

Mind Mapping as a Strategy for Enhancing Essay Writing Skills

DOI: 10.15804/tner.2016.45.3.11

Abstract

This study examines the issue of student essay writing in higher education. The main focus of this research is on the lecturers and writing tutors who wish to help undergraduates in learning foreign languages as well as to enable them to bring improvement in their essay writing skills. Essay writing is critical to academic success; usually, an essay is a piece of writing that systematically analyzes and evaluates a topic or issue. Mind mapping is one of the versatile tools that help to break down the topics into manageable chunks, fire up the brain, and boost creativity. This study focuses on how mind mapping was effectively used as a strategy to support and develop students' writing skills. The data required for this study was collected through a questionnaire and analyzed with the primary purpose to evaluate the use of mind maps as a pre-writing brainstorming strategy. The statistical techniques used to determine the role of mind mapping in the enhancement of writing skills include one-way ANOVA, Chi-Square test, and Correlation Analysis. The findings of the statistical analysis confirmed that planning an essay before writing with the use of the mind mapping technique helped in writing essays more effectively in their coursework, thereby making essay writing more enjoyable and fun.

Keywords: *essay writing, mind map, quality of writing, writing skills, foreign language*

Introduction

The heart of teaching and learning of higher education revolves around student writing skills. A wide range of methods is observed to be developed for teaching essay writing in various geographical contexts for distinctive political, historical and social reasons. In the last two decades, the usage of feedback in English seems to be enhanced as a second/ foreign language (ESL/EFL) writing instruction (Zhao, 2010). It has been stated by most researchers that feedback received from peers plays an essential part in enhancing academic achievement as well as the writing skills of students (Topping et al., 2000; Plutsky & Wilson, 2004). One of the major difficulties that students face in essay writing is essentially lack of necessary ideas to write their essay convincingly till the end. Thus, they struggle with insecurities about their writing abilities and become self-conscious about expressing themselves. Given all this, it is really interesting that applying the concept of mind mapping can remarkably accelerate the aptitude for learning new pieces of information far more quickly and efficiently than before and accelerate the process of essay writing.

Generally, writing is a challenging procedure. There is more to this procedure than just positioning the units of language collectively; it usually requires a lot of arrangement, planning, conceptualization, composition, rewriting, and modifications. Most of the researchers have focused entirely on the potency of prewriting to simplify the difficulty of writing, as it provides assistance to the writers to outline their targets and goals, brainstorming, developing the ideas, composing the gathered information and framework the content (Brodney et al., 1999; Hart, 1997; First & MacMillan, 1995; Flower & Hayes, 1981). It has been suggested by Bourdin & Fayol (2000) that appropriate and prior planning stimulates the absolute performance of writing, and interchangeably, inadequate planning may result in weak writing performance.

A mind map is one of the most efficient tools to think, recollect, and organize ideas in a visually friendly way. Mind mapping is usually deliberated as an approach to conceptualizing and brainstorming, through which one can attain the desired outcomes or more often outstanding ones. According to tutors, mind mapping is one of the greatest assets for teaching students. It is an intellectual technique which provides help in the alignment and formulation of information when introducing the students to a new topic (Hillar, 2012). Mind maps go under a variety of names. In general, they are known as semantic mapping, concept maps, think-links, graphic organizers, knowledge mapping, or cognitive maps (Svantesson, 1989). As analyzed by Buzan (1993), in terms of a graphical and visual

manner, mind maps endeavor to depict a relationship between concepts or ideas. These maps are referred to as 'mind maps' in this study. During the time span of the 1960s, Tony Buzan developed the concept of mind mapping. It is the entire brain which acts as a substitute for linear thinking. Mind maps harness an entire range of cortical skills – image, word, logic, number, color, rhythm, and spatial perception and awareness in a distinguished, uniquely powerful manner. Mind maps are usually a reflection of the way our brain reacts in deriving the ideas and concepts from our head onto paper.

