The Effect of Design Thinking on Developing Creative Writing Skills for Student-Teacher, Faculty of Education, Helwan University

By

Amany Ibrahim Khatab Abd Elwahed

Assistant lecturer at Curriculum and EFL Instruction Department

Supervised by

Dr. Soheir Ibrahim Mohamed Seleim

Professor of Curriculum and EFL Instruction

Faculty of Education

Helwan University

Dr. Manal Farouk Mohammed

Professor of Curriculum and EFL Instruction

Faculty of Education

Helwan University

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Seliem, Soheir[1]; Farouk, Manal[2]; Khatab, Amany[3]

Helwan University, Faculty of Education, Egypt

ABSTRACT

The aim of this research was to investigate the effect of design thinking on developing creative writing skills for student-teacher, faculty of education, Helwan university. The instruments of the research included a pre-post creative writing skills test based on a list of creative writing skills and a rubric. The participants were 30 who represented the study group. The necessary creative writing skills were determined through the use of checklist approved by a jury of specialists in teaching EFL. During the experiment, the study group received instruction through using design thinking. The experiment lasted for three months. The analytical descriptive method and quasi experimental design were followed. The statistical analysis of the obtained data from the two administrations of the test confirmed the effect of using design thinking on developing creative writing skills for student-teacher, Faculty of Education, Helwan University. Thus, the aim of the study was achieved as using design thinking showed a large effect size on developing creative writing skills for the experimental group of the study. Based on the results, it was recommended that teachers should give due attention to the development of the creative writing skills through design thinking.

Key words: design thinking, creative writing skills

1. Seliem, Soheir: Professor of Curriculum and EFL Instruction, Faculty of Education, Helwan University

2. Farouk, Manal: Professor of Curriculum and EFL Instruction, Faculty of Education, Helwan University

3. Khatab, Amany: Assistant lecturer and a Ph.D. researcher in Curriculum and EFL Instruction

"The Effect of Design Thinking on Developing Creative Writing Skills for Student-Teacher, Faculty of Education, Helwan University"

مستخلص البحث:

هدف هذا البحث إلى معرفة أثر التفكير التصميمي في تنمية مهارات الكتابة الإبداعية لدى الطالب المعلم بكلية التربية جامعة حلوان. وتضمنت أدوات البحث اختبار مهارات الكتابة الإبداعية القبلي والبعدي بناء على قائمة مهارات الكتابة الإبداعية ومقياس تقدير الكتابة الإبداعية،. قد تم اختيار ٣٠ طالبا بشكل عشوائي والذين يمثلون عينة الدراسة. تم تحديد مهارات الكتابة الإبداعية اللازمة من خلال استخدام قائمة مهارات معتمدة من قبل لجنة من المحكمين المتخصصين في المناهج وطرق تدريس اللغة الانجليزية.. خلال التجربة، تلقت مجموعة الدراسة التعليمات من خلال استخدام التفكير التصميمي. واستمرت التجربة لمدة ثلاثة أشهر . وتم اتباع المنهج الوصفي التحليلي والمنهج شبه التجريبي. . وأكد التحليل الإحصائي للبيانات التي تم الحصول عليها من أثر استخدام مدخل التفكير التصميمي في تنمية مهارات الكتابة الإبداعية لدى الطالب المعلم بكلية التربية جامعة حلوان. وبذلك تحقق هدف الدراسة حيث أظهر استخدام مدخل التفكير التصميمي تأثيراً كبيراً في تنمية مهارات الكتابة الإبداعية لدى المجموعة عينة الدراسة. وفي ضوء النتائج أوصت بضرورة إعطاء المعلمين الاهتمام اللازم لتنمية مهارات الكتابة الإبداعية من خلال مدخل التفكير التصميمي.

الكلمات المفتاحية: التفكير التصميمي – القراءة الإبداعية.

1. Introduction

Writing is one of the most important skills in learning English. Writing is a kind of communication that allows to share information, a note, or an idea with others. Writing is crucial to a student's future professional success. As a result, writing may be defined as a series of mental processes that allow students to turn abstract mental images into linear symbols in the form of written expression represented by themes offered to them.

Kassem (2017) referred that writing bridges the gap and connects people from different backgrounds and across borders. It is a survival skill as students are obliged to use it as a medium for learning other courses, to prepare home assignments and projects and, eventually, to communicate with their instructors. In spite of its importance, its mastery is not easy as there is a common agreement that writing is the most complex and challenging skill as it requires special effort and attention.

According to Praminatih et al. (2019), writing can be arranged into two types: functional and creative. functional writing refers to the type of writing that intended to convey a specific, direct and clear message to a particular audience. it includes areas such as writing instructions, letterheads, notes, invitations, reports and advertisements. on the other hand, Viana & Zyngier (2019) mentioned that creative writing is a form of writing by which learners express their feelings, emotions, reactions and ideas in a great literary style.

