

دراسة حول تأثير مهارة التفكير الإبداعي على مهارات الفهم القرائي لدى متعلمي اللغة الانكليزية العراقيين

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An Investigation of the Effect of Iraqi EFL Learners' Creative Thinking Ability on Their Reading Comprehension Abilities

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Abstract

The current study explores the effect of Iraqi EFL 4th secondary school learners' creative thinking abilities on their achievement in reading comprehension tests. With this aim, the researcher administered a creative thinking test and a reading comprehension test to 400 EFL learners from a number of secondary schools. Then, the results of the two tests were compared to discover if there was a connection between creative thinking and reading comprehension. The results obtained from "Pearson Product-moment correlation" revealed positive correlation between creative thinking scores and reading comprehension. To see to what extent total scores for creative thinking may affect reading comprehension, three groups of high, mid, and low were formed based on creative thinking scores. The mean reading comprehension scores of the three groups were compared. "One-way ANOVA" indicated significant differences in the mean reading comprehension scores among the three groups. The results of the post-hoc Scheffe test revealed that there was a significant difference between the reading comprehension scores of the high creative thinking group and those of the two other groups.

Keywords: creative thinking, reading comprehension, Iraqi EFL Learners.

المخلص:

تهدف الدراسة الحالية لمعرفة تأثير مهارة التفكير الإبداعي لدى طالبات مرحلة الرابع الإعدادي على تحصيلهن الدراسي في اختبارات الفهم القرائي. و في صدد هذا الهدف قامت الباحثة بتجهيز اختبارين أحدهما لقياس التفكير الإبداعي و الآخر لقياس الفهم القرائي ل (400) طالبة في عدد من المدارس الثانوية في العراق. تم مقارنة نتيجة الاختبارين لمعرفة ما اذا كان هناك رابط بين التفكير الإبداعي و الفهم القرائي. أظهرت النتائج باستخدام معامل بيرسون ان هناك تأثير إيجابي بين المتغيرين. لمعرفة مدى تأثير التفكير الإبداعي على الفهم القرائي تم تشكيل ثلاثة مجاميع حسب درجات الاختبار (عالي، متوسط،منخفض)، بعدها تم مقارنة المتوسط الحسابي لدرجات اختبار الفهم القرائي للمجموعات الثلاث. اثبتت الوسائل الاحصائية بأن هناك فرق ذو دلالة إحصائية في درجات اختبار الفهم القرائي بين المجاميع الثلاث. كذلك اثبتت نتائج إختبار التفكير الإبداعي ان هناك فرق ذو دلالة احصائية بين المجموعة الأولى و المجموعتين الثانية و الثالثة.

الكلمات المفتاحية: التفكير الإبداعي، الفهم القرائي، متعلمي اللغة الانكليزية العراقيين

1. Introduction

Reading, according to Fleming and Steven's (2004, 76), is both a highly concentrated practice and one that is embedded in a very wide cultural sense, with the ability to take one or more of several different types. In other words, reading must go with a number of important factors such as cultural meaning and linguistic proficiency. This agrees with the concept of Snow (2002, 11) who defines reading skill as the process of extracting and creating meaning from written language while interacting and engaging with it. Reading skill, in other words, is the process of comprehensively shaping and determining meaning as a result of a progressive interaction between readers and the texts they read. Reading ability, according to Wainwright (2007, 35), is a dynamic process that involves the effective or ineffective application of a variety of abilities that influence whether or not readers grasp the meaning of the text. Based on the above definitions of reading skill, it can be inferred that reading is a language skill that involves the reader's ability to react to and relate to the text's linguistic structures, to drill metacognitive control over the text's content, and to relate previous information about the text's content and vocabulary. Similarly, creative thinking has been proved to be one of the essential skills that any learner needs to have.

