



# The Effect of Using Educational Mapping as a Game in Teaching English Language on University Students' Writing Skills

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**Abstract:** The purpose of the current study is to discover how educational mapping as a game in teaching English affects university students' writing skills. 27 master's degree candidates from Al-Quds Open University took part in the study. The research questions were: 1. Does using educational mapping as a game in teaching the English language affect university students' writing skills? 2. How does using educational mapping as a game in teaching the English language affect university students' writing skills? The researchers gathered 27 semi-structured written interview forms to address the research questions. Furthermore, the researchers used the qualitative methodology, which is shown in the study by using the thematic coding and the Gioia approach. According to the study's findings, educational mapping can help students develop their writing cognitive domain and improve their writing psychological domain when teaching them English. As a result, the researchers recommended employing educational mapping to teach English to university students; thus, their writing skills will improve.

**Keywords:** Educational Mapping Game, Teaching English Language, University Students, Writing Skills.

## I. INTRODUCTION

Using graphic organizers simplifies the content of reading texts by making the process of understanding easier. Graphic organizers help learners connect their ideas and thoughts and discover new relationships between different concepts and ideas (Rawson and Kintech, 2005). Slavin (2011) indicated that using graphic organizers in teaching languages helps learners understand and comprehend the content successfully. Using them motivates learners to share their ideas; that is, it increases their motivation and enthusiasm to participate effectively. Jiang and Grabe (2007) stated that using graphic organizers demonstrates connections and relations in a particular text; thus, they simplify understanding the text meaningfully. In addition, Ellis (2004) indicated that using graphic organizers helps teachers to assess learners' understanding and knowledge. Using graphic organizers positively affects students' achievement and attitudes. Dicecco and Gleason (2002) found that using visual organizers fostered students' performance, creativity and achievement. In addition, using them improved the process of teaching. They also increased learners' trust and confidence in their abilities. Boulineau et al. (2004) found that graphic organizers have many benefits in teaching and language acquisition. Using them properly fosters students' autonomy, develops students' metacognitive skills and abilities, increases their confidence and motivates them to be independent learners. One type of graphic organizer is educational mapping. Lots of studies demonstrated the positive effects of using games in teaching, and several studies recommended using educational mapping in teaching; hence, the educational map was turned into an educational game to maximize its benefits.

### Games

Lay and Osman (2018) stated that using digital games in teaching chemistry positively influenced students' achievement and motivation. Besides, it found that using games in teaching chemistry increased students' participation and engagement. Using games helped students to increase their confidence and trust in their abilities. Yu (2005) found that games have many features. First, games are supposed to be goal-defined. Second, they should be rule-governed. Third, they should be interesting and exciting. Fourth, they are supposed to be competitive. Fifth, they are supposed to be engaging. Last, they are supposed to have a closure. Besides, Yu concluded that games provide learners with various chances to satisfy their needs while they learn. Al-Mubirek (2003) stated that using computer games in teaching mathematics positively influenced students' attitudes and achievement. The study also demonstrated that using computer games in teaching positively affected students' motivation since it could attract their attention and concentration. In addition, Selvi & Cosan (2018) stated that using scientific educational games in teaching science positively influenced students' achievement and information retention. Kobari et al. (2022) stated that using games in teaching positively influenced students' motivation and achievement.

### Educational Mapping

Educational mapping is one type of graphic organizer, and it has various benefits when used in instruction. Svantesson (2004) stated that maps have different types. First, the Hyfork shape is formed by placing the central idea in the center and then drawing the main lines. The main lines are followed by minor lines that demonstrate sub-ideas and details. Second, Thorn fish format. Last, is clustering where the main ideas are located in the center, and other branches are added later. Every branch demonstrates a particular idea. In addition, Deshatty and Mokashi (2013) indicated that maps are visual shapes, which focus on the major topics and ideas that are associated with phrases and words to create relationships among them. Rebeca (2014) indicated that mapping is an effective teaching and learning strategy that needs forming diagrams for visual illustration of ideas and topics. The diagram focuses on the main idea drawn in the center, followed by sub-ideas. Using mapping in reading helps readers to understand the content easily.

