

“Mind Mapping Techniques to Enhance EFL Writing Skill”

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Abstract

The study identifies appropriate Mind mapping techniques to enhance the EFL learners' writing ability. It reviews and examines the traditional techniques used in teaching writing to the Saudi intermediate learners and identifies appropriate Mind mapping techniques along with an application procedure to enhance the writing skill. The sample included 40 intermediate learners and 20 English language teachers at the English Language Institute. The study divided into two phases; a Survey Phase and an Experiment Phase; started with the learners' placement test and a questionnaire distributed in EL teachers to collect the data on practicing usual techniques and problems faced while teaching writing. Since, the main focus of the study was to identify the appropriate Mind mapping techniques to enhance the learners' writing ability, the experiment phase continued for 7-8 weeks. The statistical analysis of the data was carried out by using Microsoft Excel and SPSS. The results indicated that the learners, who were taught through Mind maps, improved cohesion and coherence; content paragraph structure and length in writing. The results manifested that the hierarchical structure of the Mind mapping techniques used in the pre-writing process enhanced the EFL learners' writings.

Keywords: Mind mapping, Teaching Techniques, Structure, Writing Process, Enhancement

1. Introduction

Writing is a disciplined way of producing meaning and an effective method to display one's own thoughts (Clearly and Linn, 1993). One needs to make an effective use of language devices and techniques to excellently depict ideas in writing because it's growing as an important skill in different professions and academics. Writing requires consistent effort and regular practice to develop a certain proficiency level to give way to one's thoughts and ideas in allogicalorder. Writing skill is multifaceted and difficult to teach. Along with the mastery of grammatical and linguistic devices, it requires conceptual and judgmental elements (Heaton, 1998) which are highly significant and focus of attention and dependence (Fageeh, 2011). Writing is the one stated as the basic language skill by Harmer (2002) and is never left ignored in language learning process because it is as important as reading, speaking and listening; but it requires consistent efforts and regular practice to develop certain proficiency.

On the other side, the usual practice of teaching English writing is mostly based on some traditional techniques and methods that majorly focus the learners' mastering the use of language (lexis and grammatical structure), thus neglecting the real worth of teaching the writing process which is crucially important to produce an effective piece of text. It has been acknowledged that the major problems faced by the EFL learners are not to organize lexis, mechanics, or the production of the grammatical structure but to organize ideas related to the topic of concern; in such a way that the topic is kept in focus and the association of ideas is sustained throughout the text written. According to Byrd (2011), most of the L2 learners neglect the writing process and consider one draft enough as a final piece of writing. Teaching writing involves different strategies adopted by the teachers.

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There is always a need of appropriate techniques to be adopted to teach writing to develop in learners an ability to produce their best by understanding the process of writing. As said by Richards (cited in Shafiee et al., 2003) the nature and significance of writing has been underestimated in language teaching. Alsamadani (2010) states that EFL writing is a challenging task, complex chore, and a difficult process. Writing in a foreign or a second language is more complex. There are certain steps in the process which are to be kept in concentration. These focused areas can be viewed in the Fig. 1.1.

