

The Relationship Between Creative Writing and Critical Thinkingam Secondary Stage Students

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Abstract

This study has two aims: examining the relationship between secondary students' EFL creative writing and their critical thinking and determining whether secondary students' EFL creative writing skills predict their critical thinking. The participants were 33 first year secondary school students at El-Shomout El-Moshtaraka Secondary School, Benha, Qalioubiya Governorate, Egypt during the first term of the school year 2020/2021. An EFL creative short story writing skills test and a critical thinking skills test were used for collecting data. To find out whether or not there was a significant correlation between their EFL creative writing and their critical thinking, Pearson correlation coefficient was used. The multi-regression analysis model was applied to find out if creative writing skills can predict critical thinking skills. The multi-regression analysis model was applied to find out if creative writing skills can predict critical thinking skills. Pearson correlation coefficient between the scores of the study participants in the critical thinking test and their scores in the EFL creative writing test showed the existence of positive significant correlation between the two variables. It was also found that secondary students' EFL creative writing can be a significant predictor of their critical thinking.

Key words: EFL Creative Short Story Writing, Critical Thinking, Secondary Students, Correlation and Prediction

العلاقة بين الكتابة الإبداعية في اللغة الإنجليزية كلغة أجنبية والتفكير الناقد لدى طلاب المرحلة الثانوية

الملخص:

هدفت الدراسة الحالية الكشف عن العلاقة بين الكتابة الإبداعية فى اللغة الإنجليزية كلغة أجنبية والتفكيرالناقد لدى طلاب المرحلة الثانوية وتحديد إلى أي مدى تتنبأ الكتابة الإبداعية فى اللغة الإنجليزية كلغة أجنبية بالتفكير الناقد لديهم. تكونت عينة الدراسة من ثلاثة وثلاثين طالباً وطالبة تم اختيارهم من طلاب مدرسة الشموت الثانوية المشتركة، محافظة القليوبية بجمهورية مصر العربية خلال الفصل الدراسي الأول عام ٢٠٢٠ م/٢٠٢ م. استخدمت الدراسة اختيار مهارات الكتابة الإبداعية الفريية مصر العربية خلال الفصل الدراسي الأول عام ٢٠٢٠ م/٢٠٢ م. استخدمت واختبار مهارات التعربية خلال الفصل الدراسي الأول عام ٢٠٢٠ م/٢٠٢ م. استخدمت واختبار مهارات التعربية خلال الفصل الدراسي الأول عام ٢٠٢٠ م/٢٠٢ م. استخدمت واختبار مهارات التفكير الناقد لجمع البيانات والإجابة على تساؤلات البحث. تم استخدام معامل إرتباط بيرسون للكشف عن وجود علاقة إرتباط دالة بين الكتابة الإبداعية فى اللغة الإنجليزية كلغة أجنبية الاحتبار مهارات التفكير الناقد لجمع البيانات والإجابة على تساؤلات البحث. تم استخدام معامل الدراسة اختبار مهارات التفكير الناقد لجمع البيانات والإجابة على تساؤلات البحث. تم استخدام معامل المناس بيرسون للكشف عن وجود علاقة إرتباط دالة بين الكتابة الإبداعية فى اللغة الإنجليزية الانجليزية الاحتار معارل التفكير الناقد لديهم. كما تم تطبيق نموذج تحليل معامل الانحدار المتعدد لدراسة أيثر مهارات الكتابة الإبداعية فى اللغة الإنجليزية كلغة أجنبية على الاتحدار المتعدد لدراسة اختبار التفكير الناقد وبين درجاتهم فى الخابوني بين درجات الطلاب الشاركين فى الدراسة اختبار التفكير الناقد وبين درجاتهم فى اختبار الكتابة الإبداعية فى اللغة الإنجليزية كلغة أجنبية على الاتحدار المتعدد لدراسة اختبار التفكير الناقد وبين درجاتهم فى التبليزيونية الغاني المراب الطراب المرابي المرابي الرابي الرابي الرابي الراب المراب المرابي الماركين فى الدراسة اختبار التفكير الناقد وبين درجاتهم فى اللغة الإنجليزية كلغة أجنبية وجود علاقة دانة موجبة بين الكتابة الإبداعية فى اللغات الإنجليزية كلغة أجنبية وجود علاقة داله موجبة بين الكتابة الإبداعية فى اللغاني الإنجليزية الغاني الإنجليزية الإبدايية من مالم الابرابي المرابي المرابي المرابي المرابق الرابق الربابيزية الإبدايي الكتابة الإبداعية الإنجليزية الإنجايي

الكلمات المفتاحية: الكتابة الإبداعية للقصة القصيرة فى اللغة الإنجليزية كلغة أجنبية- التفكير الناقد- طلاب الثانوي- العلاقة- التنبؤ.

Introduction

Teaching for developing critical thinking is one of the goals of modern education, as it prepares students with the skills necessary to function well in the academic as well as social life setting. It also prepares students to equip with the social affairs in a rapidly changing world. In order to develop such skills, students must go beyond involving textbook knowledge and learn to develop skills involved in judging the accuracy of information, evaluating alternative evidence and arguing with logical reasons. Ku (2009) highlights that critical thinking skills are not only important for students to perform well in school, but also required in their future workplaces, social and interpersonal contexts. Marin and Halpern (2011) and Qamar (2016) pinpoint that critical thinking skills development is often considered as the most important reason for formal education because students' ability to think critically is necessary for success in the contemporary world.

Writing similarity to critical thinking may be due to its requirement of the integration and performance of the various skills such as argumentation, organization, and planning, as well as the requirement of using the suitable grammar and punctuation rules (Dunn & Smith, 2008). Widyastuti (2018) stated that a writing course which stimulates students to engage in critical thinking is more effective than traditional methods of writing.

According to Alidmat and Ayassrah (2017), the importance of writing skills in critical thinking skills development cannot be given excessive emphasis. Students who surpass in writing will have their thinking increased as well. However, critical thinking skills are weakened when writing tasks are poorly chosen or when students are at a lower level in their writing ability than can advantage their thinking skills however carefully chosen the tasks may be.