The present study tries to find out the extent to which creative thinking ability of EFL learners may enhance, or hinder, their reading comprehension. Accordingly, the following questions are put forth:

- 1- Whether there is any important relationship between creative thinking and EFL learners' reading comprehension.
- 2- Whether there is difference which is statistically important between genders among EFL learners.

2. Literature Background

Reading Comprehension

2.1 Definition of Reading Comprehension

Reading comprehension is described as the process of obtaining, comprehending, and retaining information from a text. Reading is a method of comprehending a written text by extracting as much details as possible from it. It is a creative and productive practice with four distinct and essential characteristics: it is purposeful, selective, anticipatory, and comprehension-based, all of which require the reader to explicitly exert control. Reading comprehension encompasses a wide range of topics. It does not just understand the context of individual words in a letter. It is a process of making logical interpretations in order to comprehend a text that has four characteristics: meaning, selection, anticipation, and comprehension. One of the characteristics of reading is the ability to talk about comprehension (Smith, 2004,3).

Similarly, Mickulecky and Jeffries (2004, 74) assert that comprehension entails making sense of what one reads and relating the texts' ideas to what one already know. It can be described as the process of connecting elements of the world around us with what we read. The importance of reading in the learning process is undeniable.

Comprehension according to Richards and Schmidt (2002, 99), is the process of determining the intended sense of a piece of written or spoken communication. They also add that comprehension theories emphasize that comprehension is an active mechanism that draws on both message information (bottom-up processing), background awareness, information from the context, and information from the listener's and speaker's intentions or goals (top-down processing). The Readers acquire

meaning by making a sense of terms in context and using what they already know to comprehend and learn the unknown.

Making a sense of words is fundamentally linked to vocabulary mastery, according to Smith (2004, 41), who goes on to say that vocabulary offers a permanent foundation of understanding for deciding the likely context and pronunciation of new words. The readers would have no trouble understanding and pronouncing a new word if they know both the context and the pronunciation. In other words, reading comprehension is the method of applying the reader's prior knowledge to the details in the document in order to understand the text's message. Reading comprehension is more than just understanding and recalling the meanings of all words in a book; it is also about students constructing and building meaning from the text.

2.1.1 Strategies of Reading Comprehension

A good reader can also read for complete comprehension. This means that they learn in order to comprehend the entire meaning of a passage. This is common in academic and other environments where full comprehension is needed. According to Rangi (2019, 14), there are several methods for teaching reading comprehension. The most well-known ones are explained below:

1) Scaffolding

Scaffolding text strategy is one of the strategies used to deliver instructions that would make a difference in the content literacy of all learners, particularly students from diverse backgrounds. According to Rangi (2019, 14), scaffolding is a strategy in which students are given some assistance during the early stages of learning, then the help is reduced and students are given opportunities. It helps teachers assist a variety of learners in negotiating context and overcoming challenges in text-based learning situations. Scaffolding is a method of assisting a student in solving a problem that is beyond his or her developmental capacity with the assistance of an instructor or another individual of greater abilities.

According to the concept given above, scaffolding is a type of support provided by teachers (or by other learners with higher developmental capacities) to students in order to help them improve their learning abilities so that they can demonstrate a higher level of mastery of the material by completing more difficult problems.

2) Think-aloud

Think-aloud is a strategy that aids students in their learning practices by allowing them to remember more significant details from the teacher's texts. Teachers' ability to impart creativity to their students and guide them in completing each phase of the think-aloud in understanding reading texts, helps their students to think thinking clearly by verbalize their thoughts while reading.

When using think-aloud, Rangi (2019, 14) recommends five simple measures. First, is choosing passages to read aloud that have difficult points, ambiguities, inconsistencies, or unfamiliar words. Second, is make students follow up passively as the teacher read think-aloud and listen to how trouble spots are resolved. Third, is having students practice think-aloud with partners by reading short, carefully-planned passages and sharing their thoughts. Fourth, is making students train individually, using a check list to ensure that all students are involved and that the protocols are followed. Finally, there is combining practice with other lessons and demonstrating how, why, and when to use think aloud on a regular basis to ensure transition.

