups (control and experimental) to examine if the development in the students' writing ability will come as a result of using the six thinking hats or not. The researchers carried out a pre-test for both control and experimental groups and calculated the means and standard deviation for their scores in this test which was conducted at the beginning of the second semester of the academic year 2013/2014. Table 2 shows the results of t-test for Independent Samples on the Pre -test.

Table No. 2

The results of t-test for Independent Samples on the Pre -test

group	No. of Sts.			df.	t	Sig.
		Means	StD.			
control group	26	66.23	10.033	48	o.45	0.652
experimental group	24	68.62	11.999			

The results in table (2) shows that the difference in the mean scores of the groups of the study(control and experimental) on the pre test was (2.39),also the t- value was (0.45) which was not statistically significant at($\alpha \leq 0.05$), this means that both groups are equal according to the teaching method; Conventional and six thinking hats, then after the researchers made sure of the equivalence of the two groups, she answered the questions of the study as the following results.

Results Related to the First Question:

Is there an effect of using six thinking hats method on the development of EFL female eleventh grade students' writing skill in Al-Mazar directorate of Education?

The researchers calculated the mean scores and standard deviation of the experimental and control groups on the post test and she used t-test for independent samples to find out whether or not these differences were statistically significant. The t-test results are shown below in table (3)

Table No.3

The results of t-test for independent samples on the post -test

group	No. of Sts.	Means	StD.	df	t	Sig.
control group	26	67.96	9.688	48	4.89	0.00
experimental group	24	80.20	9.040			

As shown in Table (3), t-value was 4.89 which is statistically significant at the level of the significance (α≤0.05), this means that there were statistically differences between the mean scores of the students in the experimental group and the control group. As shown in this table the mean score of the experimental group is (80.20) and the standard deviation is (9.040), while the mean score of the control group is (67.96) and the standard deviation is (9.688) which means that the difference was in favor of the experimental group, this indicates that there is an effect for using six thinking hats method on the development of EFL female eleventh grade students' writing skill in Al-Mazar directorate of education.

Results Related to the Second Question

Is there an effect of using six thinking hats method on the development of EFL female eleventh grade students' writing skill in Al-Mazar directorate of Education?

To answer this question, the researchers referred to the scores of the experimental group on the pre test and classified the students into three groups according to their levels (high, intermediate and low). The researchers classified the students as the following (below 61% is low achievement, from 61%--80% is an intermediate achievement and above 80% is a high achievement).

The researchers found out the mean scores and standard deviation of the experimental group on the post test according to their levels in writing skills (high, intermediate and low). Table (4) shows that:

Table No.4
Means and standard deviation of the experimental group on the post-test according to their level of achievement.

Groups	No. of Sts	Means	StD.	Minimum	Maximum
High level	5	89.80	3.271	84.00	92.00
Intermediate level	12	82.25	6.440	71.00	90.00
Low level	7	69.85	4.488	65.00	77.00
Total	24	80.20	9.040	65.00	92.00

Table (4) shows that there are statistical differences in the mean scores of the experimental group on the post test according to the level variable in writing activities (high, intermediate and low). Mean score was (89.80) and standard deviation was (3.271) for the high level, while mean score was (82.25) and standard deviation was (6.440) for the Intermediate level and mean score was (69.85) and standard deviation was (4.488) for the low level

To find whether or not these differences are significant, an analysis of ONE WAY ANOVA was carried out .The results of the analysis are shown in table (5).

Table No. 5
ANOVA results for the experimental group on the post –test according to the level variable in writing skill.

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1260.051	2	630.026	21.343	.000
Within Groups	619.907	21	29.519		
Total	1879.958	23			

Table (5) shows that there were significant differences between the students of the experimental group on the post-test due to the level of students in writing skill (high, intermediate and low) where (F =21.343), which is statistically significant at the level of significance (α≤0.05), this indicates that using six thinking hats method contributes unevenly, in developing writing skills of eleventh grade students according to their previous level (high, intermediate and low). To find out to whom these differences refer, Scheffe for Multiple Comparisons was used. The results of the analysis are shown in Table (6) .