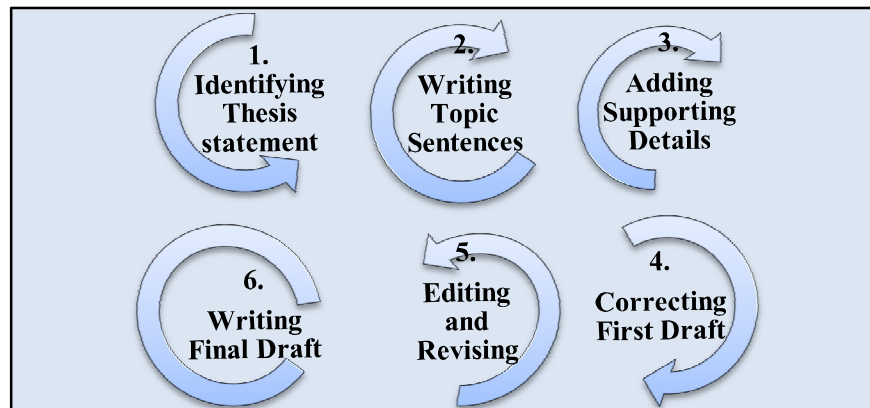


Fig. 1.1 Focused Skill Areas in EFL Writing

Source: Designed by the Researcher

A well-developed focused approach towards teaching the skill is required. Awareness of the grammatical techniques, imagination, and suitable lexical items are focal points. The techniques, methods, or approaches to teach writing differ in diverse academic contexts according to the indigenous circumstances present at that time. Same situation is confronted while teaching the Saudi learners. Their educational, social, and contextual needs and restrictions are found different from the other second or foreign language learners in the world. Modification in teaching techniques to suit the various learning profiles is an effective approach. A professional ability is required to filter the approaches and extract an appropriate one after considering the needs of the learners, their level, their social contextual appropriateness and their academic system set-up (Badger & White, 2000).

1.1 Teaching EFL Writing: A Diversion

Arab learners, studying at higher educational institutes, undergo from serious problems and deficiencies in English language and specially in English writing which makes it difficult for them to cope up with their higher studies effectively (Tahaineh, 2010; Rababah, 2003). Alsamadani (2010) has explained that this difficulty is produced from the point when learners organize, revise, and/or edit to produce an error free text.

A patent fact is that the foundation year learners at the ELI have to study English course in a four modular system, with a very few hours allocated to the writing program. Desirable outcomes have not been obtained as much portion of the credit hours is utilized to teach the other part of the syllabus which is mostly related to learning other grammatical concepts, vocabulary, reading, listening, and speaking activities. When learners write a short paragraph, they feel stressed. Difficulties of EFL writing (Alsamadani, 2010) have already been identified by many researchers and are attributed to a number of facts which include cognitive competence at a standing mark.

Writing process is cyclic and interrelated. The processes of writing can be divided into pre-writing and actual writing activities. Usually these processes flow like: Pre-writing, composing, revising, editing. EFL learners struggle mostly at the first stage of the process, i.e. Prewriting. This initial stage of writing is important as main and sub-ideas and thoughts are generated at this stage which is vital to writing. The thoughts need to be relevant and cohesively allied. The figure 1.2 shows how the process continues.



Fig. 1.2 Writing Processes

Source: Designed by the Researcher

Writing process needs linguistic blocks out of which the ideas structure. However, the learners need to get the blocks into shape where the learners' cognitive abilities work to support and develop ideas conveniently in a flow. According to the cognitive approach, writing itself is a source which directs learners to assess their own structures. Writing is not a linguistic process only; rather it is beyond that scope. The deductive approach of writing is all about the organization of ideas and it is far beyond the inductive approach where writing was seen as a practice in language usage. Former major practices were the correct usage of the language and most of the classroom practice was to ensure the linguistic competence has been developed in the learners (Widdowson, 1984). EFL writing is normally associated with learning or mastering the grammatical structures, vocabulary, and syntax. Majority teachers and students are conscious of the production as error free and an exceptional piece of grammar exhibition. Thus, the main purpose of writing suffers somewhere in between the process.

1.2 Perceived Difficulties of the EFL Learners

Writing involves organization of thoughts, structuring thoughts into a systematic connection with related details, using opinions in a cohesive and coherent way that all the ideas are interwoven and link the main theme, etc. are the desirables when it comes to writing, thus creating challenges not only for the learner but also the teachers to keep the whole connections in balance in writing. There are many areas that the writing process gets hindered or failed due to the difficulties faced by the EFL learners who learn writing or the teachers who teach them writing. There is a need to identify the underlying problems which create complications in teaching-learning writing skill.

Organization of the composition depends on structure and content. The learners are usually confused in between what to write and how to start to create an appropriate length, and organization of the structure and paragraphs. Unity in Organization demands that the text is free from the irrelevant details of thought related to the topic. The problem arises when the learners produce exaggerated ideas along with the elaboration of unnecessary and looped details which break the whole text as one piece of writing and disconnect the thoughts from the central idea. Keeping the track of cohesion and coherence is another problem related faced by the learners during the writing process. Learners' texts lack the use of connectors, sequence, consequence, and contrast with a lack of signal words to guide towards arguments. As described by Khuwaileh and AlShoumali (2000), the absence of logical connectors of sequence make the sentences of a composition look like a list of sentences, thus the production loses its real substance. Many researchers relate the issue to the proficiency problems and the major syntactic errors. These highlighted problems are linked with the verb formation, use of tenses and subject-verb agreement. Tahaineh's (2010) work has presented that Arab students' errors in writing are mainly of syntax and grammar. The development of writing requires the organization of thoughts to flow from a smaller idea to a bigger concept related to the topic. Another perceived difficulty is the use of supporting details in writing to support ideas. The process of writing gets hindered when the learners are stuck in between.