The following are five observations that can be made during think-aloud. 1) Forming hypotheses by making assumptions, 2) Forming images by explaining the images that come up in reader's mind as a result of the knowledge being read, 3) Using

analogies to connect new information with prior knowledge, 4) Checking for understanding by stating a point that is unclear. 5) Demonstrating techniques for controlling comprehension. (Ranggi, 2019, 14-15).

3) Reciprocal Teaching

Reciprocal teaching is a strategy in which teachers ask their students to share the position of teacher by encouraging them to lead a discussion about a particular reading. Predicting, question generation, summarizing, and clarifying are four techniques used in reciprocal teaching to direct the discussion. Reciprocal teaching is an excellent way to teach students how to illustrate key ideas from a reading while sharing vocabulary, generating ideas and questions, and summarizing content. It can be used in a variety of content fields, but it fits best for textbooks and non-fiction material. (Ranggi, 2019, 16-17)

Reciprocal teaching, as stated by Palinscar and Brown (1984,119) is a directed reading comprehension approach that allows students to acquire the skills that good readers and learners naturally possess (i.e. summarizing, questioning, clarifying, predicting, and responding to what they are reading). Students work in pairs or small groups to apply these five comprehension skills to a common text. Reciprocal teaching is applicable to fiction, non-fiction, prose, and poetry.

The students then take turns acting as a teacher. Adjusting the mission demand to help the students work out the challenging situations is critical to the strategy's effectiveness. That is, if students are having trouble, the teacher can help them by lowering the task's requirements. The teacher gradually withdraw support as the process progresses, allowing students to continue learning. Reciprocal instruction is a combination of five comprehension techniques in several respects: predicting, questioning, clarifying, summarizing, questioning-answering relationship (Pearson & Johnson,1978, 223).

2.2 Creative Thinking

2.2.1 Definitions of Creative Thinking

According to existing literature, creativity refers to the advent of something that did not exist previously. Feldman (1994) (cited in Alsahou, 2015, 45) describes creativity as "the achievement of something remarkable and new, something which transforms and changes a field of endeavor in a significant way". The concept of creativity means having something new, novel and useful. This novel "something" sometimes can be a process, a product, or a person. Creativity is examined using three main elements: process, person, and product (Gough, 1979; 1398). However, Kaufman (2009, 6) mentions a fourth model which denotes creativity as an environment.

In the same vain, Baer (2003, 569) sees that any activity can be examined from four positions: the person who does it, the thing that is done, the process or action that is accomplished, and the environment or circumstances that impact the three previous positions. Taylor (1995) (cited in Alsahou, 2015, 46) states that these four dimensions are connected to one another and interact with each other.

Other researchers and theorists view creativity differently which caused the emergence of two general models, namely: historical creativity (known as big C creativity) and psychological creativity (known as little c creativity). Later on, some theorists proposed new models of creativity, such as professional creativity and mini creativity.

2.2.2 Elements of Creativity

As mentioned in Section 2.2.1 above, creativity is examined in accordance to three elements: person, product and process. All are explained in detail below:

(1) Person Element of Creativity

Oldham & Cummings, (1996, 609) correlate creativity with creative behaviors. Feist (1998, 290) states that many studies have led to convince evidence that creative people behave in different situations in ways that distinguish them from others. He asserts that personality dispositions have regular and predictable relation to creative achievement. Other researchers (e.g. Torrance, 2004,9), highlight various characteristics which are seen to be features of a creative person. Among these features are: intelligence, originality, imagination, curiosity, energetic nature, artistic nature, risk taking ability, and open-mindedness.