Fancourt, et al. (2019) indicated that creative writing can offer avenues of expression, build reading and writing the skills, as well as much needed confidence in the classroom. It strengthens connects among the students and the instructors who work with them. It also encourages self-expression, cultivate confidence,

upgrades relation abilities and improves the learners' trust and figuring out how to peruse and write in a foreign language. Stephens (2018) also stressed that the greatest joy of the teacher and the greatest hope for better world lies in the cultivation of creative power. Creativity is the main source of emergence and development of human culture.

According to Alicie (2012) creative writing should be developed for the students for the following main reasons:

1. **Encouraging imagination**: helping students learn to think outside of the box
2. **Teaching persuasiveness**: when students write about some actions or creatures (up to normal) they are trying to convince the reader of the possibility of the thing and make him/ her believes this is possible
3. **Teaching discipline**: by letting imagination run free may not seem like a way to encourage discipline. Putting the writer what s/he sees in his/ her head into paper and making it something feasible and enjoyable for others is an exercise in discipline _ in addition, the thoughts you need to be ordered, clear and concise.
4. **Using as therapy**: many times, students have a hard time saying what is on their minds. In creative writing therapy, they are able to put whatever is bothering them into a third person point of view, which helps them remain detached,
5. **Developing grammar skills**: helping students practice good grammar and spelling skills without seeming like a lesson. they learn to insert commas, to separate adjectives, to put periods to end a thought and to start a new paragraph.

Also, teachers who use creative writing classrooms have the following significant benefits:

1. The power of the teacher as model and co-writer is inestimable.
2. Creative writing is one way of keeping teachers active and vibrant, as it helps keeping the primary resource still alive and well.
3. As creative writing seems to have an effect on the writer's level of energy in general, this tends to make teachers who use it more interesting to be around. this inevitable impacts on their relationship with students.
4. The experimental stance with regard to writing in general appears to feedback into the teaching of writing. so, teachers of creative writing then also to be better teachers of writing in general (Maley, 2009).

Senel (2018) confirmed that creative writing is an effective way not only for students but also for teachers in writing courses. For students, it gives them a lot of opportunities in order to improve academic success. When students feel proud to present their original ideas, this can be a factor to increase motivation among them. when students are motivated to write, the degree of satisfaction among teachers will be higher during writing classes. When students and teachers are highly motivated, writing lessons will be more enjoyable, the academic success will be increased and negative factors such as, anxiety, fear of failure and unwillingness to write may be prevented.

Mehdiabadi & Arabmofrad (2015) called for a different way of teaching creative writing saying that if teaching instruction is based on traditional approaches, the learners will lose their motivation, and see writing classes as a difficult and boring one. To solve this problem, teachers need to take a different view towards creative writing instruction and employ collaborative tasks which are originally supported by the social constructivist view of Vygotsky (1978).

Developing creative writing is required for improving students' performance and achievement. Many strategies that can be used that are based on students' participation in the learning (Herry, Maltais and Mougeot, 2012). As students continuously exposed to new ways of thinking and doing, they should learn to work fluidly with a wide range of processes. Design thinking is nonlinear, iterative and analytic process that engages individuals in opportunities to experiment, create and prototype models. It involves how they see and consequently think (Razzouk and Shute 2012).

Rudresh and Varghase (2019) assured that design thinking can be adopted in foreign language classroom to create better and interactive language instruction. It depends on treating cases through innovations and creative ideas. It helps teacher understand the act of creating reflective and intentional learning environment. It also helps in constructing students who are shapers of knowledge, not receivers of information. It begins from deep empathy, understanding of needs and motivation of learners. It is structured approach to generate and develop ideas. It is also so called as investigate learning as it is about believing that learners can make a different and give a faith in creative abilities with them.

Design thinking helps students learn the following
1- Optimizing the ability to innovate.
2- Developing a variety of concepts and products.
3- Leveraging the diverse ideas of innovation.
4- Converting useful data, individual insights and vague ideas into feasible reality.
5- Connecting with the audience to get the actual requirements.

Using different tools to reach the product (Tutorial Point 1   ٦- ,2016).

2. Context of the Problem

In spite of the importance of developing creative writing skills for student - teacher of the Faculty of Education, Helwan University, the researcher found that students had difficulty in creative writing skills. To make sure of the existence of the problem she felt, the researcher did the following procedures:

First: Interview

The researcher held informal interview with ten staff members of the Faculty of Arts and the Faculty of Education who taught those students. It aimed at identifying the following:

- Realizing the importance of teaching creative writing skills for those students
- The creative writing skills that should be developed for the 3rd year English section students of the Faculty of Education, Helwan University
- The methods and strategies used for developing creative writing skills
- The methods and strategies that are suggested for developing creative writing skills for those students

The results of the interview revealed that in the few creative writing lessons, students were weak in expressing their points of views. They couldn't present their ideas with evidence and were not able to make argument with others. In general, they lacked most of creative writing skills. They were not aware about the importance of developing their creative writing skills. Seven of the ten staff members used teaching strategies but those strategies did not put emphasis on developing these skills. They used regular instruction that was based on choosing topics and asking students to write creatively about them. All of them assured that students were not

given sufficient opportunities to practice the creative writing skills and did not suggest successful strategies for developing creative writing skills.