EFL Creative Writing

There are many definitions of creative writing. It was defined as "work in the traditional literary genres of poetry, short fiction, the novel, the plays, and/or the literary essay (Stewart, 1994:7)." To Harmer (2001) creative writing introduces imaginative tasks such as writing poetry, stories and plays. As defined by May (2007:1) 'creative writing' means writing fiction, poetry and script and writing narrative non-fiction and writing the feature side of journalism. Creative writing can be also defined as the study of writing genres (including poetry, fiction, drama, and creative non-fiction) and its contexts by

means of creative production and reflection on process. Creative writing can use any form or genre of writing as an exemplary subject of study, but the productions of creative writing tend to include imaginative interpretations of the world that invite the complex participation of the audience or reader (Bennett, Clarke, Motion & Naidoo, 2008 as cited in Pawliczak, 2015: 2).

Other researchers defined creative writing as the written expressions in which students put their own ideas, thoughts, feelings and impressions in their own words. Ramet (2007: xi) defined it as "having the power to create an imaginative, original literary production or composition". According to Onkas (2015:197), it can be defined as "the fluent expression of thoughts in an original manner by creating logical linkages between them based on the individual's schemata in a written form".

Ghani and Din (2017) stated that creative writing tends to increase ESL/EFL students' ability to express their feelings in a vivid and spontaneous manner, and to convey responses freely in their writing. Creative writing also means the students' ability to express themselves well in writing and print.

Barbot, Tan, Randi, Santa-Donato and Grigorenko (2012: 210-212) identified the "ingredients" of creative writing to six broad categories of factors: (a) general knowledge and cognition, (b) creative cognition, (c) executive functioning, (d) motivation and other conative characteristics, (e) linguistic and literary factors, and (f) psychomotor factors.

(a) General knowledge and cognition

They are central factors to the development of writing skills. They include intelligence, which allows the recall of knowledge in a workable form. Cognitive flexibility includes writers' ability to synthesize what they know into a coherent composition.

(b) Creative cognition

Creative writing requires originality, and selective combination to creatively solve problems related to the writing process, or to produce original story elements. Finally, divergent thinking is a generative thinking skill often viewed as the cognitive essence of creativity. These sub-level abilities, components of creative cognition, are supported by a higher-order construct: imagination.

(c) Motivational and conative factors



Intrinsic motivation reflects the personal desire to express one's knowledge or thoughts on a subject through compositional activity.

(d) Executive functioning

Executive functions, such as planning and organizing ideas, are central to the writing process.

(e) Linguistic and literacy factors

Linguistic factors refer to the basic language skills that are involved in assembling words into meaningful sequences. Meaningful writing involves a complex array of lower and higher level linguistic skills, such as the ability to build sentence structures and construct meaning using context, to achieve creative written expression; and knowledge of the larger, organizing structures of language that support meaningful text, such as narrative framework, essentially the introduction of a problem, with particular characters and setting, which includes a beginning, a middle and an end. Finally, reading comprehension, the receptive aspect of writing, is a basic linguistic skill highly related to the ability to write.

(f) Psychomotor factors

Handwriting is a lower level skill that may affect one's ability to write. Lack of mastery of low level transcription skills (i.e., spelling and handwriting) can impede writing development in novice and struggling writers.

Some researchers focused on fluency, flexibility, originality and elaboration as creative writing skills.

1. Fluency

Thorne (2007) stated that fluency is thinking of many ideas. Shively (2011) explained that fluency refers to the writer's ability to generate lots of ideas, which produce creative meanings. Baer and Kaufman (2012) defined fluency as the number of different ideas one can produce.

2. Flexibility

To Thorne (2007), flexibility is thinking of different ways to do or use things. Baer and Kaufman (2012) defined flexibility as the variety among the ideas one produces. Shively (2011) explained that flexibility generates a variety of ideas. It also leads to original ideas, which is considered the most fugitive aspect of creativity.

3. Originality

As stated by Thorne (2007), originality is thinking of different unique things. Baer and Kaufman (2012) suggested that originality refers to how



unusual are the ideas one produces. Shively (2011) explained that originality is the quality through which the writer can generate unique or uncommon products, sudden ideas.

4. Elaboration

Thorne (2007) and Shively (2011) agreed that elaboration is thinking of details and embellishments to an idea. Baer and Kaufman (2012) suggested that elaboration refers to the richness of detail in the ideas one produces.

Ibnian (2010) stated that there are elements that should be included in the short story:

Characters: They are the persons, or sometimes even animals, who participate in the action of a short story.

Setting: It refers to the time and place in which the story takes place. Writers often use descriptions of landscape, scenery, buildings, seasons or weather to draw a strong sense of setting in their stories.

The Plot or events: It refers to the systematized chain of events which compose the short story. Each link in the chain helps in building suspense and solving a problem.

The Conflict or problem: It refers to the struggle between two people or things in the story. The main character is usually on one side of the central conflict. The main character may struggle against another important character, against the forces of nature, against society, or even against something inside himself or herself (feelings, emotions, illness).

The Theme: This refers to the central idea or belief of the short story. It gives a basic meaning to a literary work. Generally, a theme is inferred from the other elements in the short story and often develops through the conflict experienced by the main character.

The Solution: This

refers to the outcome of the attempts to resolve the problem or conflict in the story.

Klarer (2004) and Milhorn (2006) and Harris (2017) agreed that the most important elements of a short story are: plot (What happens?), characters (Who acts?), narrative perspective or point of view (Who sees what?), setting (Where and when do the events take place?) and theme (what is the main idea?).

1- **Plot**

Plot is the logical interaction of the various thematic elements of a text which lead to a change of the original situation as presented at the outset of the

narrative (Klarer, 2004). It is the chain of causes and circumstances which connect the various events and place them into some sort of relation with each other (Beard, 2003). It is the series of events that take place in the story and relate to a central conflict (Harris, 2017). The plot has four characteristics:1) a character with a goal and a conflict, 2) movement forward in time, 3) causality and connectedness of events, and 4) direction toward an answer or a resolution (Lucke, 1999).

2- Characters

Characters are the core of a story and interact with or influence every other element of fiction. They are what drive a story, carrying the reader from the first to the last page, making readers care (Gotham Writer's Workshop, 2003). Through their motivations, actions, and responses, they create the story (Lucke, 1999). A typified character in literature is dominated by one specific trait and is referred to as a flat character. The term round character usually denotes a persona with more complex and differentiated features (Klarer, 2004). The protagonist is the hero or heroine of the story. He or she is the central character, the person around whom the events of the story revolve and usually the one who will be most affected by the outcome (Lucke, 1999).