Similarly, Taylor (1995) (cited in Alsahou, 2015, 47), defines the creative person in accordance to the nature of abilities and traits; he proposes six talent traits associated to creativity: originality which means the ability to produce novel satisfactory thoughts; sensitivity to problems, which means the ability to identify and discover problems; redefinition, meaning being able to perceive one specific problem for different angles; fluency meaning the ability to generate a number of ideas in a period of time; flexibility, which means capability to modify thought in mind with no difficulty; and elaboration meaning the aptitude to develop the dedicated area and its solutions.

(2) Product Element of Creativity

Lynch & Harries, (2001) (cited in Alsahou, 2015, 48) believe that creativity is a substance phenomenon or a product. This is mostly because creativity entails the creation of something new. The sorts of products are defined as a product which could be a physical object or a theoretical system. It may be an equation or new technique.

Accordingly, the majority of research studies on creative product focusses on products regardless of the process or producer. The product, as discussed by Alsahou (2015, 48) is measured according to new (i.e. original) criterion which is the most important criterion. Other criterion is usefulness criterion which refers to the feasibility of the product both for the society and the individual.

Finally, Russ (1998, 57) states that it is important that a product must be innovative and purposeful and that creations are usually precious products and unique. He adds that a creative product, whether an object, an act, or an idea should make novel change in the current situation and move it to a new context.

(3) Process Element of Creativity

According to Boden (1994, 104) creative process occurs when "the conceptual spaces are explored and transformed". The term "conceptual space" means the system of knowledge which comprises structured group of knowledge collections that is bonded to one another by logical links. He adds that the investigation of a conceptual space means reviewing and revising these groups of knowledge collections. At the same time, the conversion of a "conceptual space" refers to appearance of a new set of knowledge collection. Ward *et al.*, (1997, 309) put a similar view, stating that the creative process is essentially based on connecting the already existing knowledge and at the same time generating new bonds among it.

An early model proposed by Csikszentmihalyi (1996, 107) identifies creative process in accordance to four stages:

1. The preparation stage: Which is concerned with collecting information and gathering data regarding the problem area, then coming up with the most proper thoughts.
2. The incubation stage: in which, the person uses cognitive skills to work on a problem unconsciously.

3. The illumination stage: Unlike the incubation stage, here the person consciously deals with the new ideas in order to reach some unexpected insights where the novel thoughts are fitted together.
4. The verification stage: in which the solution is confirmed in a practical way; and at the same time it can be modified when necessary.

2.2.2.3 Environment Element of Creativity

Creativity needs specific context that permits for the emergence of creativity; this context includes social creatures, their attitudes, their perspectives, and their cultural stance.

According to Russ (1998, 57), significant creations are virtually always based on a convoluted relationship. Another study by Csikszentmihalyi (1996, 107) concentrates on creative individuals. This study finds that interactive works strongly influence individuals' creative ideas. Cropley (2006, 125) adds that imagery is obvious as a mechanism for self-awareness, personal appearance and self-fulfilment. He suggests another manner to explore creative settings stating that creativity is centered on the social interactions. He highlights that creativity is fostered by social networks and that it is not reinforced separately as isolated labors but as groups work cooperatively.

2.2.2.4 Types of Creative Thinking:

Human beings have special innovative competencies in keeping with their intellectual or chronological age. Abo Tailakh (2015, 39) determines five types of creativity:

1. **Expressive Creativity:** It shows unfastened and unbiased thinking and attempts to expand specific thoughts a part from their quality, such as graphics impulse for children.
2. **Productive Creativity:** It is the outcome of the development of expressive abilities and skills that leads to the creation of complete works. It is distinguished by the restriction and control of free activities. This ability appears to be evident in creative activities such as drawing and music.
3. **Inventive Creativity:** Flexibility is required in establishing new relationships between different elements and demonstrating innovation in inventing new uses on individual basis.
4. **Innovative Creativity:** It necessitates a high level of abstract vision skills as well as the ability to develop and adapt the principles and foundations that govern a science or an art. Both individual figurative talents, as well as the coupling of two systems be improved.
5. **Emergent Creativity:** It consists of imaging a brand new principle, that is the maximum abstract one. It means developing a brand new imaginative.