Second: Administering a creative writing test

The researcher administered a creative writing skills test to 30, 3rd year English section students of the Faculty of Education, Helwan University. It included two main questions. The first was "Choose the correct answer". It contained seven statements. The second was "a topic to write about". As the students were asked to present the topic in a devoted time. 18 students could not pass the exam due to their weakness in creative writing skills or not being able to write on the topic. So, there was a pressing need to develop the creative writing skills for those students.

Third: Reviewing Previous studies

Also, some previous studies ensured that there was a great weakness in creative writing skills for the 3rd year English section students such as (El-amir, 2015; Ghoneim, 2019; Helmy,2020). So, having been sure of the existence of the problem, the researcher conducted this study in a trial of developing those skills for the 3rd year English section students of the Faculty of Education, Helwan University.

3. Statement of the Problem

The problem of the current study was concerned with the 3rd year English section students' weakness in creative writing skills that might be due to the inactive methods used in teaching them creative writing. Therefore, the present study tried to apply design thinking following certain procedures to improve creative writing skills among those students.

4. Questions of the Study

In order to tackle the above problem, the present study attempted to answer the following main question:
"What is the effect of using design thinking on developing the required creative writing skills for the 3rd year basic English section students of the Faculty of Education, Helwan University?
From the main question, the following sub- questions were derived:

1. What are the required creative writing skills to be developed for the 3rd year basic English section students - teachers of the Faculty of Education, Helwan University?
2. What is the suggested framework of using design thinking for developing the required creative writing skills for the 3rd year basic English section students of the Faculty of Education, Helwan University?

5. Aim of the study

The present study aimed at:

Investigating the effect of using the design thinking on developing the required creative writing skills of the 3rd year basic English section students-teachers of the Faculty of Education, Helwan University.

6.Hypotheses of the Study

The present study hypothesized that:

1. There is a statistically significant difference between the mean scores of the study group students on the pre and post administrations of the creative writing skills test at the level of (0.01), in favour of the post administration of the test.

2. There is a statistically significant difference between the mean scores of the experimental group students on the pre and post administrations of each main creative writing skill test at the level of (0.01), in favour of the post administration of the test.

7.Variables of the Research:

The present study variables are as follows:

1. The independent variable: design thinking

2.The dependent variable: developing the required creative writing skills.

In the present study, the researcher measured the effect of the independent variable (design thinking) on the dependent variable (developing the required creative writing skills) for the 3rd year basic English section students-teachers of the Faculty of Education, Helwan University.

8.Delimitations of the Study

The current study was delimited to

1- 30, 3rd year English section students-teachers of the Faculty of Education, Helwan University. The reason for choosing this sample was because they would be graduated soon. So, there was an urgent need to improve their way of writing expressing their points of views creatively.

2- Developing only the required creative writing skills determined by the skills' checklist of the present study i.e. (flexibility, fluency, accuracy and originality) for the 3rd year English section students-teachers of the Faculty of Education, Helwan University.

9. Significance of the study:

The present study significance lies in the fact that it attempted to develop the required creative writing skills for the 3rd year basic English section students-teachers of the Faculty of Education, Helwan University. It is hoped that the results of the present study would contribute to:

1. Attracting the attention to the importance of developing the required creative writing skills for the 3rd year basic English section students-teachers of the Faculty of Education, Helwan University.
2. Providing a list of the required creative writing skills for the 3rd year basic English section students-teachers of the Faculty of Education, Helwan University.
3. Encouraging the use of design thinking on developing the required creative writing skills of the 3rd year basic English section students-teachers of the Faculty of Education, Helwan University.

10. Definition of terms:

10.1 Creative Writing

According to Pawliczak (2015, p.347) creative writing can be defined as "The study of writing (including poetry, fiction, drama, and creative non-fiction) and its context through creative production and reflection process. It can use any form or genre of writing as an exemplary subject of study, but the productions of creative writing tend not to be informational, but imaginative interpretations of the world that invite the complex participation of the audience or reader".

Moreover, Iyengar & Smith (2016) defined creative writing as the process of crafting text that is not specialized, editorial, theoretical, or procedural forms of writing; it is the craftsmanship of

storytelling. It also employs characters, figures of speech or even poetic form. (P.103)

Creative writing can be defined as the writing that expresses the writer's thoughts and feelings in a deep, imaginative often unique way that is described by generating original, consistent and coherent ideas (Ghoneim, 2019).