Table No.6
(Scheffe) for Multiple Comparisons

Groups	Mean scores	The means differences among the groups		
		High level	Intermediate level	Low level
High level	89.80	---	7.55	19.94*
Intermediate level	82.25	-7.55-	--	12.39*
Low level	69.85	-19.94*	-12.39*	--

*The mean difference is significant at the (α≤0.05)

As shown in table(6),the results indicate that there were statistically significant differences on the post test between the students in the (high and intermediate levels) in comparison with the students in the low level, and in favor of the students in the high and intermediate level), whereas, the results did not indicate statistically significant differences between the students of the (high and intermediate levels), which means that using the six thinking hats method helped in developing writing skills and more efficiently, for the students in the (high and intermediate levels) comparing with the students in the low level.

Discussion of the results

The results of this study revealed that there were statistically significant differences at (α≤0.05) between students achievement in writing skill as a result of using the method of six thinking hats compared with the conventional method.

The results of this study showed significant development in students writing skill in English language as measured by the post –test scores in writing skill test which was constructed by the researcher. On the other hand, no development in students writing skills was marked in the results of the students in the control group that was taught using the conventional method. The mean score of the experimental group was (80.20), whereas that of the control group was (66.96). That is, this positive difference in the mean scores of the experimental group was due to the effect of teaching students using six thinking hats method. In fact, the researcher noticed that students of the experimental group were motivated and they had positive attitudes toward this method (six thinking hats) because it was a new method in teaching writing and they haven't ever used this method in a writing skill task as an instructional tool. This method helped student to be creative, imaginative, think thoughtfully before speaking or writing, and also it enhanced their ability to solve problems. This result is in line with the research results of (Kwayotha & Tantriratna ,2008), which indicate that, according to the creative writing skill, the students could be able to use thinking performance in writing using Language in communication as relevant to thinking. Also this study was in line with the results of (Koray, 2005) , which revealed that the students as well as the pre-service science teachers had positive opinions about using six thinking hats. The same results are consistent with that obtained by (Fodah & Abdo, 2005), which shows that there was a good effect of the six thinking hats in developing the skills of creative thinking.

Is there an effect of using six thinking hats method on the development of EFL female eleventh grade students' writing skill in Al-Mazar Directorate of Education?

The researchers classified students according to the pre-test results into three levels (below 61% is low achievement, from 61%--80% is an intermediate achievement and above 80% is a high achievement).

The results presented in table (4) showed that students whose level is (intermediate and high) scored significantly higher than those of (low) level.

One possible reason for this could be that students who were good in English language were affected positively by this method (six thinking hats) and enhanced their writing skill .Also group work, cooperation and oral discussion encouraged students to be more motivated, whereas the students in the low level might have lacked the ability to generate good ideas or build up their vocabulary items and other writing skills such as, spelling and grammar.

In summary, the findings of this study revealed that six thinking hats method was effective in teaching writing to EFL students and these findings are consistent with the findings of studies of (Kwayotha, & Tantriratna,2008), (Zhang and Vukelch ,1998), who supported the idea of using six thinking hats in developing writing skills. Also the results of the study are in harmony with studies done by (Fodah & Abdo,2005), (Koray,2005), approved the importance of six thinking hats in developing scientific concepts and creative thinking, as well as investigating students' opinions toward thinking hats.

Other studies such as, (Mofadi, 2010), (Naifeh ,2005), supported the idea of the positive effects of using six thinking hats on the achievement of student in Mathematics or Science .

Finally, It can be concluded from the results of the study that using six thinking hats method is very helpful for the teachers as well as for the students themselves .For example, it helps the teacher to make the writing process discussions and workshops consistent, the teacher is an effective facilitator, also grading students' writings is objective. Also this method is helpful for the students for example, it helps students to organize their ideas and see what they are thinking before writing, and students revise drafts with less teacher intervention. Cooperation and oral discussion encourage students to be more involved and work seriously to complete the writing task. And in general, this method enhances the collaborative group work between students.

In conclusion, the findings of this study provide clear evidence for the effectiveness of this method in developing the quality and the quantity of students' writing.

Recommendations

In light of the findings of this study, the researchers believe that the following recommendations are helpful for the educators, teachers and researchers:

1.   Further researches are recommended to investigate the effect of using six thinking hats on other skills of English language (reading and speaking).
2.   Teachers should not limit their writing skills instruction to only one method but they have to apply new and different methods and strategies, such as six thinking hats.
3.   Organizing seminars and workshops to train Jordanian teachers on implementing the six thinking hats in teaching English language.

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