From the preceding types, the researcher can say that human beings have diverse creative thinking abilities. These types are appropriate for cultivating creativity. After those types, there is an imaginative creativity in which individuals produce new ideas.

3. Method

3.1 Participants

Four hundred learners from four secondary schools took part in the present study. They were both male (N=198) and female (N=202). The researchers selected the participants based on their agreement to take part in the study. The participants were in

the age of 15 to 17 years old with a similar language experience having been studying English in school classes for about 10 years.

3.2 Instruments

In order to achieve the objectives of the current study, the researcher used two different types of tools: two tests and a questionnaire. The first test is a creativity test and the second one is a reading comprehension test. Below is a detailed description of the research tools:

3.2.1 Creative Thinking Test

Baqer Mehdi's test of creativity was chosen to be used to test the creative thinking ability of the participants. According to Baqer Mehdi, students' creativity is represented by their scores on various factors of verbal and non-verbal creativity including fluency, originality, flexibility and elaboration. (Sarsani, 1999,94) Baqer Mehdi's Test (1985 a) of creative thinking, verbal test was adapted for the present study. The verbal test of creativity includes four sub-tests, which are: the consequence test (takes 15 minutes), the unusual (or novel) uses test (12 minutes), the new relationships (similarity) test (15 minutes), and the product improvement test (6 minutes). The total time required for the whole parts of the test is 48 minutes.

In regard to scoring the answers for the test, there are no right or wrong responses. Each item is scored for fluency, flexibility and originality as explained below:

- 1- **Fluency**: In order to score the participants' sheets for fluency, the researcher goes through the responses and strike off the irrelevant and repeated answers. The remaining number is the fluency score.
- 2- **Flexibility**: Flexibility refers to the individuals' ability to produce variances in trend of thought. The ideas that differ in trend of approach are treated as one for flexibility scoring. Thus, if three given ideas belong to only one approach of thought trend, flexibility will be scored as one, on the other hand, if all the three ideas are based on three different approaches, flexibility will be scored as 3.
- 3- **Originality**: Originality is understood by the uncommonness of the given ideas or responses. Thus, if less than 5% of the respondents give analogous responses, these responses are given different weights. Consequently, a response that is given by 0.1% - 0.99 of the participant will be given the score 5; a response that is given by 1% - 1.99% of the respondents will be given 4; a response given by 2% - 2.99% of the respondents will be given 3; the response given by 3% - 3.99% of the participants will be given 2; a response given by 4% - 4.99% of the respondents will be given 1; finally, a response given by 5% or more will be given zero.

The reliability of the test was established by using Cronbach's Alpha. As shown in Table (1) below, the Cronbach's alpha coefficient is 0.711. This value is above 0.7, so the scale can be considered reliable with our sample:

Table (1) Reliability of Creativity Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.701	3

3.2.2 Reading Comprehension Test:

A considerable number of tests are established to assess EFL learners' reading comprehension. As for the current study, the researcher decides to use a standard test to evaluate the participants' reading comprehension. Therefore, the reading comprehension part of Michigan Test of English Language Proficiency (MTELP) is chosen. It is chosen because it is a well-established standardized test of English language proficiency that was developed to assess students at different proficiency levels. The test goes in line with universal applicable regulations. Another reason for choosing this specific test is that it has been assured by a number of assessment specialists that this test fulfills the following points, as stated by Lai (2009, 67):

1. Absence of bias in items.
2. Appropriate for all levels.
3. Each question of the test was carefully reviewed by EFL teachers and only the questions that were judged as being acceptable and fair for students all over the world were included.
4. It has a very sufficient validity and acceptable reliability.
5. It is economic in term of time.