3- Point of view or Narrative perspective

Point of view refers to the vantage point from which readers observe the events of the story (Lucke, 1999). It characterizes the way in which a story presents persons, events, and settings (Klarer, 2004). It determines whose eyes the reader experiences the story (Harris, 2017). It should already be clear that although a written story has an author, it is not this author who tells the storyit is a narrator created by the author. The most obvious distinction between types of narrator is whether they are third person or first person. A third person will use the pronouns 'he, she, it' or 'they' and a first person narrative will largely use the pronouns 'I' and 'we' (Beard, 2003).

4- Setting

Setting refers to the when and where of a short story. It is the place and time in which the characters are acting. But setting is not just backdrop. It can influence theme, characters, and action (Harris, 2017). It provides a context for its characters and events. Not only does it situate them in time and place, but it shapes the people and influences what happens to them (Lucke, 1999). It denotes the location, historical period, and social surroundings in which the action of a text develops (Klarer, 2004).

5- Theme

A theme is the central idea explored by the writer's work, a message that a writer leave in the reader's awake. It is the purposeful way the writer tells the story's events that will broadcast his theme (Harris, 2017).

In addition, Lucke (1999) added narrative voice or style element to the main elements of the short story to refer to the how, the "artful way" the story is told. The term voice encompasses all the choices a writer makes about language and style. It also includes the unique perspective that any author brings to his or her own work such as use of imagery, metaphor, and simile. The present study focused on elements of short story: the character, setting, plot, theme, point of view and style.

Norman and Spencer (2005) mentioned that creative writing helps learners to express their ideas, engage in the creative process, and reflect on their lives. Therefore, creative writing involves a set of activities, or process that can be discovered by the investigation of emerged works whose results are most often referred to by their specific 'artefactual' names-for example, the 'poem', 'script', 'story' or 'novel' that arises from the acts and actions of creative writing (Harper, 2010).

According to Kirkgöz (2014), there are several reasons for including creative writing in the language teaching practices. First, creative writing helps language development at the level of grammar, vocabulary and discourse. Second, creative writing encourages more creative reading and aesthetic reading skills development, which enhances the students' understanding of textual construction and contributes to their writing. In addition, creative writing concentrates on the right side of the brain, which focuses on feelings, physical sensations, intuition and the like. This leads to a balance between the logical and the intuitive thinking. It also gives an opportunity for students whose hemisphere preference may not be left-brain where they can engage in more logical thinking.

Critical Thinking

Researchers presented many definitions of critical thinking (CT). Jaffar (2004: 15) defined it as "the ability to see the discrepancies or logical flaws in arguments". Cottrell (2005:1) defined it as a cognitive skill, associated with



mind using. The students' ability to think in critical, analytical and evaluative ways means using mental processes such as selection, categorisation, attention, and judgement. Critical thinking was defined by Paul and Elder (2006: xx) as "thinking explicitly aimed at well-founded judgment, utilizing appropriate evaluative standards in an attempt to determine the true worth, merit, or value of something"

Ennis (2015) defined critical thinking in accord with contemporary usage as "reasonable reflective thinking focused on deciding what to believe or do" (P.32). Ennis (1993:180) stated that a student needs to do most of these skills reflectively:

- 1. Judge the credibility of sources.
- 2. Judge the quality of an argument, including the acceptability of its reasons, assumptions, and evidence.
- 3. Try to be well informed.
- 4. Identify conclusions, reasons, and assumptions.
- 5. Develop and defend a position on an issue.
- 6. Plan experiments and judge experimental designs.
- 7. Ask appropriate clarifying questions.
- 8. Define terms in a way appropriate for the context.
- 9. Be open-minded.
- 10.Draw conclusions when warranted, but with caution.

Critical thinking, according to Fisher (2011), is a kind of evaluative thinking-which involves both criticism and creative thinking-and which is particularly interestedly engaged with the quality of reasoning or argument which is presented in support of a belief or a course of action. Stobaugh (2013) stated that critical thinking is analytical and deliberate and involves original thinking. It is the process of knowledge to correlate connections across disciplines and find the possible creative solutions to problems.

Cottrell (2005:2) mentioned that critical thinking is a complex process of deliberation which involves a wide range of skills and attitudes. It includes:

- Identifying other people's positions, arguments and conclusions;
- Evaluating the evidence for alternative points of view;
- Weighing up opposing arguments and evidence fairly;
- Being able to read between the lines, seeing behind surfaces, and identifying

false or unfair assumptions;

• Recognising techniques used to make certain position more appealing than others, such as false logic and persuasive devices;

- Reflecting on issues in a structured way, bringing logic and insight to bear;
- Drawing conclusions about whether arguments are valid and justifiable, based on good evidence and sensible assumptions;
- Presenting a point of view in a structured, clear, well-reasoned way that convinces others.

Wade (1995) focused on eight general activities that critical thinkers should be able to perform. These activities involves asking students to (a) ask questions and be willing to wonder, (b) define problems clearly, (c) examine evidence, (d) analyze assumptions and biases, (e) avoid emotional reasoning, (f) avoid oversimplification, (g) consider alternative interpretations, and (h) tolerate uncertainty.

Writing and Critical Thinking

Writing is a recursive process in which the student can return to a previous stage of the writing process while working on a later stage. In other words, while students are revising their writings, they think of new ideas that could be included in their writings. This means that critical thinking and its skills may be developed in the students' writing process (Dewi, 2015).

The relationship between writing and critical thinking is a basis for the underlying assumption that writing is closely connected with thinking. The process of writing helps formulate, clarify, expand, and deepen thinking (Schmidt, 1999). According to Rahmat, Aripn, Lin, Whanchit and Khairuddin (2020), good writing requires proper planning. The planning involves reading for information. This reading stage needs critical thinking skills to make decisions on the content of what has been read, as well as how the content fits into the writer's needs. The writer's first writing is not the final stage. He always needs to evaluate his draft by reading critically to improve the final product.

Rahmat et al. (2020) stated that writing and thinking are inter-connected. They compared the process of writing to that of critical thinking skills. The writing processes are mapped onto the stages of the student's critical thinking

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process. Figure 1 shows the connection between critical thinking and writing through the following stages:

The Planning Stage: During this stage, the writer needs to understand concepts before he/she can decide on what or how much to write. The next stage of planning is for the writer to apply the understood concept to be sued in their writings.

The Translation Stage: It is a complex cognitive process and happens in the mind of the writer. The writer analyses the information into manageable chunks to be included in their writings. However, a better writer would synthesize the gathered information before writing.

