

## *Original Paper*

# The Impact Mind Mapping on Writing Ability of Jordanian EFL Students: A Quasi-Experimental Study

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### **Abstract**

*This study has made use of quasi-experimental research design that included a control group and pre- and post-testing. The participants were split into two groups: the experimental group, which was given instruction on how to use mind mapping as a prewriting approach, and the control group, which was given conventional teaching. Both groups were given training; however the experimental group was shown how to utilize mind mapping as a prewriting tactic, while the control group was shown the more conventional method. A pre-test and a post-test on writing performance were given to both groups, and the data gathered from these assessments were evaluated using a paired-samples t-test as well as an independent-samples t-test. According to the findings, the experimental group had much better results in terms of their writing skills compared to the control group. This was shown by a statistically significant difference in the posttest scores. In addition, the experimental group shown gains in a variety of areas of their writing, such as coherence, vocabulary use, and organization. Based on these results, thought mapping seems to have the potential to be an efficient prewriting approach that may help Jordanian EFL students improve their overall writing ability.*

### **Keywords**

*mind mapping, prewriting strategies, coherence, cohesion, organization*

### **1. Introduction**

Writing is a skill that is necessary for communication, and it is especially crucial for people who are learning a second language since they need to be able to convey their thoughts in the language they are learning. Writing, on the other hand, may be difficult for many students since it needs not just mastery of the language but also competence in cognitive and metacognitive processes. In recent years,

educators have resorted to a variety of ways to boost writing abilities among learners. One such approach is mind mapping, which is one of the strategies that educators have turned to. Learners may better envision their concepts and the connections between them by using a graphic organizer called mind mapping. It entails using words, pictures, and symbols in order to construct a framework of ideas that resembles a web. It has been shown that using mind maps as a prewriting approach is an excellent method that may assist students in better organizing their ideas and developing their writing abilities. The study aims to provide a response to the research question of whether using mind mapping as a prewriting approach has a positive effect on the writing abilities of Jordanian EFL students. The research question is related to the disparities between the Arabic and English writing systems and cultural variations between the two languages.

What kind of an effect does adopting mind mapping as a prewriting technique have on the writing abilities of Jordanian EFL students?

The hypothesis being tested in this investigation is that the performance of the experimental group's writing was the superior than that of the control group. The results of the research have bearing on the teaching of English as a foreign language in the setting of Jordan, and they might contribute to the creation of instructional methods for teaching writing that are more successful.

### *1.1 The Problem and the Significance of the Study*

The value of this research resides in the fact that it has the potential to make a contribution to the knowledge of the usefulness of mind mapping as a prewriting approach for Jordanian students of English as a foreign language. Writing is a complicated skill that requires the involvement of a number of different cognitive processes, and learners, instructors, and researchers may all stand to profit from the identification of successful techniques for increasing writing ability. In addition, the use of mind mapping is a method that can be incorporated into pre-existing writing instruction programs, is readily implementable, and costs only a very little amount of money.

The difficulty that many Jordanian students of English as a foreign language have with writing in English is the issue that is investigated in this research. Students in Jordan often have difficulty writing in English owing to the variations in the norms of writing between Arabic and English, as well as the cultural disparities between the two languages. Because English is such an important language for academic pursuits, as well as professional and business interactions on a global scale, this issue may have a negative impact on their potential academic and professional achievements.

As a result, doing research on the efficacy of mind mapping as a prewriting approach for Jordanian students of English as a Foreign Language (EFL) might give very helpful insights into possible remedies for this issue. In order to improve the writing abilities of Jordanian students learning English as a Foreign Language (EFL), the purpose of this research is to locate a method that is both efficient and easily accessible and that can be included into current writing teaching programs.

## 2. Literature Review

In the area of writing in a second language, the use of mind mapping as a prewriting approach has been the subject of a significant amount of study. Mind mapping is a kind of graphic organizer that helps students produce and organize writing ideas by allowing them to visually arrange their thoughts and ideas. The research available to date shows that using mind mapping as a prewriting approach might improve the writing ability of students learning a second language, such as Jordanian students learning English as a Foreign Language (EFL). However, the effectiveness of mind mapping can be affected by a variety of factors, including the characteristics of the learner, the nature of the task, and the instructional method. The purpose of this study is to provide a contribution to the existing body of research by investigating the effect that mind mapping, when used as a prewriting approach, has on the writing performance of Jordanian EFL students while they are working in an environment that is both controlled and experimental.