Yunus and Chien (2016) demonstrated that using mapping positively affects students' motivation and enthusiasm. Malekzadeh and Bayat (2015) indicated that using mapping helps learners organize and arrange their thoughts easily. It assists learners in elaborating ideas and talking about the main topics of the lesson because it offers graphics and illustrations. It also positively affects students' attitudes and motivation. Furthermore, Pashie (2009) stated that using mapping directs and guides students while learning; hence, students will be aware of what they are doing. The study also revealed that students' confidence and trust in their abilities largely increased. In addition, mapping is an educational strategy that helps learners to arrange their ideas and participate enthusiastically. It fosters their motivation to play their roles successfully (Grant et al., 2005)

### Scaffolding

Educators use educational scaffolding in educational settings to assist learners in working independently. Scaffolding aims to assist learners to enrich their learning and help them to reach the expected level such as construction workers (Huggins & Edwards, 2011). The scaffolding word is taken from the construction field that is viewed as a platform, which workers use while construction works. That is, it assists one to stand on while doing something, particularly when there is something outreach or higher than the normal height (Meriam Webster Dict, 2023). Scaffolding helps learners to finish the given tasks independently when they are higher than their educational level. Then, the teacher minimizes the given scaffolding and support gradually when the student's abilities and skills improve (Chang et al., 2002). The quality and amount of given intervention differentiate teaching from scaffolding. Intervention is essential for students to reach the required outcome while scaffolding. Of course, ZPD stands for the distance between what learners achieve with support, and what learners perform independently (Vygotsky, 1986). The process of scaffolding aims to guide students in their ZPD, and it is formed to help learners finish a specific task in various settings (Hammond and Gibbons, 2005)

Instructional scaffolding has three educational scales. First, giving help to support particular activities. Second, concentrating on certain tasks and class activities. Third, assistance is given during the process of learning (Gibbons, 2003). Sanguanpuak (2005) stated that scaffolding has the following levels. The first one is the macro level, which is reached by simplifying the big tasks and missions. The second one is the micro level which is activated by assisting, hints, feedback and instances to assist students in learning.

## The Zone of Proximal Development

The zone of proximal development demonstrates the task that has not been finished but is supposed to be completed and finished. ZPD is a sensitive site to mastering the skills and attitudes of a particular society in which the learner improves his/her competence and performance by working with the more capable learner (Rogoff, 1990).

## Educational Mapping Game

Numerous research mentioned the advantages of employing educational mapping as a game when instructing English. For instance, Kobari (2018) stated that using educational mapping as a game in teaching reading comprehension positively influenced 11th-grade students' achievement and attitudes. Moreover, Kobari et al.(2023a) stated that using educational mapping as a game in teaching the English language could increase university students' motivation. Furthermore, Kobari et al.(2023b) found that using educational mapping in teaching the English language could increase university students' self-efficacy. Besides, Kobari et al.(2023c) emphasized the significance of adopting the proposed technological future model of using educational mapping as a game in teaching English. In addition, Kobari and Shaheen (2023) indicated that using educational mapping as a game in teaching English could develop students' speaking cognitive and psychological domains. However, the current study was conducted to discover the effect of using educational mapping as a game in teaching the English language on university students' writing skills. Thus, the current study aims to address two research questions: 1. Does using educational mapping as a game in teaching the English language affect university students' writing skills? 2. How does using educational mapping as a game in teaching the English language affect university students' writing skills?

## Methodology

Students pursuing master's degrees at Al-Quds Open University made up the study's population. Around 800 students are enrolled in master's programs at Al-Quds Open University in the year 2022/2023. There were 27 students in the sample, chosen at random using stratified random sampling.