1.3 Types of English Writing

Descriptive writing is the simplest type of academic writing process which provides details of facts and information on different topics related to the real life. Figure 1.3 represents a few types. Another type of writing in academics is the persuasive writing which closely resembles the analytical writing procedure which involves the process of writing the information and reorganization of the information. An extra feature of personal view-point is also there. Critical writing is common for research especially for the empirical thesis to show a gap.

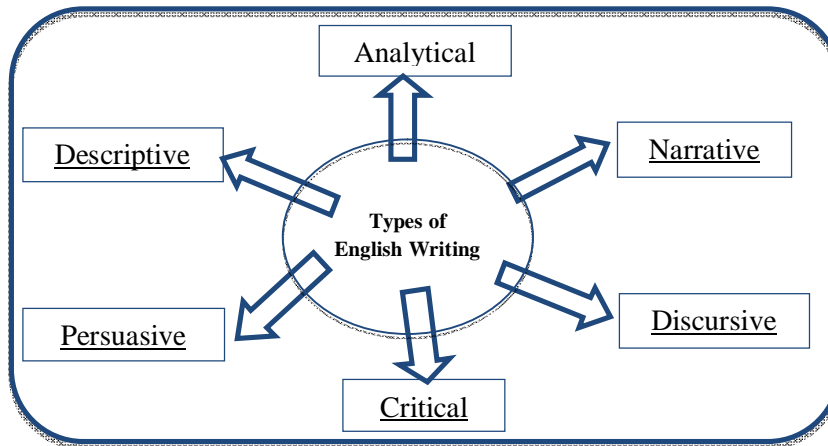


Fig. 1.3 Types of English Writing
 Source: Developed by the Researcher

It has all the features of persuasive writing; like quoting facts, re-organizing, presenting own point of view. Narrative writing provides a subject matter that the writer has written on. Learners usually learn this type of writing easily because they do not have to struggle with any extra component about the sequence of the events. Discursive writing is formal and impersonal. A subject is presented in a balanced discussion on the issue and an objective examination of the matter. The beginning is the introduction to the topic or some problem along with the thesis statement.

1.4 EFL Writing: Different Teaching Techniques

There many techniques those EFL teachers apply when they teach writing. These techniques vary according to the day to day teaching requirements. Some very common techniques to gather ideas or to generate thoughts on any topic are, e.g. brainstorming, listing, note taking, concept maps, lucid charts, tree structure, and flow charts etc.