Creative writing is operationally defined in the present study as the process which helps third year basic English section students of the Faculty of Education, Helwan university express their thoughts effectively and originally. The required creative writing skills that were taught to 3rd year basic English student- teacher were fluency, flexibility, accuracy and originality as determined in the final form of the present study checklist.

11.2 Design thinking

Curedale (2013) defined Design Thinking as it is a people centered way of solving difficult problems. It follows a collaborative, team based cross disciplinary process. It uses a toolkit of methods and can be applied by anyone from the most seasoned corporate designers and executives to school children".

Erbeldinger & Ramge (2015) defined it as the innovative thinking with a radical, user-orientation. It is based on the interdisciplinary principle and connects the attitude of openness with the need of result.

Moreover, Torabi (2020) defined design thinking as a powerful approach in helping people envision new opportunities and become comfortable with uncertainty. It provides process to experiment with and learn how to uncover creative insights and innovative solutions following clear and guided process consequently transforming regular people into creative ones.

In the present study, design thinking is defined as a process that includes five steps that are based on organizing and planning the students' thoughts to reach innovative solutions. These steps are empathy, define, ideate, prototype and test.

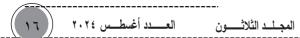## 11. Theoretical background:

11.1 Creative writing

11.1.1 Characteristics of creative writing

According to Kulprasit & Chiramanee, 2012; Khansir, 2012, the features of creative writing are:

1. **Originality**: The ability of the writer to come up with the new ideas that is unique and unrepeated both to him/her and the reader. The less common ideas are the more original they are. Such unusual ideas attract the reader's attention.
2. **Flexibility**: The ability of the writer to produce variety of ideas as possible as s/he can. Then, s/he can choose the best ideas to support the main idea of his/her product.
3. **Elaboration**: Expanding of the writer's ideas, giving specific details at high level of analysis.
4. **Choice of words**: Creativity manifests itself in the choice of words in the ways which students build words together to communicate ideas. Creative writing can be a valuable tool in helping students learn about the power and pleasure of words.
5. **Organization**: The writer organizes ideas in a logical way that helps the reader follow the order of thoughts easily without frustration resulted from disorder.

11.1.2 Skills of creative writing:

There are lots of studies in Egypt that dealt with creative writing skills classifications. For example, Diab (2019) classified creative

writing skills to have four main skills and sixteen sub-skills as follows:

A. **Fluency**:

1. Generating a large number of ideas.
2. Expressing the meaning with different word groups.
3. Using different sentences and vocabulary to express the meaning.
4. Using transition words properly to show the logical sequence of related ideas.
5. Writing a coherent paragraph through means of coherence techniques.

B. **Flexibility**:

6. Generating flow of ideas in different ways.
7. Expressing others' ideas on their own words.
8. Using different linguistic patterns.
9. Creating different aspects of language independently.
10. Changing point of view and redefining problems by making concrete and abstract ideas when necessary.

C. **Accuracy**:

11. Developing writing without errors grammar, structure, punctuation and capitalization.
12. Using grammar correctly and sentence structure.
13. Using appropriate and precise word choice.

D. **Originality**:

14. Generating a truly unique ideas or unexpected ideas.
15. Writing imaginative ideas from different points of view.

16. Composing a short story with a suitable title (introductory paragraph of the story, topic of the short story and ending paragraph for the short story.

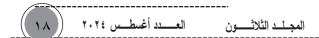It is worth mentioning that the following four creative writing skills are adopted in the current study

1. Fluency (the ability to write, generate idea that are related to the topic).
2. Flexibility (the ability to produce variety of ideas to support the main idea of the topic).
3. Originality (the ability to come up with new ideas that are unique and unrepeated).
4. Accuracy (the ability to use grammar and punctuation marks correctly and to use appropriate and precise word choice.

11.1.3 Challenges of creative writing:

Goodwin (2012) said that not reaching creative writing by the students in EFL classrooms can be due to the following reasons:

1. Students are afraid of being left out or excluded.
2. They just do not believe they are very creative. even if they are the most naturally gifted writers they will not be creative, unless they have a strong belief in themselves and their abilities.
3. They have not found the right form of expression. As some students experiment different froms of creative Writing, try to find the ones that they feel most comfortable and expressive, they do not find them.
4. They are scared of failing.
5. They don't know what it is like to achieve.

So, teaching creative writing the process is not an easy task and should go through the following steps:

1. **Idea collection**: using various brainstorming techniques to gather thoughts about the topic.
2. **Idea mapping**: creating mind maps that organize thoughts structurally.
3. **Conversation to linear form**: when writing, ideas must be presented one word after another. the challenge is to present the material in a way that the association and structure of a material are not lost (Mega, 2006).

12.1 Design Thinking

Design Thinking is an innovative, creative and human-centered process and mindset that employs collaborative multidisciplinary teams in order to generate user-focused products, services or experiences. It has been applied beyond the original sphere of design work to business, engineering, technology, and more recently, education, because of its ability of advancing creativity and innovation by applying an empathetic, flexible and iterative approach (Lor, 2017).