This study was done:

1. To identify the effect of mind maps in essay writing.
2. To understand how mind maps are used by a group newly introduced to the concept.
3. To measure if and how mind maps enhance the ability to write well-meaning essays.

Literature Review

The methods of bringing enhancement in the writing performance of students during examinations were explored by Wallace (1997) with the use of the technique of mind mapping. Moreover, the repetitive style of action research gives current opportunities to teachers, who demonstrate and elevate their personal manner of teaching.

Jarf (2009) investigated the compelling distinction among the group of students who used the software of Mind Mapping while writing and the ones who did not. The researcher stated that the software of Mind Mapping could be used to help students in brainstorming, development of new ideas, making correlations among various concepts and supporting details as students face problems in propagating ideas in EFL and writing paragraphs with topic sentences and supporting details. This study was performed by considering freshman students as a sample of research, who were divided into two groups, i.e., experimental and control. The results of post-test showed that the members of the experimental group had higher gains in their final writing.

Davies (2011) carried out research in which he explained a number of techniques and tools used in mapping, as well as distinctions among those methods. This research paper also comprised different advantages and disadvantages of each of the mapping tools. According to Davies, choosing a mapping tool is principally dependent upon the primary objective or aim for which that relevant tool should

be used and that the tools may be well concentrated on offering instructions as still inferential and potentially interrelated functions.

Naqbi (2011) examined the use of mind mapping in the context of EFL as a strategy of prewriting brainstorming under the circumstances of examination. This study aimed to guide students in planning and organizing their concepts and ideas as well as providing answers about the writing topic instead of giving answers to the questions asked in exam without any prior planning. As stated by the author, students should perform in a different manner during examinations because of limited time availability. In particular, students have little time to think about the questions and in such a case, the strategy of Mind Mapping helps them to respond to questions in an efficient ways. This is the main reason why the tools of collecting data used by Naqbi include interviews, observations, and sample of work performed by students. Actually, the researcher believed that most students try to memorize information for their exams, instead of understanding it. Hence, students' capability of planning and organizing their concepts before essay writing is likely to be enhanced by application of the mind mapping strategy. After conducting the study, it was found out that by mastering the technique, students' cognitive skills and thinking abilities could be enhanced, and they showed greater ability in finding ideas, examining them, and stimulating their background knowledge.

Riswanto and Putra (2012) conducted research in Indonesia on the appropriateness of the mind mapping strategy while providing training in writing. The design of pretest-posttest disparate groups was used by the researchers. As the study was carried out in the town of Bengkulu, 234 students of the first year of SMAN3 were the population of the study during the academic year of 2011/2012. A total of 66 students were selected as a sample and divided into two groups. The writing test was conducted in order to collect data, and t-test was used as the tool for analysis of the data. Results showed a compelling distinction was present in the writing accomplishment of the students taught with the use of the strategy of mind mapping. Hence, it is evident from this study that writing achievement of students can be enhanced through the application of the mind mapping strategy.

Methodology

A questionnaire was designed by the researcher for data collection as an effective way to determine the efficacy of the mind mapping method. As reported by Mills (2003), researchers are required to "collect data that is appropriate and accessible"

(p.51). The sample of this research included 151 students enrolled in General Education Program at Abu Dhabi University. The students' age was between 18 and 23 years. A structured questionnaire was administered to collect the required data for this study. Chi-square test was done to identify the effect of mind mapping in essay writing, one way ANOVA and Correlation were also performed to measure how helpful mind maps were in the enhancement of the quality of essays. In the case of the presence of nominal variables, the Chi-Square test is applied as it is a non-parametric test. It is a very simple test of relevance, through which research observations can be categorized into distinct groups and evaluated as frequencies (Burns & Burns, 2008).

Data Analysis and Interpretation

Research Objective 1: To identify the effect of mind maps in essay writing

H_0 = There is no significant association between using mind maps before essay writing and the quality of essays.