## Training program

The texts from the pre-intermediate English language textbook, which is available at several regional universities in Palestine, were used to create the slides for the educational mapping. The Erasmus program of the European Union also contributed to the book design work, and the data used to create the mapping slides came from the book. Four sections are also included in the mapping slides. Grammar is covered in the first section, followed by writing, vocabulary, reading comprehension, and finally, writing. The training program was completed with eight lectures. The class received a 180-minute lecture each week. The participants attended every lecture given by the researcher. Besides, some lectures were used for midterm and final exams.

Lecture	Content	Lessons
1 <sup>st</sup> lecture (Units one and two)	Grammar	Sentences, Questions Transitive and intransitive verbs Regular and irregular verbs Present Simple and Wh-Questions
2 <sup>nd</sup> lecture (Units three and four)	Grammar	Past Simple Passive voice( Present simple and past simple) Imperative
3 <sup>rd</sup> lecture (Units five and Six)	Grammar	Present progressive, present perfect Comparative adjectives Superlative adjectives
4 <sup>th</sup> lecture (Units one and two)	Reading comprehension and vocabulary	Greetings from around the world, Netiquette Food and Health , what is in your food? Cuisines and Countries, get healthy
5 <sup>th</sup> lecture (Units three and four)	Reading comprehension and vocabulary	Wonders of the world, Jerusalem and Bethlehem full day tour, biomes Fashion ...are you interested? Palestinian Traditional customs: The story of place and memory
6 <sup>th</sup> lecture (Units five and Six)	Reading comprehension and vocabulary	Learning and Technology A new Era of Entertainment Technology Palestine got home E-sports
7 <sup>th</sup> lecture (Units one, two and three)	Writing Topics	Capitalization Commas Application and assessment
8 <sup>th</sup> lecture (Units four, five and six)	Writing Topics	Giving Reasons (Because and so) Contrasting (But) Application and assessment

Figure 1: Training program- lectures

## Sample of Educational Mapping Game

The following slides show a sample of educational mapping game.

# Cuisines & Countries

There are many countries in the world, as well as many cuisines. Each country has a special cuisine it is known for, and these cuisines usually have common ingredients. These are some of the popular cuisines around the world:

### 1. Palestinian/Jordanian cuisine

Both countries are located in the Middle East and are very close to each other in terms of geography, traditions, and food. The main ingredients of Palestinian/Jordanian cuisine are vegetables, boiled rice, and meat. Makloubah, mansaf, musakhan, and mujadara are some examples of Palestinian/Jordanian cuisine.

### 2. Japanese cuisine

The Eastern Asian cuisines are very special. Japan has one of the most varied cuisines in the world. Fish and whales' meat are some of the main ingredients of Japanese cuisine, as they use them to create many dishes like sushi. There are other ingredients that contribute to this special cuisine such as noodles and steamed rice.

### 3. Italian cuisine

Italian cuisine is one of the most popular cuisines not only in Italy but in the whole world. Italian dishes are created in every country in every house. Therefore, it is considered global cuisine. Most Italian dishes, like pizza and lasagna, use different types of cheese, pasta, and tomatoes.

This is a short list of some of the popular cuisines around the world. Of course, there are still hundreds of other cuisines that have many delicious dishes. It would be great to try them all!



Figure2: The Reading Text

The lesson talks about \_\_\_\_\_

- 1)What are the popular cuisines around the world that the text mentioned?
- 2)What are the ingredients of the Palestinian and Jordanian Cuisines?
- 3) What are the ingredients of the Japanese cuisines?
- 4)What are the ingredients of Italian cuisines?