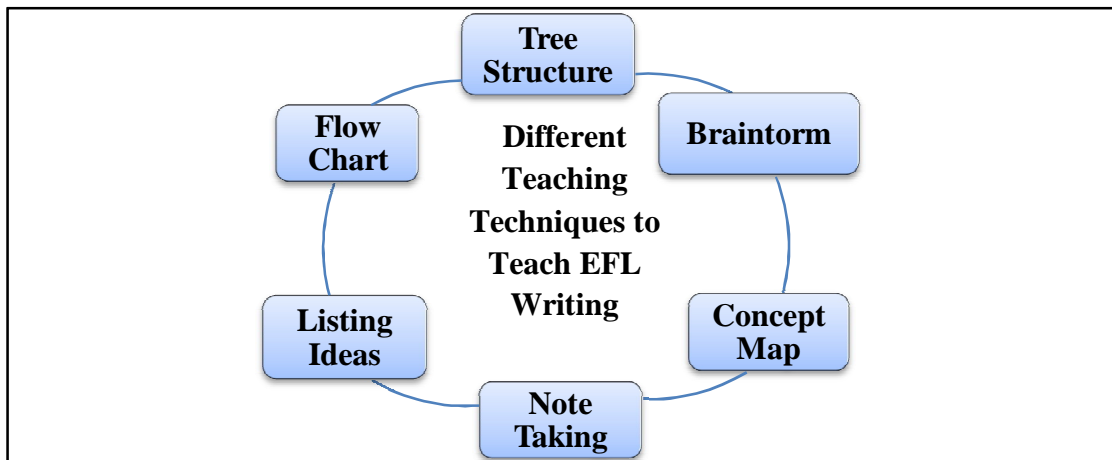


Fig. 1.4 Teaching Techniques
 Source: Developed by the Researcher

Each technique is applied with its own specific structure, flow and modification by the teachers and/or the learners when the adopted technique is used in a certain pattern to gather related thoughts either by working alone or in collaboration with peers in class. The concepts gathered with the application of the technique show linking lexical items which create relationships with other ideas (Novak, 1991).

1.5 Mind maps: Supportive for Writing Skill

Mind mapping is the easiest way to develop information in a human mind and take information from out of brain. It is a creative and an effective way that map our ideas (Buzan, 2002). Maps are easier to follow than the long tardy note taking or listing techniques where ideas are kept in a top down sequence and it becomes difficult to make connection of the last idea to the first in the list.

Mind maps can work as tool to facilitate the learners to plan ideas in the pre-writing process. Learners can be provided with examples to prepare a step wise pattern in hierarchy that would help them retain ideas till the whole of the essay is written. Mind-mapping techniques are good to be applied in the pre-writing stage to explore ideas and generate thoughts on the topic for writing. Mind-maps allow gathering concepts in relation to the main theme. The concepts gathered this way are coherent without the linear or inflexible structure of outlines, clustering or listing ideas. The use of mind map can present information using images, symbols, key words, codes and color to the level one wishes to do. This type of organization of ideas can capture the spatial, bodily-kinesthetic, and visual intelligences of some learners (Gardner, 1985, 1999). As the content resembles that's found on a topic outline, the structure of the mind map is nonlinear and lends itself to personalization by the student (Buzan, 1993).

1.6 Mind maps and Multiple Intelligence

Mind-maps help teachers not only to teach the students, but also to think, learn, and make meaningful connections between prior knowledge and new knowledge. The maps project ideas, as it is done during brainstorming, show a hierarchical structure and interconnect the major components with the minor details. Gardner identifies eight different types of intelligences (Gardner, 1985, 1999) and mind-mapping can tap these intelligences of larger number of learners. All level students can be provided with appropriate structures through Mind maps to help them to make sense, organize thoughts, and create connections. Mind maps work similar to human brain and include keywords which are easy to remember. Use of lines, arrows, color-coding, pictures, and symbols in Mind maps not only makes the process of writing interesting but also suits the learning profile of individual learner.

1.7 Mind maps and Constructivism

The undeniable fact is that each learner is "unique" in what s/he gets from a learning experience in his/her life. The theory of Constructivism states that the learner is a unique individual. The individual learner is exceptional with respect to his/her manner, prior knowledge, and experiences. According to this prior developed knowledge and experience or manner, the learner builds up new ideas, shapes, or constructs his or her knowledge and this development or construction is in regard to his or her own reality (Brooks & Brooks, 1993; Shapiro, 1994). Mind map can be supported by the theory of Human Constructivism. According to Novak (1993), the humans have greater capacity of making meaning and using language to construct meaning and the thing that really counts is how to empower human beings to optimize their phenomenal capacity to make meaning including their awareness and confidence in processes that are involved. This capacity for meaning making is referred to as human constructivism. Mind maps can hook prior knowledge through multiple presentations (visual, audio, numeric, wordy etc.) which can easily be incorporated while teaching writing processes (see Fig. 1.2), starting from the brainstorming on a topic till leading to the final draft. Hooking ideas through mind maps is supportive in the process of writing.

The constructivist philosophy helps to maintain the fact that learners must connect the new knowledge with the prior knowledge. The learning experiences must support that connection in a manner supportive of the learner's uniqueness. The traditional teaching methods directly counter to constructivist beliefs which basically rely on the outpouring of facts for students to remember. In fact, the constructivists explain that many times the learners do not remember the knowledge presented to them. The reason behind is that they do not have found the connections of the new knowledge with that of the prior or they have lost the connections that take the learning experience.