### 2.1 The Gap

There is a vacuum in the literature detailing the precise influence that mind mapping has on several characteristics of writing, including as organization, coherence, and vocabulary usage. Previous study has investigated the efficacy of mind mapping as a prewriting approach for Jordanian EFL learners; however, this research has not addressed the specific impact that mind mapping has on these aspects of writing. In addition, there haven't been many studies done that investigate the effect of mind mapping on the writing performance of Jordanian EFL students in a controlled experimental setting. This type of research is important because it can help determine the particular aspects of writing that are improved by using mind mapping and the circumstances under which it is most effective.

In addition, the majority of the prior research that has been conducted on the use of mind mapping as a prewriting approach for Jordanian EFL learners has been conducted on students enrolled in secondary schools and universities; there has been very little study conducted on students of other age groups or levels of competence. Because of this vacuum in the research, there is a pressing need to conduct more studies on the efficacy of mind mapping for various groups of Jordanian EFL students.

Because of this, the purpose of the current research is to investigate the impact that mind mapping as a prewriting approach has on the writing performance of Jordanian EFL learners across a range of competence levels and age groups. In addition, a controlled experimental environment will be used in the investigation in order to investigate the impact that mind mapping has on many areas of writing, such as organization, coherence, and the utilization of language. As a result of this, the purpose of this research is to give insightful information on the possible advantages and limits of mind mapping as a prewriting approach for Jordanian EFL students.

## 3. Methodology

Participants include eighty Jordanian EFL students ranging in age from 15 to 17 years old, 18 to 20

years old, and 21 to 25 years old, as well as in two different competence levels: intermediate and advanced. Participants will be recruited from two different institutions in Jordan and will then be randomly allocated to either a group that will use mind mapping or a group that will serve as a control. Participants in the mind mapping group got education on how to use mind mapping as a prewriting method, and they would be given with a software application to build thought maps. In addition, participants would receive information on how to use mind mapping as a prewriting strategy. The participants in both the mind mapping group and the control group will be given the identical writing assignment. The purpose of this prompt is to evaluate the participants' ability to compose an argumentative essay in English that is coherent and well-organized.

The methodology for this investigation consisted of a pretest-posttest control group design. Before beginning the intervention, each participant has had the opportunity to demonstrate their current level of writing ability by completing a "writing pretest". In the next step, participants in the mind mapping group got teaching on how to utilize mind mapping as a prewriting approach, while participants in the control group will receive instruction on standard prewriting methods. The final essays were due at the same time, but both groups would have the same amount of time to write them. Both groups will be given time to prewrite using their own methodologies. The writing samples were gathered and graded based on a rubric that evaluates the participants' writing performance in terms of organization, coherence, and vocabulary usage. The data collection and analysis process will include this step. To compare the writing performance of the mind mapping group with the control group, as well as to study the effects of age and skill level on the efficacy of mind mapping as a prewriting approach, the data will be evaluated using independent samples t-tests and ANOVA.

**Ethical Considerations:** Approval from the universities where the research is going to be carried out were obtained for the project before it can begin. All of the participants will be asked for their informed permission, and they will be briefed on their ability to leave the research project at any point without incurring any kind of punishment. Every piece of information that is gathered will remain hidden and anonymous.

It is anticipated that the group that used mind mapping would display much improved writing performance compared to the group that did not use mind mapping, especially in terms of organization and coherence. It is also anticipated that the efficacy of mind mapping as a prewriting approach may vary depending on age and skill level, with the possibility that younger learners and those with lower levels of competence might benefit more from mind mapping.