Table 1. Chi-square Test

Statistic	Value	df	Asymp. Sig. (2-tailed)
<i>Pearson Chi-Square</i>	79.97	4	.00
<i>Likelihood Ratio</i>	98.64	4	.00
<i>Linear-by-Linear Association</i>	72.52	1	.00
<i>No. of Valid Cases</i>	151		

On the basis of the results it can be concluded that the Chi-Square value of using mind maps before essay writing and the effect on the essay is 79.97 and this value is significant at the five percent level. Hence, the null hypothesis is rejected. There is a significant association between the use of mind maps before essay writing and the quality of the essay written. Hence, it is proved that mind maps as a strategy have a positive effect on essay writing.

H_0 = There is no significant association between using mind maps for essay writing and the thinking skills enhanced while writing an essay.

Table 2. Chi-square Test

Statistic	Value	df	Asymp. Sig. (2-tailed)
<i>Pearson Chi-Square</i>	57.27	3	.00
<i>Likelihood Ratio</i>	74.31	3	.00
<i>Linear-by-Linear Association</i>	55.44	1	.00
<i>No. of Valid Cases</i>	151		

The results indicate that the Chi-Square value for mind maps before essay writing and mind maps develop thinking skills while essay writing is 57.27, and this value is significant at the five percent level. Hence, the null hypothesis is rejected. Thus, there is a significant association between using mind maps before essay writing and the thinking skills development during writing the essay. So, it is clear from the above analysis that mind maps as a strategy enhance the thinking capabilities of students.

H_0 = There is no significant association between the usage of mind maps before essay writing and the assessment of one's ideas while writing an essay

Table 3. Chi-square Test

Statistic	Value	df	Asymp. Sig. (2-tailed)
<i>Pearson Chi-Square</i>	125.38	3	.00
<i>Likelihood Ratio</i>	144.79	3	.00
<i>Linear-by-Linear Association</i>	91.57	1	.00
<i>No. of Valid Cases</i>	151		

The results show that the Chi-Square value for mind maps before essay writing and the use of mind maps for assessment purpose while writing essays is 125.38 and this value is significant at the five percent level. Hence, the null hypothesis is rejected. There is a significant association between the use of mind maps before essay writing and assessing one's confidence while writing an essay. So, it is found from the above analysis that mind maps as a strategy are some of the best tools for enhancing students' confidence while writing essays.

Research Objective 2: To understand how mind maps are used by a group newly introduced to the concept

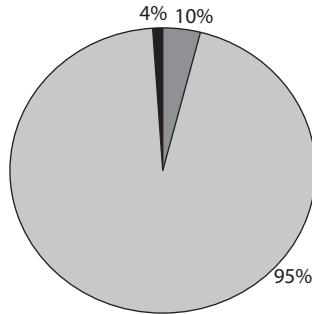


Figure 1. Use of Mind Mapping Strategy in various activities

Referring to the above pie chart, it can be observed that 95% of the respondents use mind maps as a strategy for essay writing, 4% of the respondents use mind maps for writing assignments, 1% of the respondents use mind maps before other activities, whereas none of the respondents uses mind maps as a strategy for passage comprehension. So, it is clear that mind maps as a strategy are increasingly used for activities such as the writing of an essay and assignments.