The MTELP is a multiple choice test targeting abilities in grammar, vocabulary and reading comprehension (only the part of reading comprehension is used in the current study). The items of the test represent a complete range of difficulty ranging from very simple ones aiming at learners with limited ability in English to difficult items aiming at learners with advanced ability. The reading comprehension part of the MTELP test consists of twenty items. It comprised four passages ranging from 100 to 350 words. Each passage is followed by five questions. The testees are required to read the passages carefully and answer the five multiple-choice items about the passages.

Regarding the scoring of the test, five points are given to each item. So the total mark is 100 for the reading comprehension part of the test. The scores are interpreted as follows:

1. Level 1 (beginners) = 0-30
2. Level 2 (post-beginners): 31-49
3. Level 3 (pre-advanced): 50-69
4. Level 4 (advanced): 70-100

The reliability of the reading test is checked to find its suitability to the sample of the current study. The Cronbach's Alpha is used and the results are given in Table 2 below:

Table (2) Reliability of the Reading Comprehension Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.823	20

3.3 Procedures

After collecting the required data, it is interred into SPSS. Descriptive statistics are employed in order to verify the normality of the distribution of the data in both the creative thinking test and the reading comprehension test.

Usually, the normal distribution test based on Smirnov's Kmgrove test and Shapiro-Wilk Test. In this research, the researcher uses Smirnov's Kmgrove test because the sample size is 400. Table (3) below shows the result of normality of the two tests used in the current study. The results indicate that the data was normally distributed where probability p-value is greater than 0.05 (0.68 for the creativity test and

0.919 for the reading comprehension test). The distribution of the population is normal with unspecified mean and standard deviation.

Table 3. Normal distribution test

	Kolmogorov-Smirnov			Shapiro-Wilk Test		
	statistic	p-value	Sig. level	statistic	p-value	Sig. level
Thinking	0.15	0.0638	↑	0.89	0.0518	↑
Reading	0.19	0.0919	↑	0.94	0.1061	↑

4. Data Analyses and Results

Having confirmed the normality of distribution of the two tests, the data are set to the suitable analyses to get answers for the research questions as given in detail below:

4.1 The Answer of the First Question

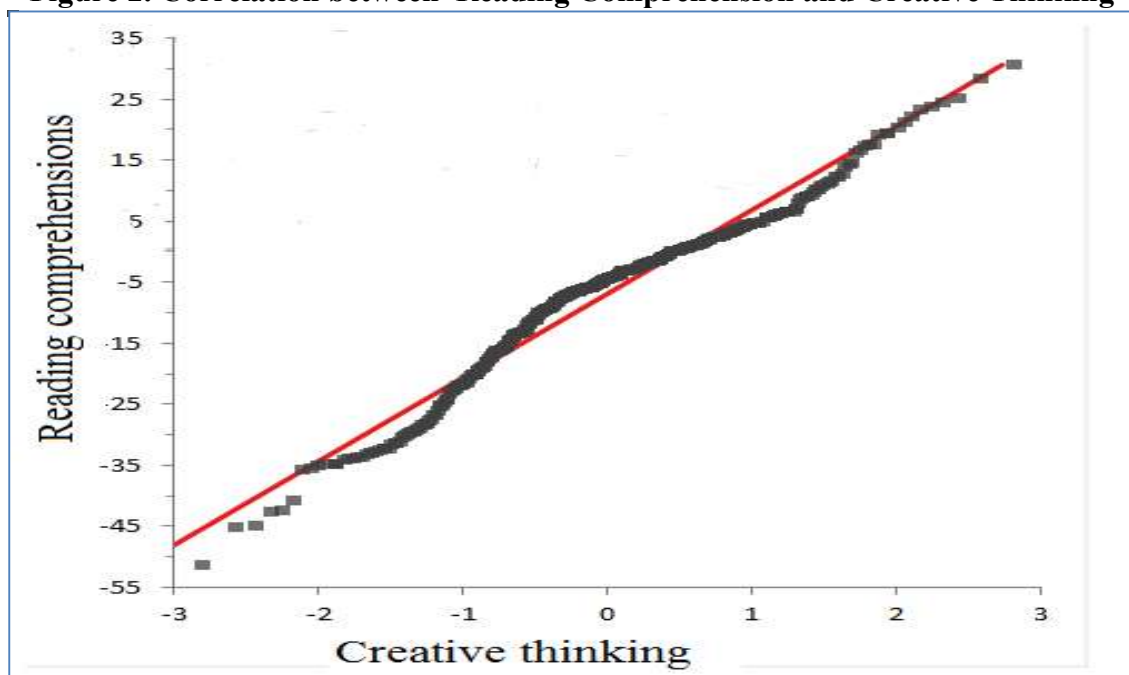
The first question raised in the current study deals with finding out the relation between the participants' creative thinking abilities and their results in reading comprehension tests. For that Pearson product-moment correlation was run within SPSS. The results show that there is a positive relation between the scores obtained in the creativity test and those obtained in the reading test (See Table 4):