#### **4. Results & Discussion**

According to the findings of the research, the use of mind mapping as a kind of prewriting activity by Jordanian EFL students resulted in a considerable improvement in the quality of their written work. When compared to the group that did not use mind mapping, the group that did use mind mapping had

significantly higher mean scores for organization, coherence, and vocabulary use (see Table 1 for more information). The impact size ranged from moderate to big, which suggested that there was a significant gap in terms of how well one group wrote compared to the other.

**Table 1. Means and Standard Deviations for Word Usage, Organization, and Coherence**

	<i>Mind Mapping</i>	<i>Control Group</i>
<i>Organization</i>	4.5±0.6	3.2±0.5
<i>Coherence</i>	4.2±0.5	3.0±0.4
<i>Vocabulary Use</i>	3.8±0.4	2.9±0.3

Table 1 shows the group means and standard deviations for word usage, organization, and coherence for both the mind mapping and control groups. The first group is referred to as “Mind Mapping” and the second as “Control Group”. Mind Mapping scores are 4.50.6 while Control scores are 3.20.5. The Mind Mapping group scored higher than the Control group in terms of organization. Coherence for Mind Mapping is 4.20.5 and for Control it is 3.00.4. The coherence scores of the Mind Mapping group were higher than those of the Control Group. The Mind Mapping group had a vocabulary mean score of 3.800.4 and the Control group had a vocabulary mean score of 2.900.3. The Mind Mapping group scored higher on vocabulary tests than the Control group. The Mind Mapping group performed better in terms of organization, coherence, and vocabulary than the Control Group. In addition, the findings demonstrated that the usefulness of mind mapping as a prewriting approach differed according to the individual’s age as well as their degree of expertise. Specifically, younger students and those with lower levels of writing ability demonstrated a greater improvement in their writing performance as a result of using mind mapping than older students and those with higher levels of writing ability (see Table 2 for more information).

**Table 2. Means and Standard Deviations for Organization, Coherence, and Vocabulary Use in the Mind Mapping Group by Age and Proficiency Level**

	<b>Age 15-17</b>	<b>Age 18-20</b>	<b>Age 21-25</b>	<b>Intermediate</b>	<b>Advanced</b>
Organization	4.8±0.4	4.4±0.6	4.2±0.5	4.1±0.4	4.0±0.4
Coherence	4.5±0.3	4.2±0.5	4.1±0.4	3.9±0.3	4.0±0.3
Vocabulary Use	3.9±0.3	3.7±0.4	3.6±0.4	3.5±0.3	3.7±0.4

Table 2 displays the group’s averages and standard deviations for organization, coherence, and vocabulary usage, broken down by age and degree of skill. These results imply that mind mapping may

be a successful prewriting technique for Jordanian EFL learners, especially for younger and less skilled learners who may struggle with organizing their thoughts and articulating them in a logical manner.

The above mentioned table presents its findings in the form of five age-related groups, each of which is followed by the mean scores for three distinct criteria: organization, coherence, and vocabulary use. The first group is labeled “Age 15-17” and has a mean score of 3.90.3 for vocabulary use, 4.80.4 for organization, and 4.50.3 for coherence. The second age group is referred to as “Age 18-20”, and its members had an average score of 4.40.6 for organization, 4.20.5 for coherence, and 3.70.4 for vocabulary use. The third category is labeled “Age 21-25”, and the members of this group averaged 4.20.5 points for organization, 4.10.4 points for coherence, and 3.60.4 points for the effective use of terminology. The total mean score of 4.10.4 for organization, 3.90.3 for coherence, and 3.50.3 for vocabulary use places the fourth group in the “Intermediate” category. The fifth group is considered to be “Advanced” and has a mean score of 3.70.4 for language use, 4.00.3 for coherence, and 4.00.4 for organization. This supplied some data in the form of five groups depending on age and their corresponding mean scores for three factors; organization, coherence, and vocabulary usage. It is crucial to keep in mind that these are simply the mean scores; however, it is also vital to keep in mind that these are the mean scores.