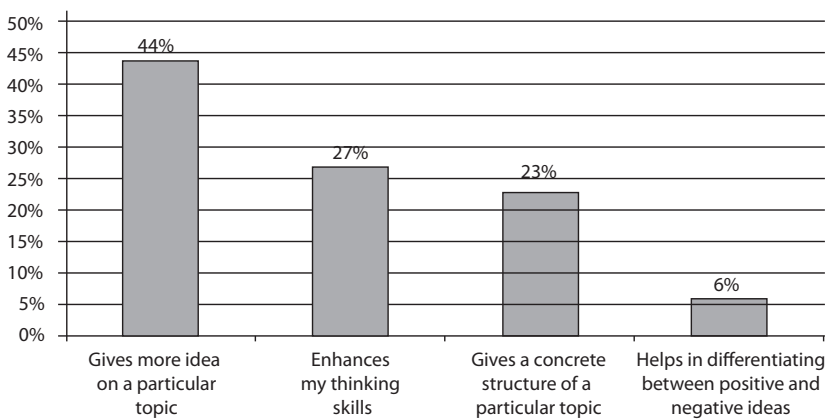


Figure 2. Perceived benefits from using mind maps before essay writing

The above chart shows that 44% of the respondents say that they use mind mapping before writing an essay as it gives better and more ideas on a particular topic, 27% say that they use mind mapping before writing an essay as it enhances their thinking skills, 23% of the respondents say that they use mind maps before writing an essay as it gives a concrete structure to a particular topic and 6% of the respondents say that they use mind maps before writing an essay as it helps in differentiating between positive and negative ideas. It is clear from the above chart that mind maps as a strategy used before essay writing give more ideas on a particular topic, enhance the student's thinking skills, allow for a concrete structure of the assigned topic and also help in making a distinction between positive and negative ideas that arise before writing an essay.

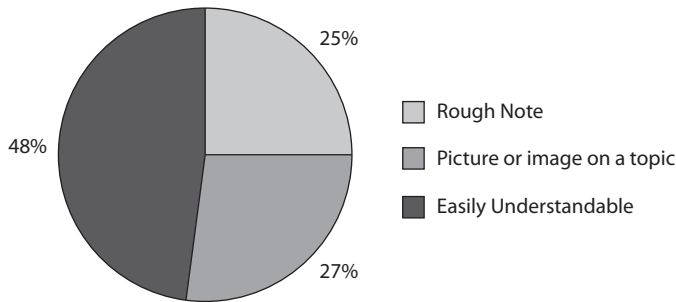


Figure 3. Role of mind maps in essay writing

The above chart indicates that 48% of the respondents consider mind maps as assisting in essay writing with a clear understanding, 27% of the respondents say that mind maps provide a vivid picture or image of an essay topic, and 25% of the respondents consider mind maps as rough notes to write confidently. Hence, it is clear that mind maps as a strategy play various roles in understanding an essay topic, having rough notes to write confidently and in making an association with the picture and image of a topic while writing an essay.

Research Objective 3: To measure how the mind map strategy enhances the quality of essay writing

H_0 = There is no significant difference between using mind maps before essay writing and the confidence to write an essay.

Table 4. ANOVA

	Sum of Squares	df	Mean Square	F	Significance
<i>Between Groups</i>	24.31	2	12.15	278.88	.00
<i>Within Groups</i>	6.45	148	.04		
<i>Total</i>	30.75	150			

The F-value of 278.88 is statistically significant at the one percent level indicating that there is a significant difference between using mind maps before essay writing and the confidence level to write an essay. Hence, the null hypothesis is rejected. Thus, mind maps as a strategy enhance the student's writing skills.

H_0 = There is no significant difference between using mind maps before essay writing and their perception as a strategy that is suitable for essay writing.

Table 5. ANOVA

	Sum of Squares	df	Mean Square	F	Significance
<i>Between Groups</i>	18.07	3	6.02	69.79	.00
<i>Within Groups</i>	12.69	147	.09		
<i>Total</i>	30.75	150			

The F-value of 69.79 is statistically significant at the one percent level indicating that there is a significant difference between using mind maps before essay writing and their perception as a strategy that is suitable for essay writing. Hence, the null hypothesis is rejected. So it is clear that mind mapping is a suitable strategy for essay writing.

H_0 = There is no significant relationship between the use of mind maps for essay writing and the formulation of a logical and coherent essay.