Figure 3: Questions on the Reading Text

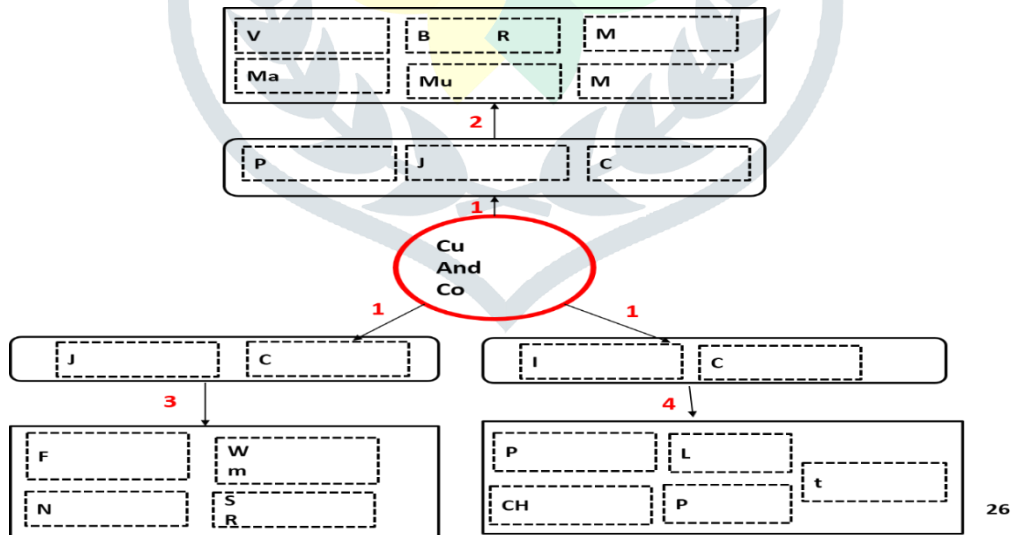


Figure 4: Using Educational Mapping as a Game

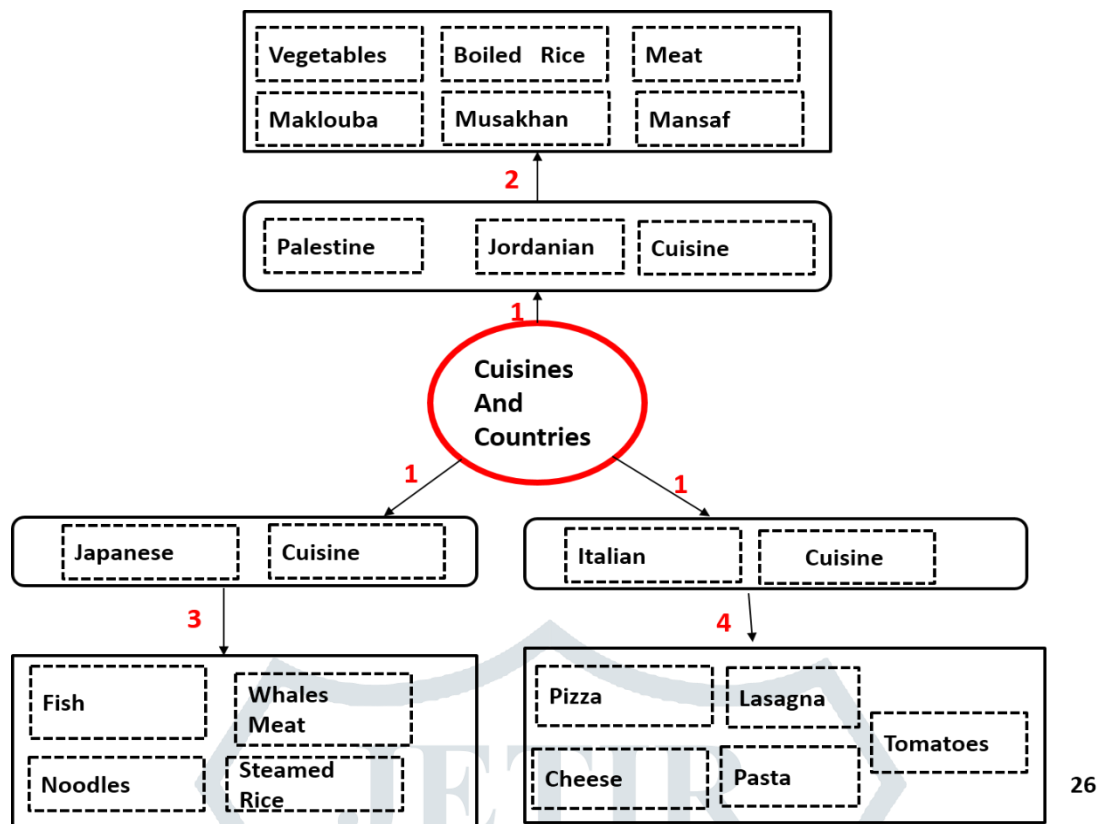


Figure 5: Sample Answer of the Educational Mapping

### Study Procedures

After choosing the study's sample, one researcher used educational mapping as a game to teach the 27 students. The investigation was carried out in the second semester of the year 2022/2023. The participants received instruction for nearly three months; the intervention period was from 15 February 2023 to 15 May 2023. Then, a written interview paper with semi-structured questions, that specifically addressed the study questions, was supplied to the participants as a tool of reflection.

### Data Collection Tools

A semi-structured interview written form with detailed questions, that are connected to the study questions, was used to gather the data (Maxwell, 2013). The participants had 24 hours to thoroughly respond to the questions. After gathering the participants' responses, the researchers utilized thematic coding to code the received responses and demonstrate the main and sub-themes.

### Data Analysis Tools

According to Dacin et al. (2010), the Gioia approach is appropriate to analyze the received data since the findings of the current study have main and sub-themes that are connected. For instance, the major theme was improving students' psychological writing domain; it was classified into the following second-order themes: fostering students' confidence to write and enhancing students' motivation to write. The second main theme was improving students' cognitive writing domain. It was divided into four sub-themes: generating the minor and major ideas, connecting the major and minor ideas, summarizing the lecture easily, and writing short paragraphs easily. Dacin et al. (2010) highlighted the significance of employing snippets to enrich the themes, sub-themes and codes. For example, we used a few quotations to support the main and sub-themes of the study. For example, we supported the theme of increasing the students' confidence to write with the quotation: "A student (J.S) wrote: "Learning by this method in the English lecture helped me to feel sure that I can write for the first time simple sentences and paragraphs, I will never forget this method and this feeling".