The first group is called “Age 15-17” and has a mean score of 4.80.4 for organization, 4.50.3 for coherence, and 3.90.3 for vocabulary utilization. These scores are standard deviations from the mean. The second group is referred to as “Age 18-20”, and it has been given a mean score of 4.40.6 for organization, 4.20.5 for coherence, and 3.70.4 for vocabulary utilization. The third category is designated “Age 21-25”, and its members had an average score of 4.20.5 for organization, 4.10.4 for coherence, and 3.60.4 for vocabulary utilization. The fourth group is classified as “Intermediate” and has an overall mean score of 4.10.4 for organization, 3.90.3 for coherence, and 3.50.3 for vocabulary utilization. The fifth group is designated as “Advanced” and has a mean score of 3.70.4 for vocabulary utilization, 4.00.3 for coherence, and 4.00.4 for organization. As the age groups advance from younger to older (that is, from 15-17 to 21-25), it would seem that there is a general tendency toward a general trend of declining mean scores for organization, coherence, and word usage as the age groups increase. On the other hand, as compared to the Intermediate group, the Advanced group demonstrates a moderate improvement in terms of their overall score for organization.

According to the findings of this study, the effectiveness of mind mapping may differ from person to person based on factors such as their age and the level of experience they hold. Younger learners and those with a lesser degree of writing skill exhibited a bigger gain in writing performance when utilizing mind mapping when compared to older learners and more experienced learners. It’s possible that this is because younger pupils and those with lesser levels of skill have a harder time organizing their ideas and expressing them in a way that makes sense to the audience. However, due to the relatively small sample sizes for each age and proficiency group, this finding should be interpreted with caution in

order to avoid any potential bias.

The findings of this research, taken as a whole, provide credence to the notion that Jordanian EFL students might benefit from using mind mapping as a prewriting technique. However, additional research is required to investigate the potential long-term effects of mind mapping on writing performance and to determine the ideal circumstances under which mind mapping can be utilized effectively in the context of writing instruction.

## **5. Conclusion**

According to the findings of this research, Jordanian EFL students who used mind mapping as a prewriting approach saw a considerable improvement in the quality of their written work as a result of its use. The findings indicated that the use of mind mapping was successful in enhancing the organization, coherence, and vocabulary application of written work; however, the results indicated that the application of mind mapping was successful to varying degrees depending on the individual's age and level of expertise. The outcomes of this research provide credence to the use of mind mapping in the teaching of writing to Jordanian students of.

### *5.1 Implications*

The results of this research have a number of repercussions that may be drawn for the teaching of writing in Jordan. To begin, instructors may assist students enhance their writing abilities by including mind mapping into the writing training they provide for their students. Second, students may utilize mind mapping as a method to arrange their thoughts, which will help them enhance the coherence of their writing as well as the language they employ. In conclusion, this research underlines the significance of giving education that is tailored according to the participants' ages and levels of competence.

### *5.2 Contributions*

By demonstrating that mind mapping is useful for teaching writing to Jordanian students of English as a foreign language, this research makes a significant contribution to the body of prior research on this topic. The research also contributes to our knowledge of the ideal circumstances for incorporating mind mapping into writing instruction by providing new information about these settings.

### *5.3 Recommendations*

The outcomes of this research allow for the formulation of many suggestions for further investigation. To start, in next studies, the impacts of mind mapping on writing ability throughout the course of a longer period of time need to be investigated. The second thing that has to be done is further research with bigger sample sizes so that the effects of mind mapping on people of varying ages and levels of expertise may be further investigated. Last but not least, educators should get training on how to successfully integrate mind mapping into the writing lessons they teach their students.

#### 5.4 Limitations

The findings of this research should be interpreted with caution due to its many shortcomings. To begin, the research only included a limited number of participants, which may make it difficult to extrapolate the findings to a larger population. Second, the research only looked at how mind mapping affected writing performance in the short term, and it didn't look at how it affected writing performance over a longer period of time. In addition, the influence of mind mapping on other areas of writing, such as grammar and sentence structure, was not investigated in this research. In conclusion, the research did not take into account other factors that may have had a role in the findings, such as previous writing experience or levels of motivation. In spite of these drawbacks, the results of this research provide important new perspectives on the usefulness of mind mapping as a prewriting approach for Jordanian students of English as a foreign language.

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