Table 6. Correlation

		Mind mapping before essay writing	Mind maps for formu- lation of a logical and coherent essay
<i>Mind mapping before essay writing</i>	Pearson Correlation	1.00	.59
	Sig. (2-tailed)		.00
	N	151	151
<i>Mind maps for formulation of a logical and coherent essay</i>	Pearson Correlation	.59	1.00
	Sig. (2-tailed)	.00	
	N	151	151

The correlation between mind mapping before essay writing and the eventual formulation of logical and coherent essays is $r = 0.59$ and the significant value is 0.000. Here the value of r is 0.59, so it is considered to be a strong correlation. Hence, there is a significant relationship between using mind maps before essay writing and the formulation of logical and coherent essays. Thus, it is proved that mind mapping as a strategy helps in the structuring of the topic assigned for essay writing.

H_0 = There is no significant relationship between the use of mind maps and the final quality of an essay.

Table 7. Correlation

		Mind mapping before essay writing	Mind maps' influence on quality of essay
<i>Mind mapping before essay writing</i>	Pearson Correlation	1.00	.67
	Sig. (2-tailed)		.00
	N	151	151
<i>Mind maps' influence on quality of essay</i>	Pearson Correlation	.67	1.00
	Sig. (2-tailed)	.00	
	N	151	152

The correlation between mind mapping before essay writing and mind mapping enhancing the quality of writing is $r = 0.67$ and significant values are 0.000. Here, the value of r is 0.67, so it is considered to be a strong correlation. Hence, there is a significant relationship between mind mapping before essay writing and its influence on the quality of the essay. So, it is proved that mind mapping as a strategy enhances the quality of the final essay.

H_0 = There is no significant relationship between the use of mind maps before essay writing and one's ability to write an essay in the stipulated time.

Table 8. Correlation

		Mind mapping before essay writing	Mind map's influence on writing an essay in the stipulated time
<i>Mind mapping before essay writing</i>	Pearson Correlation	1.00	.77
	Sig. (2-tailed)		.00
	N	151	151
<i>Mind map's influence on writing an essay in the stipulated time</i>	Pearson Correlation	.77	1.00
	Sig. (2-tailed)	.00	
	N	151	152

The correlation between mind mapping before essay writing and mind mapping as a strategy improving writing skills in a given time frame is $r = 0.77$ and significant values are 0.000. Here, the value of r is 0.77, so it is considered to be a strong correlation. Hence, there is a significant relationship between using mind maps before essay writing and improving one's ability to write an essay in the stipulated time.

Discussion

The mind mapping strategy is an excellent and innovative technique which enables students to generate new ideas for essays, assignments, etc., in a very short time. This study has proved that mind mapping as a prewriting strategy helps in

improving the quality of essays and helps students to enhance their writing skills in a given time frame. It also helps in understanding a particular topic assigned for essay writing in a better way by focusing on ideas written down in one's own words and observing connections between them. Thus, mind mapping as a strategy is useful in both situations, i.e., before essay writing and during writing. In the above study, it was found that those students of Abu Dhabi University who used mind maps showed improvement in their writing capabilities and quality of writing.

Conclusion

A notable difference in writing logical and coherent essays was found in a group of students of the general education program at Abu Dhabi University, who were encouraged to create mind maps to brainstorm, generate, and organize ideas before writing an essay. This clearly indicates that the mind mapping technique can act as a powerful tool, not only in boosting the confidence level of students as well as their capability to generate, imagine, and write logical, well-organized and allied essays, but also in writing faster and more efficiently detailed ideas in their paragraphs. Furthermore, since the present study declared a positive impact on the attitude of students approaching the technique of mind mapping as a pre-writing activity, it is recommended that the software of mind mapping should be introduced for the assistance of students in generating complex ideas for multi-paragraph essays. Hence, the results generated from the presented research are found to be consistent with the findings of other research on the use of mind maps by students of particular college levels and grades, enrolled in disparate subjects as investigated by Horton et al. (1993); Nesbit and Adesope (2006); Goodnough and Woods (2002); Lim, Cheng, Lam and Ngan (2003); BouJaoude and Attieh (2003); Berry and Chew (2008); Cifuentes (2009); Holland, Holland and Davies (2003/2004); and Chan (2004).

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