### Validity and Reliability

The researchers discussed the themes and sub-themes before confirming the final themes to ensure the validity and reliability of the study. Each researcher worked individually, coded the responses for the semi-structured interview forms, and made sure that the data analysis was accurate and reliable. Then, 15% of the recorded written interview forms were examined by a researcher and three other investigators. The final inter-rater reliability was assessed when the researchers discussed and agreed on the coded results. The initial inter-rater reliability for the coders was 75%, while the final inter-rater reliability for the coders was 87.5%.

### Ethics

The researcher received consent to conduct this study from Al-Quds Open University's Faculty of Graduate Studies and Scientific Research. The informed consent of the participants was also obtained before collecting the necessary data.

### Results

The results of the current study, as Figure 6 illustrates, demonstrated that using educational mapping improved the psychological and cognitive domains of students' writing skills. For instance, it increased students' confidence and motivation to write properly. Besides, it helped them to generate major and minor ideas, and connect them. In addition, it helps them to summarize the lesson and write short paragraphs easily.

**1-Improving students’ writing psychological domain**

**1.1 Increasing students’ confidence to write**

The results of the study showed that the students’ confidence to write sentences, summaries and paragraphs was enhanced largely. For example, a student (A.M) wrote:” This method gave confidence and trust in my abilities, I can write new sentences with confidence as well as writing short summaries”. Another student (M.S) wrote: “Using educational mapping method made me feel confident while writing the summary of the lecture because it gave me the main ideas that I can use while I writing, and this method is amazing because it helped me to trust myself”. In addition, a student (J.S) wrote: “Learning by this method in the English lecture helped me to feel sure that I can write for the first time simple sentences and paragraphs, I will never forget this method and this feeling.”