The Reviewing Stage: It is the last stage where the writer re-reads what he/she had written. He then evaluates whether their writings needs improvement or good the way it already is.

Figure (1): The connection between critical thinking and writing

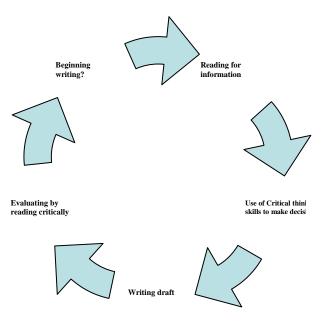


Source: Flower and Hayes (1981) and Haase (2010) cited in Rahmat et al. (2020)

The thinking and writing connection is undeniable. The writing process involves the execution of several steps to be effective, higher order thinking also involves certain conditioning of the mind. Good writing begins with the brainstorming of ideas and activating prior schema, exploring and searching all available information about the topic, drafting or ruminating on the topic, editing, modifying and /or rewriting. The well-designed writing assignments help instructors encourage students to reconsider concepts, critically evaluate assumptions and revise their writing (Cavdar and Doe, 2012). The need to ensure that critical thinking skills are incorporated into the process of writing in a classroom context is significant (Mehta & Al-Mahrooqi, 2015). Writing is a vehicle through which students can readily express their critical thinking. Writing seems to be an expression of critical thinking when students are trained to use a critical thinking method consistently in writing. (Dixon, Cassady, Cross & Williams, 2005). In addition, Olson (1984, 31) stated that "By helping students become better thinkers, we would enable them to become better writers and vice-versa."

According to Rahmat (2020), critical thinking is a kind of problem solving. The writing process is as a process of solving problem. Writers are expected to apply information they already know to gather suitable materials for their writing task. They need to use declarative knowledge to practice the skills of analyzing information, and synthesizing information. Next, they need to use procedural knowledge to make decisions to download the content of their writing. They also need to use metacognition to evaluate information in order to make the materials work better with their writing task.





(Adapted from: Rahmat, 2020:33)



Related Studies

Some research papers investigated the effects of EFL writing on critical thinking skills such as Al Sharadgah (2014); Hashemi, Behrooznia and Mahjoobi (2014); Prastya, Soe'oed and Setiawan (2014); Sugianto (2014); Chen (2017) and Arifin, Ilyas and Sukmawidjaya (2020). Al Sharadgah (2014) investigated the effectiveness of a writing program on improving Salman bin Abdulaziz University students' critical thinking skills using an Internet-based writing program (IBWP) developed by the researcher. The participants were 98 male students enrolled in a writing course during the first semester of the academic year 2013/2014. The findings revealed that EFL students in the experimental group who used the IBWP showed greater improvement in their critical thinking skills than did the EFL students in the control group who used the ordinary method.

Hashemi, Behrooznia and Mahjoobi (2014) investigated the correlation between Iranian EFL learners' critical thinking ability and their argumentative writing achievement, and investigated the predictability of the students' argumentative writing achievement based on their scores on critical thinking scale. Furthermore, the effect of gender on Iranian EFL learners' argumentative writing achievement was investigated. The participants included 178 EFL learners in three universities in Mashhad, Iran. Instruments used were 'Watson-Glaser Critical Thinking Appraisal' (2002) as well as an argumentative writing assignment. The results revealed the positive correlation between critical thinking ability and argumentative writing indicating that these two variables significantly and positively related to each other; among the predictors (subscales of the critical thinking) of argumentative writing, inference, assumptions, arguments were the stronger predictors. Finally, gender was not found to significantly affect Iranian EFL learners' argumentative writing achievement.

Prastya, Soe'oed and Setiawan's study (2014) aimed (1) to know critical thinking skill of the fifth semester English Department students of Mulawarman University, (2) To know writing argumentative essay achievement of the fifth semester English Department students of Mulawarman University, (3) To find whether there is significant correlation between critical thinking skill and writing argumentative essay achievement. The design of this study was correlation

design. Participants were 30 students of the fifth semester English Department of Mulawarman University. Instruments of the study were critical thinking test and writing argumentative essay test. The findings showed that: (1) The critical thinking skill achievement of the fifth semester English department students of Mulawarman University was poor with the mean score of 51.51; (2) The writing argumentative essay achievement of the fifth semester English department students of Mulawarman University was good with the mean score of 74.42; (3) there was a significant correlation between critical thinking skill and writing argumentative essay achievement of the fifth semester English Department students of Mulawarman University.

Sugianto (2014) aimed at analyzing and finding out the empirical evidence about critical thinking ability and its relation to writing ability. Participants were 60 students of Department of English Education of Syarif Hidayatullah State Islamic University Jakarta. Instruments of the study were: a critical thinking test and test of written English (independent essay). Results indicated that there was a high relationship between critical thinking ability and writing ability.

Chen (2017) examined whether a relationship exists between critical thinking and English writing courses among community college students. The study aimed to expand current understanding about the role of writing courses in increasing students' critical thinking skills. Participants were 110 students at one large, urban California community college. Students in two sections of basic skills English and two sections of college-level English completed the California Critical Thinking Skills Test (CCTST). As two distinct groups of students, they were treated as Study 1 and Study 2. Results indicated that there was a relationship between writing and critical thinking. Writing Intensive General Education courses were positively correlated with critical thinking.

Arifin, Ilyas and Sukmawidjaya (2020) determined the effect of journal entries and assigned writing on developing students' critical thinking. A total of six components, namely, interpretation, analysis, evaluation, inference, explanation, and self-regulation, were used to carry out this study. Participants were 12 students majoring in English Education from one of the universities in Jakarta. Journal entries submitted by the students as a course prerequisite were evaluated and analyzed by two raters. The results showed that many students lacked important critical thinking skills required for a successful study, and to

acquire good employment after graduating from college. In addition, the use of journal entries and assigned writing had the ability to promote the critical thinking level to varying degrees.

On the other hand, many research papers examined the correlation between students' EFL writing and their critical thinking and determined to what extent students' EFL creative writing predict their critical thinking such as studies of Nikou, Bonyadi and Amirikar (2015); Afshar, Movassagh and Arbabi (2017); Madjid, Sulfiana and Lutfiyah (2019) and Rahmat et al. (2020). Nikou, Bonyadi and Amirikar (2015) investigated the relationship between critical thinking skills and the quality of Iranian TEFL students' writing. Participants were 140 students who were homogeneous in their language proficiency were selected non-randomly. Instruments were Proficiency test, California Critical Thinking Test (form B) and Scale for assessing writing. To examine the relationship between variables, the Pearson-Product Moment was used. Furthermore, the researchers applied multiple regressions to predict the degree of their relationship. The results revealed that there was a positive relationship between critical thing skills and writing quality.