1.8 Mind-maps and Process of Writing

The process of EFL writing involves three stages:

- (a) Pre-writing process: in which the ideas are gathered and generated
- (b) Drafting: in which the writer composes structures, and reconstructs ideas

(c) Revision. (Leeds, 1996; Richards, 1992; Scholes and Comley, 1989)

Efforts done for the development of the writing skill and the sub-writing skills serve these three phases. Mind-mapping is used in the first phase which is the pre-writing phase, where the students are given an opportunity to generate, gather, and arrange related ideas and enhance their own learning (Scarcella & Oxford, 1992). Mind mapping is a technique which is used as a graphic organizer in which major categories related to the main theme radiate from the central idea, and sub-categories are to be presented as branches coming out of the larger branches.

According to Buzan (2000), a mind map is a visual tool that can be used to generate ideas, take notes, organize thinking, and develop concepts. Ideas can be generated with a strong connection to the central theme and in a hierarchical structure that they leave a lasting impact on the learners' mind and retention is enhanced. Mind mapping techniques are also supported by the theory of Human Constructivism (Novak, 1993). A human brain likes to work on the basis of association and it links every idea, memory or piece of information to hundreds of other thoughts and notions (Anokhin, 1973). Previous research explains that teachers can make a selection on how to use mind mapping in language classes as a pre-writing activity and also for the sake of developing learners' writing ability and their proficiency level. Thus, mind mapping can be used as software are available online, (e.g. Leyden, 2014; Think Buzan, 2013) or created manually by the teachers during their writing lessons to develop outlining process and writing proficiency as pre-writing activity. The use of lines, arrows, color-coding, pictures, and symbols not only makes the process of writing interesting but also suit the learning styles of each individual learner. Ideas can be generated with a strong connection to the central theme and in a hierarchical structure that they leave a lasting impact on the learners' mind and retention is enhanced.

The situation of Saudi learners derives even more concentrations beyond a simple embrace of an approach or a technique to teach English writing skill. Teaching writing techniques and approaches towards those techniques should suit the Saudi learners' needs and should be compatible with the Saudi context because their general social and contextual requirements are sensitively different. The techniques which are generally considered useful to teach any Indian or Japanese students may not appropriately suit the Saudi learners. According to the facts related to that EFL writing as a complex process and teaching EEL writing skill with some usual techniques are highly considerable.

2. Research Questions

- a. What are the different techniques frequently used by the EFL teachers to teach EFL writing skills?
- b. What application procedure of the Mind mapping techniques is appropriate for the Intermediate Saudi EL Learners?
- c. Does the use of appropriate Mind mapping techniques enhance English Writing ability of the Intermediate English Language learners at ELI, KAU?

3. Objectives

- a. To review the techniques frequently used in teaching English writing skill to the Saudi learners at the Intermediate level in ELI, KAU
- b. To examine the techniques used in teaching/learning English Writing skills to the Saudi learners at the Intermediate level
- c. To identify appropriate Mind mapping techniques to teach EFL writing to the Saudi learners
- d. To recommend appropriate mind mapping techniques with an application procedure to enhance the Saudi EFL learners' writing ability

4. Research Design

It was divided into two phases and the data was collected over a period of three months. The structure of two phases can be seen in the Fig. 1.5.