**Table 4: Pearson product-moment correlation
Correlations**

		TotCreativity	TotRed100
TotCreativity	Pearson Correlation	1	.114*
	Sig. (2-tailed)		.022
	N	401	400
TotRed100	Pearson Correlation	.114*	1
	Sig. (2-tailed)	.022	
	N	400	400

*. Correlation is significant at the 0.05 level (2-tailed).

As shown in the table above the value of Pearson correlation is 0.114. As stated by Pallant (2005), if the Pearson correlation $r = 0.10$ to 0.29 , the relation is small; if $r = 0.30$ to 0.49 the relation is medium; if $r = 0.50$ to 1.0 , the relation is large. For that, it is concluded that the relation between creative thinking and reading comprehension is small. This result is also given in Figure 1 below:

Figure 2. Correlation between Reading Comprehension and Creative Thinking

4.2 The Answer of the Second Question

Concerning the second question, which deals finding out whether there is any difference between male and female in regard to their ability in creative thinking. The Chi-Square is run and the results within SPSS. The results are given in Table 5 below:

Table 5 Chi-Square Test for the Differences Between Male and Female Creativity

Chi-Square Tests			
	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	.182 ^a	2	.075
Continuity Correction ^a	.191	2	.071
Likelihood Ratio	.196	2	.074
Linear-by-Linear Association	.875	1	.027
N of Valid Cases	401		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 64.68.

Table 5 shows that the Correction for Continuity value is 0.191, with an associated significance level of 0.071. To be significant, the Sig. value should be 0.05 or smaller. Since the value of 0.071 is larger than the alpha value of 0.05, the researcher can conclude that there is no statistically significant difference between male and female in regard to their creative thinking abilities. which means that the ability of males in creative thinking is not different from the ability of females in this regard.

Conclusions

The results of the analyses allow the researchers to strongly claim that there is an effect of the EFL learners' creativity and their performance in reading comprehension tests. This is because it is found that even though the level of the participants in creativity is generally low, there is relation between the level in creativity test and in reading comprehension test. Accordingly, it can be claimed that creating thinking is an important factor in explaining EFL learners' proficiency in reading comprehension. Therefore, it is important to highlight that not paying enough attention to creative thinking in foreign language classes may lead to students' inabilities of obtaining excellence in reading comprehension required for them to be able to achieve success in academic study.

Furthermore, the present study proves that there is no difference between male and female learners in relation to their creative thinking ability. Based on the results obtained in the current study, one can strongly claim that the gender of the learners has nothing to do with their ability in creative thinking. This leads to the recommendation that any attempt to improve creative thinking and/or reading comprehension should be built equally for male and female learner.

The present study has some beneficial implications for classroom instruction. Since creative thinking can be developed and taught and due to the results of the present study, it is suggested that creative thinking be developed as a core academic skill so that better educational outcomes can be accomplished by learners.

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