**1.2 Increasing students’ motivation to write**

The results of the study showed that the students’ motivation to write sentences, summaries and paragraphs increased clearly. For instance, a student (S.S) wrote:” During the lecture, I became very motivated to answer, write sentences and summarize the lecture every time because of this method”. Another student (A.E) wrote:” I and my colleagues were very enthusiastic and motivated to write the summary of the lecture and the lesson because this method guided us to find many ideas”. Furthermore, a student (S.A) wrote: “Educational mapping game increased my motivation to compete with my colleagues and express my ideas while writing.”

**2-Improving students’ writing cognitive domain**

The results of the study illustrated that using this method helped the participants to generate the minor and major ideas, connect these ideas effectively, summarize the lecture easily and write short paragraphs easily.

**2.1 Generating the minor and major ideas**

This method helped the students to generate minor and major ideas. For example, a student (A.E) wrote:” Using the educational mapping method in learning English assisted me to discover and generate the major and minor ideas of our lesson, so I could understand the topics of the lecture without big efforts”. Another student (J.S) wrote:” Maps method helped me to recognize the content of the lesson even before our doctor speaks anything by showing all the ideas through the shape.”

**2.2 Connecting the major and minor ideas effectively**

This method helped the participants to connect and associate the major and minor ideas together. For instance, a student (B.I) wrote:”The secret of learning through this method was helping to connect the major and minor ideas to understand the topic and form sentences and questions.”

**2.3 Summarizing the lecture easily**

This method helped the participants to summarize the topics in every lecture. For example, a student (A.E) wrote:” I was waiting every time to give my summary at the end of the lecture by using this fantastic method”. Besides, another student (S.S) wrote: “Using educational mapping method while learning facilitated summarizing the lectures every time”. Moreover, another student (I.L) wrote:” This method and game helped me to summarize any lesson, conference and chapter successfully, I can draw shapes and put the ideas in a suitable place, and summarize the content easily.”

**2.4 Writing short paragraphs easily**

This method helped the participants write short paragraphs. For instance, a student (A.Z) wrote: ”Using the maps method assisted me to write sentences, respond to my doctor’s questions and form meaningful paragraphs when needed”. Another student (Al. B) wrote: “Since this method offers the main and sub ideas it helped me to write expressive short paragraphs and share them with my colleagues.”

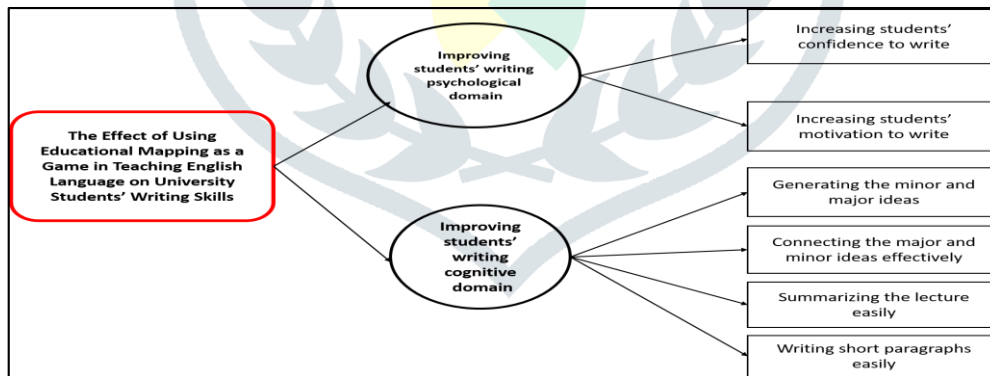


Figure 6: A diagram represents the results of the study

## Discussion

The results of the current study demonstrated that using educational mapping improved the psychological and cognitive domains of students' writing skills. For instance, it increased students' confidence and motivation to write properly. Besides, it helped them to generate major and minor ideas, and connect them. In addition, it helped them to summarize the lesson and write short paragraphs easily.