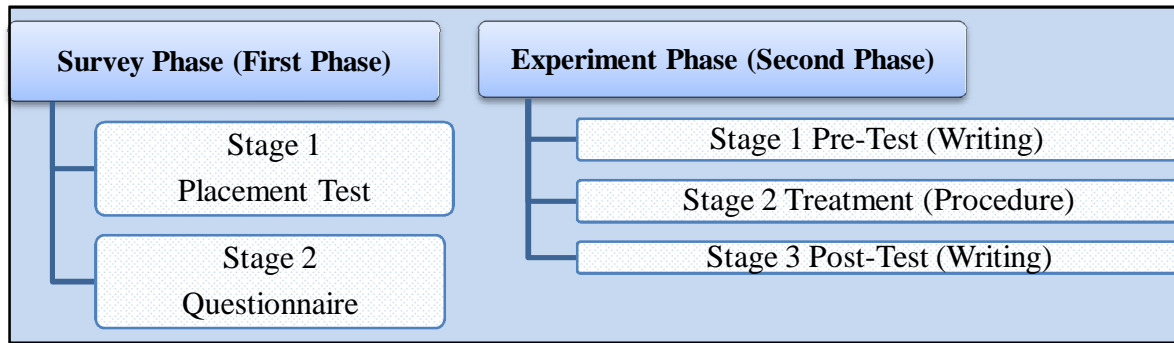


Fig. 1.5 Research Design

Source: Developed by the Researcher

4.1 Survey Phase (Stage One: Placement Test):

The Survey Phase contained two stages in which a placement test (UCLES 2001) and a questionnaire were conducted. Convenient sampling technique was used. Considering only the female students of the sample, two sections from the intermediate level were selected for the placement test. Each section contained 20 learners and they were randomly named as Controlled and Experimental Section before the placement test was conducted. The total number of the learners included in the overall sample was 40. The placement test was conducted in both the sections on the same day. The time frame was 60 minutes, (30x2 parts). Test was collected back and marked. It was used to analyze the learners' English proficiency level to further select the sample for the experimental phase. Only the first two parts (60 MCQs) were given. The extracted GPA through MSEXCEL was used to filter the doubts about the language deficiencies in the learners.

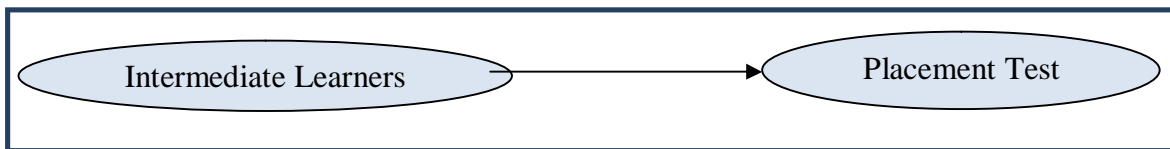


Fig. 1.6 Survey Phase: Stage 1- Placement Test

Source: Developed by the Researcher

4.1.1 Survey Phase (Stage Two: The Questionnaire):

Data was collected over a period of two weeks with the help of a questionnaire to identify the mostly used teaching techniques by the EL teachers. In the second stage, the questionnaire, based on 31 items, was distributed among the English language teachers at the English Language Institute, King Abdulaziz University. Five out of those listed techniques, which gained a high percentage (for strongly agree”), were selected to be further used to teach writing to the Controlled Section and the treatment started in the Experiment Phase.

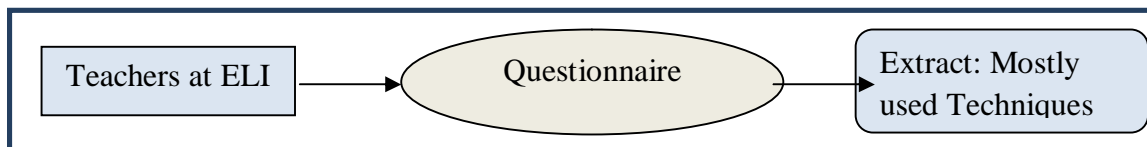


Fig. 1.7 Survey Phase: Stage 2 - Questionnaire

Developed by the Researcher

4.1.2 Population: English language teachers at ELI, KAU.

4.1.3 Sample

It comprised English language teachers at the ELI, King Abdulaziz University. Further, 20 teachers were randomly selected as the sample of the study.

4.1.4 Research Instrument

A Likert Scale questionnaire, divided into two parts was prepared by the researcher. First part was to investigate the problems related to teaching EFL writing and the second part was to find out about different teaching techniques used / adopted by EFL teachers while teaching English writing to the EFL learners. The rating scale was divided from 1-5: 1=Strongly Disagree, 2=Disagree, 3=neither Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree. The first part contained 17 items, the second part consisted 14 statements (items).