Afshar, Movassagh and Arbabi (2017) investigated the relationship between critical thinking and the writing ability of Iranian EFL learners, and the interrelationship among the subskills of the two constructs. It also aimed at finding which skills of critical thinking predicted the participants' writing ability. Participants were 104 students majoring in English Language. Instruments were the California Critical Thinking Skills Test and IELTS test rubrics. The results indicated a significant relationship between critical thinking and writing ability of the participants. Moreover, among the subskills of writing ability, only organisation was correlated with certain subskills of critical thinking. The results of multiple regression analysis revealed that among the five components of critical thinking, analysis and evaluation turned out to be stronger predictors of writing ability.

Madjid, Sulfiana and Lutfiyah's case study (2019) aimed at investigating the relationship between students' critical thinking and writing ability and to analyze how the writing can improve the level of students' thinking. Participants were 30 students in the third semester at English Teaching Education Department (ETED) of UINSA academic year 2018/2019. The main sources of

the data were observation and interview. The study concluded that most of the students could not write with the correct grammar, but also the teachers did not understand what strategies for students.

Rahmat et al. (2020) explored the connection between critical thinking skills and academic writing. Participants were 207 undergraduate students who signed up for academic writing course in a public university in Malaysia. Findings revealed interesting implications for the teaching of writing process and critical thinking among undergraduates.

Based on the review of the previous studies, it can be noted that some studies found out a correlation between critical thinking and EFL writing/creative writing indicating that critical thinking positively affects the writing/creative writing performance such as Nikou, Bonyadi and Amirikar (2015); Afshar, Movassagh and Arbabi, (2017); Madjid, Sulfiana and Lutfiyah (2019) and Rahmat et al., (2020). On the other hand, some studies found out that it is writing that is correlated to critical thinking indicating that searching for information and the process of constructing meaning in writing positively affects critical thinking.

However, to the researcher's best knowledge, there are no studies carried on the correlation between EFL creative writing and critical thinking of secondary students. Because of this, further studies on the correlation between creative writing and critical thinking are needed to be carried out in order to create a more effective curriculum regarding creative writing and critical thinking in an integrated manner at the secondary school. Besides, there is no study that aimed at investigating if EFL creative writing can predict EFL critical thinking ability among secondary stage students. Hence, this research aims to examine the correlation between secondary students' EFL creative writing and their critical thinking and to investigate whether secondary students' EFL creative writing skills predict their critical thinking.

Questions of the Study

In order to establish a correlation between EFL creative writing and critical thinking, the following questions were formulated in the study:

(1) Is there a significant correlation between secondary students' EFL creative writing and critical thinking?

(2) Can secondary students' EFL creative writing predict their critical thinking?

Hypotheses of the Study

The present study attempted to test the following hypotheses:

- 1- There is a relationship between the mean scores of the study participants in of EFL creative writing skills and critical thinking skills.
- 2- The study participants' EFL creative writing can predict their critical thinking skills".

Research Method

The correlational research method was used in this study to explore and investigate the correlation between secondary students' EFL creative writing and their critical thinking and to determine to what extent students' EFL creative writing can predict their critical thinking. "Correlation design is procedures in quantitative research in which investigators measure the degree of association (relationship) between two or more variables using the statistical procedure of correlation analysis "(Creswell, 2005: 52) cited in Lestari and Holandiyah (2016).

Participants

The participants of the present study were one group (intact class) of first year secondary school students at El-Shomout El-Moshtaraka Secondary School, Benha, Qalioubiya Governorate, Egypt during the first term of the school year 2020/2021. The study participants comprised 33 students.

Instruments

The researcher prepared and used an EFL creative short story writing skills test and a critical thinking skills test in order to answer the research questions in this study

The EFL Creative Short Story Writing Skills Pre-Post Test Purpose of the EFL Creative Short Story Writing Skills Pre-Post Test

The EFL creative short story writing skills pre-post test was prepared by the researcher. It was used to identify the difference in the EFL creative short story writing performance.

Description of the EFL Creative Short Story Writing Skills Pre-Post Test



The creative short story writing skills test was prepared to measure first year secondary school students' creative short story writing skills classified under six main dimensions: character, setting, plot, theme, point of view, and style.

The creative short story writing skills test consisted of two questions to write two short stories. In their writing of each story, they were asked to include:

- (1) Different types of characterization.
- (2) Character's development through dialogue, interactions with others and situations.
- (3) The elements of the setting.
- (4) Different types of setting.
- (5) All elements of the plot.
- (6) Different types and techniques of plot.
- (7) A clear theme.
- (8) The point of view from which the story is told.
- (9) Narrative writing techniques, imagery and literary devices such as similes and personification.

Validity of the EFL Creative Short Story Writing Skills Test

For estimating the validity of the EFL creative short story skills test, the following methods were used:

Face Validity

The EFL creative short story skills test was submitted to 10 jury members specialized in EFL curricula and teaching methods, who asserted the validity of the test for assessing EFL creative short story writing skills. They were asked to provide feedback regarding the following: (1) The suitability of the test item for measuring the EFL creative short story writing skills to first year secondary school students, (2) The appropriateness of the test items to the students' level and (3) The validity of the test as a whole in achieving its intended goal.

Internal Consistency Validity

The test was piloted to a sample of 30 first year secondary stage students, other than the experimental group, in the first term of the academic year 2020/2021. The researcher used Statistical Package for the Social Science (SPSS) program (version 18) for estimating the internal consistency validity in two methods:



A) Estimating the internal consistency among the different dimensions of the test and each other.

B) Estimating the internal consistency among the test dimensions and the overall mark for the test.

A) Estimating the internal consistency validity among the different dimensions of the test and each other

To estimate the internal consistency validity among the different dimensions of the test and each other, the correlations between the students' scores in each dimension of the test and their scores in the other dimensions were calculated using the Pearson correlation coefficients. Table (8) indicates these correlations.