12.1.2 Foundation of design thinking

Morrism,2014 mentioned that Rowe in 1987 first introduced the concept design thinking in his book Design Thinking. He described the concept in the context of Architecture and urban planning challenges. It is used as a process or a method which has been planned to various disciplines including education. For education, it is a creative process that helps in designing effective solutions in classroom.

Fredrickson (2017) stated that design thinking in relation to education has its historical roots in constructivist approach. Constructivist thinking immerses the learners in the context of the teaching environment. While constructivism played an effective role, thinking research. Simon 1969 planned the ground work for

modern research. He insightful design centered theories that reverberated across the scientific fields of organizational theory. Simon's design thinking includes seven stages; define, research, ideate, prototype, choose, implement and learn.

12.1.3 Characteristics of design thinking approach:

Burns & Stint, 2017 stated some key features of design thinking which are:

- ➤ a focus on solving wicked or complex problems with an emphasis on the user;
- ➤ learning by doing, involving a haptic process, for example, writing and making;
- ➤ working in groups with no hierarchy; and
- ➤ allowing people to fail so that solutions do not need to be perfect.

Roterbery (2018) identified other features of design thinking as follows:

1- Being an integrative approach as the process of solving the problem is considered together with its framework conditions,

2- Emphasizing empathy: The central element is to put oneself in the position of the user and observe him/her in details,

3- Striving to make ideas tangible at a nearly stage. So, prototypes must be created as quickly as possible,

4- Consisting of frequent iteration loops between the development phases. The return to a previous phase reflects the learning success,

5- Directing attention to the diversity of the participants. It combines knowledge, experience and perspectives of a team of different careers with different ages and gender,

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6- Creating team oriented and creative work spaces. They involve the spaces for individual work and the spaces for group, and

7- Combining analytical phases (collecting, organizing and evaluating) and synthetic phases (developing, testing and improving solutions).

12.1.4 Stages of design thinking approach:

Siddiqua (2015) identified the following seven stages of design thinking

1) **Empathy**:   involves the work students do to understand people within design
           challenge and the idea that they seek to achieve.

2) **Define**: includes identifying the actual problem to reach the right solution. A designer should be self-motivated and focused to find direction.

3) **Ideate**: involves generation of ideas as it starts from concepts and goes to outcomes. The designer takes the idea and puts it on a paper in countless ways.

4) **Prototype**: deals with testing ideas which provides a ground for comparison. It is tested not only for design but also for functionality which is the
    essence of design thinking.

5) **Select**: includes picking one of the proposed designs when suiting with the   purpose.

6) **Implement**: involves passing the artwork and format to those who will be supplying the final product.

7) **Feedback**: involves identifying what worked well and how to improve it when needed.

The design thinking university approach comprises four stages:

1. explore: build an understanding of the user and their needs as well as unsolved problems;

2. create: design and evaluate potential solutions;

3. prototype: build a physical or virtual model to demonstrate one or more solutions; and

4. evaluate: test the prototype with users and improve and/or redevelop ideas.

At each stage different tools are used to achieve the desired outcome. For

example, we tended to use a form of brainstorming as an idea generator

(divergence) and clustering and dot voting to filter ideas (convergence) (Liedtka and Oglivie, 2011).

13. Method of the study:

13.1 Design of the Study

The present study followed the descriptive analytical method for reviewing the theoretical background of the study. Furthermore, the quasi experimental pre- post tested one group design was used in the experimental part of the study to investigate the effect of design thinking on developing creative writing skills and academic self-efficacy for the 3rd year basic English students, faculty of education, Helwan university.

13.2 Participants of the study

The participants of the study consisted of 30, 3rd year basic English section students, faculty of education, Helwan university. They were considered as the study group. The reason for choosing the participants was due to their bad need of training on how to write creatively.

13.3 Instruments of the Study

13.3.1 A creative writing skills test

To ensure the progress of the participants in creative writing skills, a pre-posttest for measuring the required creative writing skills for the 3ʳᵈ year basic English section students, Faculty of education, Helwan university was designed.

The creative writing skills test was developed by the researcher. The test has four parts; each part was developed to measure one of the intended main skills fluency, flexibility, accuracy and originality. The first part focused on assessing the fluency skills where the students were required to generate as many related ideas as possible then choose two of these ideas and write an essay. The second part focused on assessing the flexibility skills in which students were required to restate a paragraph on their own. The third part assessed the accuracy skills where students were required to read a paragraph that contains some errors in (spelling, grammar, vocabulary and punctuation), identify these errors and correct them. Then the final part of the test focused on students' originality of ideas in which students were required to write a solution for a specific problem. It was submitted to jury members specialized in the field of methods of teaching English to test the validity and the appropriateness.

To measure the reliability of the test, the test –retest reliability was counted. It was r=0.78. So, the test was reliable and could be used before and after the experiment.