4.1.5 Validation of the Research Instrument

Case Processing Summary			Reliability Statistics	
	N	%		
Cases	Valid	20	100.0	Cronbach's AI .746
	Excluded ^a	0	.0	
	Total	20	100.0	
				N of Items 31

a. List wise deletion based on all variables in the procedure.

Table 1.1 Validation of the Questionnaire

The validity of questionnaire was checked by having four qualified experts in the field of research to give their opinion and judgment on the statements' clarity, appropriateness, and relevance. Finally, on per their advice and opinions, few items were modified.

4.1.6 Data Collection

The data at this stage was collected in two weeks during the five official working days per week. The questionnaire was distributed and collected by the researcher herself. The identities of the respondents were kept anonymous.

4.1.7 Data Analysis

Mean, Standard Deviation and Significance were taken out by using the SPSS software. Graphs were prepared on MS Excel for each statement used in the questionnaire.

4.2 Experiment Phase

Experiment Phase is shown in the Fig. 1.8(a) and Fig. 1.8(b). This phase had three stages. For both the Sections; "Controlled Section" and the "Experimental Section", a pre-test of writing was conducted before the start of the treatment during this phase. Controlled section was taught by implanting five mostly used techniques found out after analyzing the data result of the questionnaires in the Survey Phase, stage 2. The third stage started where the post-test was conducted. The Experimental Section received the researcher's proposed treatment in second stage. They were taught through the mind-mapping techniques that the researcher thought appropriate for them. Then the post-test was conducted.

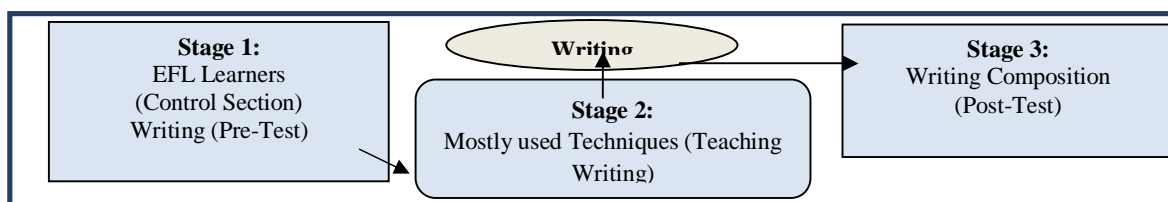


Fig. 1.8 (a) Experiment Phase: Controlled Section

Source: Developed by the Researcher

The treatment continued for both the sections for two months before the post-test was taken. The researcher tried generating result not being unnecessarily affected and also controlled the situation of effective variables hindering to determine the learners' writing abilities before and after the tests designed in the Experiment Phase of the study.

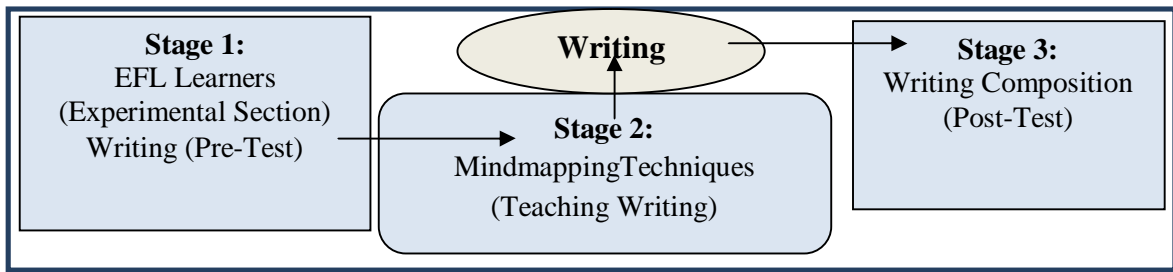


Fig. 1.8 (b) Experiment Phase: Experimental Section
Source: Developed by the Researcher

4.2.1 Treatment:

The treatment was for two months and the researcher delivered lecture on three topics (Fig.1.9) in both the sections. The topics were taken from the English curriculum taught at the ELI, for the academic year 2014-2015. In the controlled section, all three topics were taught through usual teaching techniques. In the Experimental section, Mind mapping techniques were designed for them. The researcher constructed Mind maps on topics following a hierarchical structure of ordering the sequence of the introductory paragraph with a thesis statement, body paragraphs with topic sentences and supporting details in favor of and against the topic, and concluding the whole text with some suggestion, opinion, or recommendations. The researcher used the maps in the pre-writing process. The researcher organized the material for the experimental group and prepared Mind maps to be displayed to the students.