Table (1): The correlations between the scores of each dimension in the creative writing test and the scores of the other dimensions using the Pearson correlation coefficients

| Correlatio Skills | Setting | Plot | Theme | Point of view | Style |
|----------------------|---------|--------|---------|------------------|---------|
| Character | 0.467** | 0.435* | 0.542** | 0.649** | 0.398* |
| Setting | | 0.369* | 0.665** | 0.640** | 0.364* |
| Plot | | | 0.804* | 0.390* | 0.524** |
| Theme | | | | 0.689** | 0.505** |
| Point of view | | | | | 0.458* |
| Style | | | | | |

*. Correlation is significant at the 0.05 level **. Correlation is significant at the 0.01 level

Table (1) indicates that all correlations are significant at the 0.05 and 0.01 levels. This indicates the internal consistency among the different dimensions of the test and each other.

B) Estimating the validity of internal consistency validity among the test dimensions and the overall score of the test

To estimate the validity of internal consistency validity among the test dimensions and the overall score of the test, the correlations between the students' scores in each dimension of the test and the overall score of the test were calculated using the Pearson correlation coefficients. Table (2) indicates these correlations.

Table (2): The correlations between the scores of each dimension in the creative writing test and the overall score of the test using the Pearson correlation coefficients

| Skills | Characte | Setting | Plot | Theme | Point of view | Style |
|-------------|----------|---------|---------|---------|---------------|-------|
| Correlation | 0.662** | 0.586** | 0.614** | 0.749** | 0.746** | 0.453 |

*. Correlation is significant at the 0.05 level **. Correlation is significant at the 0.01 level

Table (2) indicates that all correlations are significant at the 0.05 and 0.01 levels. This indicates the internal consistency validity among the different dimensions of the test and the overall scores.

Discriminant Validity

To make sure of the discriminant ability of the EFL creative writing skills test, the discriminant validity was calculated. The scores of 27 % of the participants who scored the highest and 27 % of those who scored the lowest of the pilot sample (N=30) were calculated using Mann-Whitney Test to estimate the significant differences between these means. Table (3) shows the findings of the differences between the mean rank and Z- value between the two groups.

Table (3): The findings of the differences between the mean rank and Z-value of the two high scores and low scores of the EFL creative short story writing skills test

| Group | Mean Rank | Sum of Ranks | Z- Value | A Sig. |
|---------------------------------|--------------|--------------|----------|--------|
| The highest group less students | 12.50 | 100 | 0.41.4 | 0.01 |
| The lowest group level students | 4.50 | 36 | 3.414 | 0.01 |
| 50 | | | | |

Table (3) shows that there is statistically significant difference at the level 0.01 between the two groups' levels. Accordingly, the EFL creative short story writing skills test is of high level of discriminant validity.

Reliability of the EFL Creative Short Story Skills Test

For estimating the reliability of the EFL creative short story skills test, the following method was used:

Test-Retest Reliability Method

In order to establish the reliability of the creative short story writing test, the test was piloted to a sample of first year secondary school students in El-Shomout El-Moshtaraka Secondary School in Benha (N=30), other than the study sample, during the first term of the school year 2020-2021. Then, the test was re-administered after two weeks to the same sample. The Pearson correlation coefficients between the results of the first and second application of the test were calculated using SPSS program (Version. 18). The Pearson reliability correlation coefficients between the two applications in each sub-skill and the test as a whole were statistically significant at the 0.01 level. Table (4) indicates the test-retest reliability correlation coefficients of the EFL creative writing skills test.

Table (4): The test-retest reliability correlation coefficients of the EFL creative writing skills test

| | | | | | | | the test as a |
|-------------|----------|---------|--------|--------|---------------|---------|---------------|
| Skills | Characte | Setting | plot | theme | Point of view | Style | whole |
| Correlation | 0.719** | 0.659** | 0.851* | 0.881* | 0.917** |).737** | 0.942** |

**. Correlation is significant at the 0.01 level

Table (4) indicates that all the reliability correlation coefficients are high and are statistically significant at the 0.01 level. Accordingly, the EFL creative short story writing skills test is reliable in each dimension of the test and the test as a whole.

The Rubric for Scoring the Creative Short Story Writing Skills Test

An analytical rubric for scoring the EFL creative short story writing skills test was used. The analytical rubric was developed by reviewing the literature related to EFL creative writing such as Griffin and Ana (2005); Morris and

Sharpin (2013); Mozaffari (2013); Abdel Razik (2019); Abdel Razik, Khater, Hussein and Ahmed (2019) and El-Sweedy (2019). The purpose of the analytical rubric was to score the students' responses to the EFL creative short story writing skills test. This rubric included a detailed description of each of the six dimensions of the creative short story writing skills and the 10 sub-skills in order to help in scoring each student's two short stories.

Therefore, this analytical rubric covers the six main dimensions in addition to the 10 sub-skills of the EFL creative short story writing. Each dimension was scored out of four as (4: excellent) represents high, (3: good) represents intermediate, (2: fair) represents low and (1: poor) represents the lowest. The scale is used to measure each skill and sub-skill.

The Critical Thinking Skills Test Purpose of the Critical Thinking Skills Test

The critical thinking skills test was prepared by the researcher. The purpose of the test was to determine students' level.

Description of the Critical Thinking Skills Test

The test assesses six main skills: interpretation skills, analysis skills, inference skills, evaluation skills, explanation skills and self-regulation skills including a total of 12 sub-skills.

The critical thinking skills test consisted of nineteen critical thinking questions followed by multiple-choice questions. Each question consisted of a statement or a situation and offered a choice of responses. Multiple-choice questions were used for testing the critical thinking skills because they are easy for students to answer, and they are objective and can be scored quickly and accurately. The numbers of the test items were: 4 items for interpretation skills, 3 items for analysis skills, 2 items for inference skills, 4 items for evaluation skills, 3 items for explanation skills and 3 items for self-regulation skills. The test items covered all the critical thinking skills the researcher wanted to test.

The following criteria were taken into consideration during test construction:

- 1. The suitability of the test to students' level.
- 2. The test questions should express the main goal of constructing the test and the items should be relevant to the objectives of the test.
- 3. The test items cover the critical thinking skills identified by jury members.



Sources of Developing the Critical Thinking Skills Test

The critical thinking skills test was derived from Facione's California Critical Thinking Skills Test (Short Form) (1990 cited in McGrath 1999), Facione (1990), Shahin (2008), Starkey (2010), Abdel-Hack and Helwa (2014), Abdel Khalek (2014), Sheir, El Nabawy and Abdelkhalek (2014), Saadati, Tarmizi and Bayat (2010), Boulter (2010), El Safory (2018) and Facione (2020).