13.3.2 Creative writing skills rubric

In order to measure the students' progress in creative writing skills, the researcher designed creative writing skills scoring rubric as a pre- post measuring instrument. It measured the four main creative writing skills required for the participants. It was submitted to jury members specialized in the field of methods of teaching

English to test the validity and appropriateness. Having done their modifications, the rubric became valid.

13.3.3 Description of the writing rubric

The writing rubric consisted of five main categories of the writing skills; fluency, flexibility, accuracy and originality. For each category, there was a scale of three levels very good (5 scores), good (3 scores), or poor (1 score) with descriptors. The total score of the writing test was eighty.

13.3.4 Suggested framework of using design thinking

The suggested framework of using design thinking approach was developed to enhance EFL creative writing for third year basic English section and provide them with some theoretical knowledge about EFL creative writing skills (fluency, flexibility, originality and accuracy)

The suggested framework of using design thinking approach was developed to enhance the required EFL creative writing skills for third year basic English section students, faculty of education, Helwan University. the researcher used various activities and tasks through the sessions to enable the participants accomplish the objectives of the suggested framework. so, by the end of the sessions, students were expected to be able to:

1. Understand the importance of design thinking approach in general and in developing third year basic English section students in particular.
2. Acquire the required fourteen EFL creative writing skills for the third year basic English section.
3. Develop the four main creative writing skills categories (i.e. fluency, flexibility, originality, accuracy).

13.3.4.1 Content of the suggested framework:

The suggested framework included some creative writing skills activities and tasks that are suitable for third year basic English students at faculty of education.

13.3.4.2 Description of the suggested framework

The suggested framework consisted of 16 sessions. The first two were orientation sessions about design thinking approach used in the program, EFL creative writing skills and the importance of these skills to the participants of the study. The rest of the sessions were instructional ones through which the main four creative writing skills categories were practiced (fluency, flexibility, accuracy and originality). Moreover, there were four sessions for revision. Each one of the revision sessions was practiced and presented after the total practice of its skill, as a kind of formative assessment.

The proposed framework of the present study went through the following steps:

1) **Empathy**: involved the work students do to understand people within design
        challenge and the idea that they seek to achieve.
2) **Define**: included identifying the actual problem to reach the right solution. A designer should be self-motivated and focused to find direction.
3) **Ideate**: involved generation of ideas as it starts from concepts and goes to outcomes. The designer takes the idea and puts it on a paper in countless ways.
4) **Prototype**: deals with testing ideas which provides a ground for comparison. It is tested not only for design but also for functionality which is the essence of design thinking.
5) **evaluate**: test the prototype with students and improve and/or redevelop ideas.

13.3.4.3 Implementation of the suggested framework

the study was conducted on 30 third year basic English students at faculty of education, Helwan University during the second term of the academic year 2022/2023.

14. Results of the study

The results of the study will be displayed through verifying the hypothesis and answering the questions of the study

14.1 Verifying the First Hypothesis:

The First hypothesis of the present study stated,

"There is a statistically significant difference between the mean scores of the experimental group students on the pre and post administrations of the creative writing skills test at the level of (0.01), in favour of the post administration."
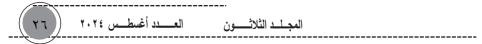
For verifying this hypothesis, the mean scores of the experimental group students in the pre and post administration of creative writing skills test were compared and t-value was calculated:

Table (1): <u>t-test results of the experimental group pre and post administrations mean scores of the creative writing test</u>

Test	Group	N	Mean	Std. Deviation	Df	t-estimated valued	Significance level
Writing skills test	Post	30	63.13	8.653	29	15.02	Significant at 0.01
	Pre	30	33.23	5.282	29		

t-tabled value at (29) df. At (0.01) sig. level equals (2.462).

As shown in table (1) above, the calculated t-value (15.02) indicated that there was statistically significant difference at (0.01)

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level between the mean scores of the experimental group on the pre- and post-administrations of the creative writing test in favour of the post test. Thus, it might be stated that the t –test results were consistent with the hypothesis. Therefore, the first hypothesis was confirmed.

14.2 Verifying the second Hypothesis:

The second hypothesis of the present study stated,

"There is a statistically significant difference between the mean scores of the experimental group students on the pre and post administrations of each main creative writing skills test at the level of (0.01), in favour of the post administration."

For Verifying this hypothesis, the mean scores of the experimental group students in the pre and post administration of each main creative writing skills test were compared and t-value was calculated

(Table 2): t-test results of the experimental group pre and post administrations mean scores, and t-value on each main creative writing sub skills.