The results of the current study came in line with several studies. First, Rawson and Kintech (2005) stated that using graphic organizers simplifies the content of reading texts by making the process of understanding easier. Graphic organizers help learners connect their ideas and thoughts and discover new relationships between different concepts and ideas. Second, Jiang and Grabe (2007) stated that using graphic organizers demonstrates connections and relations in a particular text; thus, they simplify understanding the text meaningfully. Third, Dicecco and Gleason (2002) found that using visual organizers fostered students' performance, creativity and achievement. In addition, using them improved the process of teaching. They also increased learners' trust and confidence in their abilities. Fourth, Boulineau et al. (2004) found that graphic organizers have many benefits in teaching and language acquisition. Using them properly fosters students' autonomy, develops students' metacognitive skills and abilities, increases their confidence and motivates them to be independent learners.

The researchers think that educational mapping as a game was presented as a challenging game, and the way that students were taught English attracted their attention. In other words, they were introduced to an exciting, beneficial, and motivating method of learning. Students try to learn as much as they can about new and useful things they find. Additionally, how students were taught allowed them to be exposed to some new vocabulary and expressions. The puzzle-like presentation expanded their vocabulary and assisted them in learning new terms. They were able to memorize the words easily when these words were presented understandably. As a result, students were better able to comprehend the sentences and identify the main concepts and supporting details in the text since they understood and were familiar with the phrases and terms' uses.

Moreover, the results of the current study confirmed the results of several studies. For instance, Yunus and Chien (2016) demonstrated that using educational mapping positively affects students' motivation and enthusiasm. In addition, Malekzadeh and Bayat (2015) indicated that using educational mapping helps learners organize and arrange their thoughts easily. It assists learners in elaborating ideas and talking about the main topics of the lesson because it offers graphics and illustrations; it also positively affects students' attitudes and motivation. Furthermore, Pashie (2009) stated that using educational mapping directs and guides students while learning; hence, students will be aware of what they are doing. The study also revealed that students' confidence and trust in their abilities largely increased. Besides, Grant et al. (2005) stated that educational mapping is an educational strategy that helps learners arrange their ideas and participate enthusiastically; it fosters their motivation to play their roles successfully.

The researchers think that the students were encouraged to take part all the time. Since the game accommodated all of their skill levels and individual differences, they felt comfortable while answering. Of course, both low and high achievers were able to participate in their respective learning roles and were all engaged. It provided them with the fundamental framework to respond to the questions listed in the paragraphs; as a result, they were able to respond and use their responses to interact and converse with one another. Since speaking English gave them the faith and confidence to do so, they were able to communicate with one another. The process of learning became simple and joyful after it reduced their dread and anxiety. It thus boosted their zeal and inspiration. As a result, they were able to summarize the lecture to their colleagues and easily explain its main points.

Hence, these benefits could affect students' understanding of the lesson. Thus, the students were able to know the main and minor ideas of every lesson and generate them easily. As a result, they were able to answer the written questions, summarize the lesson and write short paragraphs. Therefore, the development of their writing cognitive domains positively affected their writing psychological domain and increased their motivation and confidence to write enthusiastically.

## Conclusion

The current study recommends employing educational mapping as a game in English language instruction to develop university students' writing cognitive and psychological domains; thus, their writing skills will improve gradually. The researchers think that educational mapping's simplicity made it easier for students to learn, memorize, and recall words. As a result, it increased their vocabulary and gave them a sense of self-expression. Hence, it developed their abilities and skills to formulate statements and responses. Therefore, they were urged to take part and respond to questions; that is, the students' participation grew when they realized that their skills had improved and they could perform their roles well. Consequently, this study suggests carrying out additional research to discover how educational mapping game affects other teaching and learning domains.

## Limitations

This study had various limitations. First of all, regarding the topic limitations, the study explored the effect of using educational mapping in teaching the English language on university students' writing skills. In addition, regarding the time and place limitations, the research was conducted at Al-Quds Open University in the second semester of the academic year 2022-2023. Last, regarding the methodological limitations, the researchers used the qualitative methodology, thematic coding and the Gioia approach to analyze the received data.

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