Piloting the Critical Thinking Skills Test

During the first term of the school year 2020-2021, the critical thinking skills test was piloted to a sample of first year secondary school students (N=30) from El-Shomout El-Moshtaraka Secondary School in Benha to investigate: (1) the clarity of instructions, (2) the suitability of the linguistic level of the test for the sample (3) determining the test time and (4) assessing the test validity and reliability. Results of piloting the test indicated that the instructions of the test were clear enough, and the linguistic level of the test was suitable for the sample.

Validity of the Critical Thinking Skills Test

The critical thinking skills test was piloted to a sample of first year secondary school students (N=30) in El-Shomout El-Moshtaraka Secondary School in Benha during the first term of the school year 2020-2021. Those students were excluded from the whole experiment. Then, the test was readministered after two weeks to the same sample. Piloting the critical thinking skills test aimed at calculating the validity and reliability of the test. The following methods were used for estimating the validity of the critical thinking skills test:

Face Validity

The critical thinking skills test was submitted to jury members (N=10) of EFL curricula and teaching methods experts who asserted that the test was valid as no suggestions were given concerning omitting or adding questions. They were asked to provide feedback regarding the following: (1) the suitability of the test items in measuring the critical thinking skills, (2) the appropriateness of the test items to the students' level, and (3) the validity of the test as a whole in achieving its intended goal.

Internal Consistency Validity

The researcher used Statistical Package for the Social Science (SPSS) program (version 18) for estimating the internal consistency validity in two methods:

A) Estimating the internal consistency among the different dimensions of the test and each other.

B) Estimating the internal consistency among the test dimensions and the overall score for the test.

A) Estimating the validity of internal consistency among the different dimensions of the test and each other

To estimate the validity of internal consistency among the different dimensions of the test and each other, the correlations between the students' scores in each dimension of the test and their scores in the other dimensions were calculated using the Pearson correlation coefficients. Table (5) shows the correlations between the scores of each dimension in the critical thinking skills test and the scores of other dimensions

Table (5): The correlations between the scores of each dimension in the critical thinking skills test and the scores of the other dimensions (N=30) using the Pearson correlation coefficients

| Correlatio | Analysis | Inference | Evaluation | Explanation | Self- regulation |
|-----------------|----------|-----------|------------|-------------|---------------------|
| Interpretation | 0.689** | 0.708** | 0.623** | 0.711** | 0.731** |
| Analysis | | 0.593** | 0.529** | 0.624** | 0.469** |
| Inference | | | 0.452* | 0.440* | 0.383* |
| Evaluation | | | | 0.652** | 0.620** |
| Explanation | | | | | 0.630** |
| Self-regulation | | | | | |

*. Correlation is significant at the 0.05 level **. Correlation is significant at the 0.01 level

Table (5) indicates that all correlations are significant at the 0.05 level and at the 0.01 level. This indicates the internal consistency among the different dimensions of the test and each other.

B) Estimating the internal consistency validity among the test dimensions and the overall score of the test

To estimate the internal consistency validity among the test dimensions and the overall score of the test, the correlations between the students' scores in each dimension of the test and the overall scores of the test were calculated using the Pearson correlation coefficients. Table (6) indicates these correlations.

Table (6): The correlations between the scores of each dimension in the critical thinking skills test and the overall score of the test (N=30) using the Pearson correlation coefficients

| Skills | Interpretatio | Analysi | Inference | Evaluatio | Explanation | Self- |
|-------------|---------------|---------|-----------|-----------|-------------|------------|
| | | | | | | regulation |
| Correlation | 0.915** | 0.800** | 0.695** | 0.801** | 0.845** | 0.805** |

**. Correlation is significant at the 0.01 level

Table (6) indicates that all correlations are significant at the 0.01 level. This indicates the internal consistency validity among the different dimensions of the test and the overall score of the test.

Discriminant Validity

To make sure of the discriminant ability of the critical thinking test, the discriminant validity was calculated. The scores of 27 % of the participants who scored the highest and 27 % of those who scored the lowest of the pilot sample (N=30) were calculated using Mann-Whitney Test to estimate the significant differences between these means. Table (7) shows the findings of the differences between the mean rank and Z- value between the two groups.

Table (7): The findings of the differences between the mean rank and Z-value of the high scores and low scores in the critical thinking skills test



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| Group | Mean Rank | Sum of Ranks | Z- Value | A Sig. |
|----------------------------|--------------|--------------|----------|--------|
| The highest level students | 12.50 | 100 | 2 4 4 0 | 0.01 |
| The lowest level students | 4.50 | 36 | 3.440 | 0.01 |

Table (7) shows that there is a statistically significant difference at the 0.01 level between the two levels. Accordingly, the critical thinking skills test is of high level of discriminant validity.

Reliability of the Critical Thinking Skills Test

For estimating the reliability of the critical thinking skills test, the following method was used:

Test-Retest Reliability Method

In order to establish the reliability of the critical thinking skills test, the testretest reliability method was used. The test was piloted to a sample of first year secondary school students in El-Shomout El-Moshtaraka Secondary School in Benha (N=30) during the first term of the school year 2020-2021. Those students were excluded from the whole experiment. Then, the test was re-administered after two weeks to the same sample. The Pearson correlation coefficients between the results of the first and second application of the test were calculated using SPSS program (Version. 18). The Pearson reliability correlation coefficients between the two applications in each sub-skill and the test as a whole were statistically significant at the 0.01 level. Table (8) shows the testretest reliability correlation coefficients of the critical thinking skills test.

Table (8): The test-retest reliability correlation coefficients of the critical thinking skills test

| | | | | | | Self- | The test |
|-------------|---------------|----------|-----------|-----------|------------|------------|----------|
| Skills | Interpretatio | Analysis | Inference | Evaluatio | Explanatio | regulation | whole |
| Correlation | 0.623** | 0.733** | 0.780* | 0.650** | 0.589** | 0.644** | 0.840** |
| | | | * | | | | |

**. Correlation is significant at the 0.01 level

Table (8) shows that all the reliability correlation coefficients were high and were statistically significant difference at the 0.01 level. Accordingly, it can be said that the critical thinking skills test is reliable.