Creative writing skills	Adms	N	Mean score	Std. Deviation	Df	t-estimated value	Significance level
1. Flexibility	post	30	4.83	0.874	29	9.5	Significant at 0.01
	Pre		2.93	0.583			
2. Fluency	post	30	4.27	0.639	29	10	Significant at 0.01
	Pre		2.6	0.563			
3. Accuracy	Post	30	4.77	0.678	29	11.1	Significant at 0.01
	Pre		2.57	0.727			
4. Originality	post	30	4.23	0.678	29	11.3	Significant at 0.01

t-tabled value at (29) df. At (0.01) sig. level equals (2.462).

Pre-Posttest in the table (2) assured that there was statistically significant difference at (0.01) level for each of the main creative writing skills between the mean scores of the experimental group students on the pre- and post-administrations of the test in favour of the post-test.

15. Answering the Questions of the Study:

Having verified all the hypotheses of the study, the researcher also tried to answer the study's questions as follows:

15.1 Answering the first sub-question:

The first sub question of the study was:

"What are the required creative writing skills to be developed for the 3rd year basic English section students - teachers of the Faculty of Education, Helwan University?"
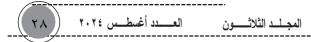
To identify the required creative writing skills for the 3rd year basic English section students, faculty of education, Helwan university, a checklist was designed by the researcher. The checklist was submitted to seven jury members who approved it. It included four main skills in its final version. Thus, the first sub- question of the present study was answered.

15.2 Answering the second sub question

The second sub-question of the study was

" What is the suggested framework of using design thinking for developing the required creative writing skills for the 3rd year basic English section students of the Faculty of Education, Helwan University?"

The third sub- question was answered as a suggested framework for using design thinking was designed and displayed as shown before.

15.3 Answering the Main Question:

In order to answer the study main question,

The effect of the design thinking approach on developing creative writing skill for the 3rd year basic English section students of the Faculty of Education was calculated. The effect size of the creative writing skills was shown in table (3). Eta square η^2 on the total creative writing skills was (0.88). It was higher than the value of the large effect size (0.80) as revealed in table (3), that meant that employing the design thinking approach (the independent variable) had a large effect size (0.88) on developing the experimental group's total creative writing skills (dependent variable).

The main question of the present study was answered.

Table (3) Effect size on developing total creative writing skills for the experimental group students

creative writing skills	Calculated t-value	Df.	η^2	Effect size
creative writing skills	15.02	29	0.88	Large

16. Discussion of results

The statistical analysis presented above, resulted in the verification of all the hypotheses of the study and answering the study questions. It also realized the achievement of the study main aim, which was to develop the required creative writing skills for the 3rd year basic English section students, faculty of education, Helwan university throughout the use of design thinking.

The comparison between the performance of the study group before and after the experiment showed the improvement achieved

in the required creative writing skills in the post-performance. The researcher attributed this improvement to the following factors:

Collaborative and co-contributive nature of the design thinking approach on which the framework based. in creative writing practice, the suggested framework based on design thinking acted as a structured framework for identifying challenges, collecting information, generating innovative ideas, refining ideas and testing the written product at the end.

Garbing students' attention during carrying out the steps of design thinking. So, they were trained on following specific stages as they organized their ideas and ordered them in a logical way. This view supported Curedale's view (2013) as he stated that design thinking is based on the idea of frequent iteration loops between the development phases, the return to a previous phase shows the learning success in this process and fail fast to succeed sooner.

The results of the present study came in accordance with those of (Alrehaili & Alhawsawi, 2020), (Elsakka, 2020) and (Afifi, 2023) studies' results. These studies highlighted the importance of using design thinking approach on developing creative writing skills in English language.

17. Recommendations

In light of the results of the present study, the following recommendations could be suggested:

1. Teaching through using design thinking approach should be conducted at schools. Teachers should be trained on using it in the EFL teaching /learning process.

2. More emphasis should be placed on developing students' EFL creative writing skills in general and in universities in particular.

3. Design thinking approach should be taken into account while designing English language curriculum in schools due to its great effect on motivating the students to get involved in the learning process.

4. Pre-service and in-service EFL teachers should be involved in training courses on different uses of design thinking approach.

5. EFL training courses should highlight the nature of pupils' interaction and its implications in the educational process.

6. EFL teachers should make room in the curriculum for students to reflect on their strategic engagements in creative writing tasks.
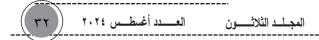
18. Suggestions for further research:

The following suggestions for further research might shed light on understanding how to integrate design thinking approach into EFL learning:

1. Study which investigate the effect of design thinking approach on developing EFL listening skills for student-teachers at faculty of education.

2. Study which investigate the effect of design thinking approach on developing EFL communication skills for students in different stages of education.

3. Study which investigate the effect of design thinking approach on developing speaking skills for EFL students.

19. References:

- Alicie, S. (2012). Why is Creative Writing Important, e How Contributor. Com

- Buphate, T. & Esteban, R. (2022). Using ideation discussion activities in Design Thinking to develop EFL students' speaking and critical thinking abilities. LEARN Journal: Language Education and Acquisition Research Network, 15(1), 682-708.

- Burns, K. & Stint, C. 2017. DESIGN THINKING: A PRACTICAL GUIDEA HANDBOOK FOR MANAGERS IN HIGHER EDUCATION. Design thinking Approach for an Interdisciplinary University.

- Curedale, J. (2013) Design Thinking Process and Methods. Manual, Design Community College, Topanga, USA.

- Diab, A. (2019). Using some Online-Collaborative Learning Tools (Google Docs & Padlet) to -Develop Student Teachers' EFL Creative Writing Skills and Writing Self Efficacy. Faculty of education, Benha University. Journal of Faculty of Education, (30) (119) July, Part (3), pp. 20-70.

- El-amir, A. (2015). The Impact of Art-Based Learning Program on Developing English Majors Creative Writing. Arabic Studies in Education and Psychology, 60,387-445

- Fancourt, D., Granett, C., Spiro, N., West, R., & Mullensiefen, D. (2019). How do artistic creative activities regular our emotions? Validation of the emotion regulation strategies for artistic creative activities scale (ERS_ACA). Plos One, 14 (2), e 0211362.

- Fredrickson, C., (2017) Design Thinking in ESL. a Programming: Creating a Program Model for New Comer Students, School of Education, Capstone Project,Hamline University
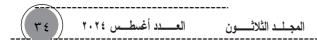
- Ghoneim, N. (2019). Utilizing Ergonomics Based Instruction to Develop College Students' EFL Creative Writing Skills. Journal of Faculty of Education, Menoufia University, (34), 3, 192-226 http://search.mandumah.com/Record/994368.

- Goodwin, D. (2012). Creative Writing 5 Reasons Why You Are Not Reaching Your Creative Writing Potential Ezine Articles, com.

- Helmy, H. (2020). Using Literature Circles to Develop EFL Prospective Teachers Creative Writing Skills and Motivation for Writing. Journal of Education. 44(3)39-82

- Herry, Y., et al (2012) Efficient Strategies That Promote the Development of Literacy and the Self Concept in Elementary and Junior Level, University of Ottawa

- Kassem, M. (2017). Developing Business Writing Skills and Reducing Writing Anxiety of EFL Learners through Wikis. The New Valley Faculty of Education, Assiut University. Published by Canadian Center of Science and Education. 10, (3)151

- Kulprasit, W., & Chiramanee, T. (2012). Boosting EFL students' positive attitudes towards writing in English: The role of journal writing with peer feedback. ABAC Journal, 32(3), 20-28. Retrieved from https://www.abacjournal.au.edu/2012/sep2012/02_(20-28)%20Boosting%20EFL%20Students%20Positive.pdf

- Liedtka, J., & Oglivie, T., (2011). Designing for Growth. A Design Thinking Toolkit for Managers. Columbia University, New York ,USA

- Lor, R. (2017). Design Thinking in Education: A Critical Review of Literature. Asian Conference on Education & Psychology At: Bangkok, Thailand. Retrieved from: https://www.researchgate.net/publication/324684320_Design_Thinking_in_Education_A_Critical_Review_of_Literature

- Maley, A. (2009). Creative writing for language learners (and teachers). In teaching English. org. uk. Retrieved from http://www.teachingenglish.org.uk/article/creative-writing-languagelearners-teachers.

- Mega, P. (2009). Three Steps Creative Writing Process. http\\ braindence.com

- Mehdiabadi, F. & Arabmofrad, A. (2015). Form-Focused Instruction and EFL Learners' Writing Performance: The Case of Collaborative Output Task of Dictogloss. International Journal of Language Learning and Applied

- Morrism, D., (2014) Why Design Thinking Does not Work in Education, Standford University's School Webpage.

- Pawliczak, J. (2015). Creative Writing as a Best Way to Improve writing Skills of Students. Sino-USA English T

- Praminatih, G., Kwary, D. & Ardanian, V. (2019). Is EFL students' academic writing becoming more informal? Journal of world languages. 1_12. Doi: 10-1080/21698252-2019-1570664

- Razzouk, R. and Shute, R., (2012) What Is Design Thinking and Why Is It Important? Review of Educational Research 82(3)330-348

- Roterbery, Ch. (2018) Handbook of Design Thinking, Kindle Direct Publishing, Innovations Management

- Rudresh, R., and Varghase,A., (2019) Design Thinking , Journal of English Language and Literature V 6, Issue 1, VED Publications.

- Stephens, G. (2018). Transferable skills and travelling theory in creative writing pedagogy. New Writing, 15(1),65-81.

- Torabi, N. (2020) Defining Design Thinking in Theory and Action. New HPI Study on Design Thinking Adoption

---

- Tutorial Point 1 (2016) Design Thinking Tutorials Point 1 PVT. L td

- Viana, V. & Zyngier, S. (2019). Creative writing and iconicity in English as a foreign language. New Writing, 16 (1), 38-49.