Duration of the Critical Thinking Skills Test

It was estimated that a period of fifty minutes would be suitable for students to complete the test. This time was determined in the following way:

The time taken by the fastest student + the time taken by the slowest student

2

= <u>40+60</u> = 50 minutes.

2

Thus, it was estimated that the time required for answering the test was 50 minutes.

Scoring the Critical Thinking Skills Test

Every question in critical thinking skills test was given a score, and then the total score of the test was calculated. Students' answers to the pre-post critical thinking test were scored by the researcher. It was assigned as follows: one score for each correct answer; zero for choosing two answers, incorrect or blank answers. The total mark of the test was 19.

Data Analysis

Statistical Package for Social Science (SPSS) computer software-version 18 was used for analyzing the data. The Pearson correlation coefficient between the scores of the study participants in the critical thinking skills test and their scores in the post application of EFL creative writing skills test were used to determine the correlation between variables. In addition, the multi-regression analysis was used to determine whether students' EFL creative writing can predict their critical thinking.

Findings of the Study Findings of the First Hypothesis

The first hypothesis in the present study stated, "There is a relationship between the mean scores of the study participants in EFL creative writing skills and critical thinking skills."



For testing this hypothesis, the Pearson correlation coefficient between the scores of the study participants in the critical thinking test and their scores in EFL creative writing test was calculated using SPSS program (Version. 18). Table (9) summarizes these findings.

Table (9): The Pearson correlation coefficient between the scores of the study participants in the post application of the critical thinking test and their scores in the post application of EFL creative writing test

| Skills | Interpretation | Analysis | Inference | Evaluation | Explanation | Self- regulation | Critical Thinking |
|-----------|----------------|----------|-----------|------------|-------------|---------------------|----------------------|
| | | | | | | | 8 |
| Character | 0.888** | 0.872** | 0.894** | 0.527** | 0.809** | 0.844** | 0.934** |
| Setting | 0.839** | 0.785** | 0.750** | 0.607** | 0.825** | 0.864** | 0.911** |
| Plot | 0.973** | 0.840** | 0.680** | 0.598** | 0.732** | 0.777** | 0.901** |
| Theme | 0.902** | 0.780** | 0.696** | 0.615** | 0.746** | 0.842** | 0.898** |
| Point of | 0.730** | 0.549** | 0.719** | 0.607** | 0.825** | 0.821** | 0.833** |
| view | | | | | | | |
| Style | 0.865** | 0.791** | 0.806** | 0.641** | 0.879** | 0.852** | 0.941** |
| Creative | 0.919** | 0.825** | 0.811** | 0.637** | 0.857** | 0.888** | 0.963** |
| writing | | | | | | | |

Table (9) shows that there is a statistically significant positive correlation relationship at the level 0.001 between the overall EFL creative writing and its six dimensions with the overall critical thinking and its six sub-skills.

Findings of the Second Hypothesis

The second hypothesis in the present study stated, "The study participants' EFL creative writing can predict their critical thinking skills" For testing this hypothesis, ANOVA with Enter method was used. Table (10) and Table (11) summarize these findings.

Table (10): Findings of ANOVA for the multi-regression model for studying the effect of creative writing skills on critical thinking

| Model | Sum of Squares | df | Mean Squar | F | Sig. | R Square |
|------------|-------------------|----|------------|---------|------|----------|
| Regression | 278.849 | 1 | 278.849 | 398.417 | 0.01 | 0.928 |

| Residual | 21.697 31 (| .700 |
|----------|-------------|------|
| Total | 300.545 32 | |

Table (11): Findings of multi-regression analysis for the predictive factors(EFL creative writing with critical thinking)

| Dependent variabl | Independent variabl | Coefficients | | Unstandardized Standardized Coefficients Coefficients | | |
|-------------------|---------------------|--------------|-------|--|--------|------|
| | | | Std. | Beta | t | Sig. |
| | | B | Error | | | |
| Critical thinking | Constant | 4.288 | 0.892 | 0.963 | 4.808 | 0.01 |
| | Creative writing | 1.068 | 0.054 | | 19.960 | 0.01 |

Table (10) shows:

- There is a statistically significant effect at (0.01) for the EFL creative writing as an independent variable in interpreting the total variance of the critical thinking as a dependent variable as this interpret (92.8%) of the total variance of the critical thinking score.
- The prediction formula is as follow: Critical thinking= 4.288 + (1.068) Creative writing

In terms of the regression analysis of students' EFL creative writing for their critical thinking, it was found out that students' EFL creative writing were a significant predictor of students' critical thinking. Accordingly, EFL creative writing can be a predictor of critical thinking. Therefore, the second hypothesis is confirmed.

Discussion

This study examined the correlation between secondary students' EFL creative writing and their critical thinking. The study also investigated whether students' EFL creative writing can predict their critical thinking. Quantitative analysis revealed that there is a statistically significant positive correlation relationship at the level 0.001 between the overall EFL creative writing and its six dimensions with the overall critical thinking and its six sub-skills. This result was in accordance with Nikou, Bonyadi and Amirikar (2015); Afshar, Movassagh and Arbabi (2017); Madjid, Sulfiana and Lutfiyah (2019) and



Rahmat et al. (2020) who emphasized that the writing courses may had positive effect on critical thinking. Therefore, the results confirmed that there is a correlation between EFL creative writing and critical thinking.

The results also confirmed the second research question concerning whether secondary students' EFL creative writing can predict their critical thinking. Quantitative analysis revealed that there is a statistically significant effect at (0.01) for the EFL creative writing as an independent variable in interpreting the total variance of the critical thinking as a dependent variable. This indicates that creative writing can predict critical thinking.

Conclusion

According to the findings and results of the quantitative analysis of the data, it can be concluded that there was a positive significant correlation between secondary students' EFL creative writing and their critical thinking. It was also found that secondary students' EFL creative writing can be a significant predictor of their critical thinking.

These findings might be helpful to those who develop curriculum for EFL teachers to include writing courses with the purpose of training competent critical thinkers as well as creative writers. In addition, it might be beneficial to those who teach English, particularly writing courses that include appropriate tasks and activities to employ their creative writing skills along with their critical thinking skills.

The correlation between secondary students' EFL creative writing and their critical thinking was examined in this research. Hence, it is possible to enrich the literature by carrying out some other studies on the correlation between the EFL creative writing and critical thinking of the students at other educational stages. In addition, other studies can be conducted for identifying the relationships between critical thinking and other EFL skills (reading comprehension and reading strategies) of secondary stage students.

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