Treatment Duration (for both the sections)		
Weeks	Week's Topic	Minutes per week
1	Introduction to Discursive Writing	30
2-3	Using Mobile Phones	90
4-5	Online Degree Program	90
6-7	Shopping	90

Fig. 1.9 Topics for the Treatment
Source: Developed by the Researcher

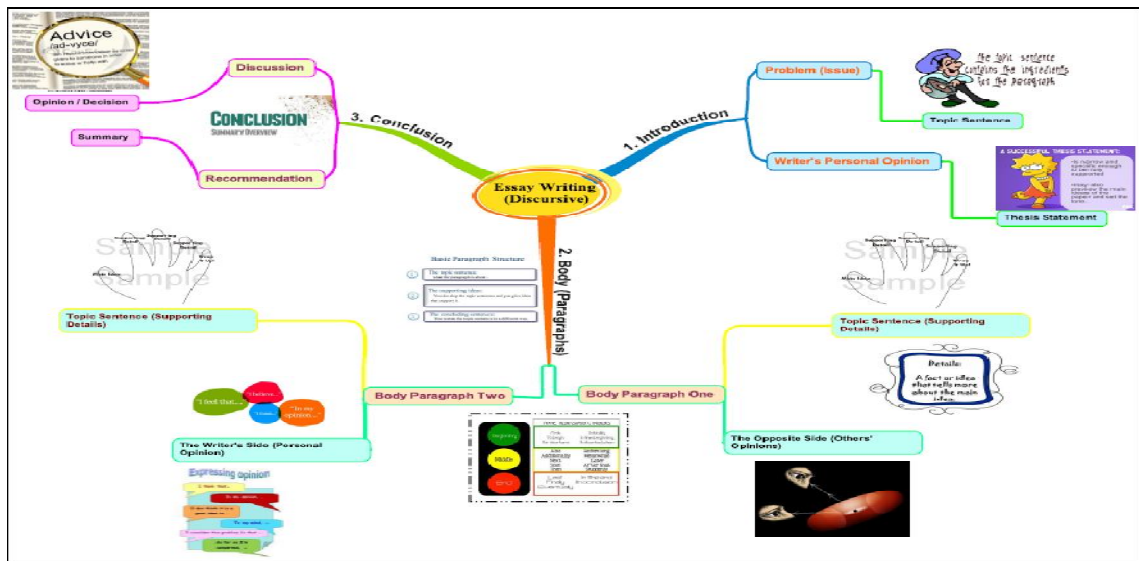


Fig. 1.10 Discursive Writing-Mindmap
Source: Developed by the Researcher

4.2.2 Population

The population of the study, phase 2, was the female learners of the English Language Institute at King Abdulaziz University (KAU), Jeddah, Saudi Arabia.

4.2.3 Sample

Two randomly selected sections of the survey phase, stage one, were the sample of the Experimental phase also. With 20 learners in each section, they were already named as "Controlled" and the "Experimental" sections before the placement test in the Phase one, stage one. These female learners were altogether 40 in numbers.

4.2.4 Research Tool

- I. Pre-Test (for both the sections)
- II. Post-Test (for both the sections)

First test was called as pre-test and it was taken before the treatment was given. The second test was named as post-test, which was conducted after the treatment stage.

4.2.5 Selection of the Research Tool

The tests were adopted from the past papers bank of the ELI's Summative Writing Assessments. These topics are already carefully prepared by the efficient and experienced members of the Curriculum Unit at the ELI department of the King Abdulaziz University. These topics were previously used in last academic year's exams. The rating scale that was used to mark these pre and post-tests was also the part of the Summative Assessment adopted from the bank of the past tests.

5. Data Analysis: Techniques And Software

SPSS Statistics, version 17.0: Mean analysis, Frequency analysis and Validation analysis of the questionnaire

Microsoft Excel 2013: Average calculations and Graphical Presentation

5.1 Data Analysis

The pre and post writing tests' analysis of this research focused on three areas:

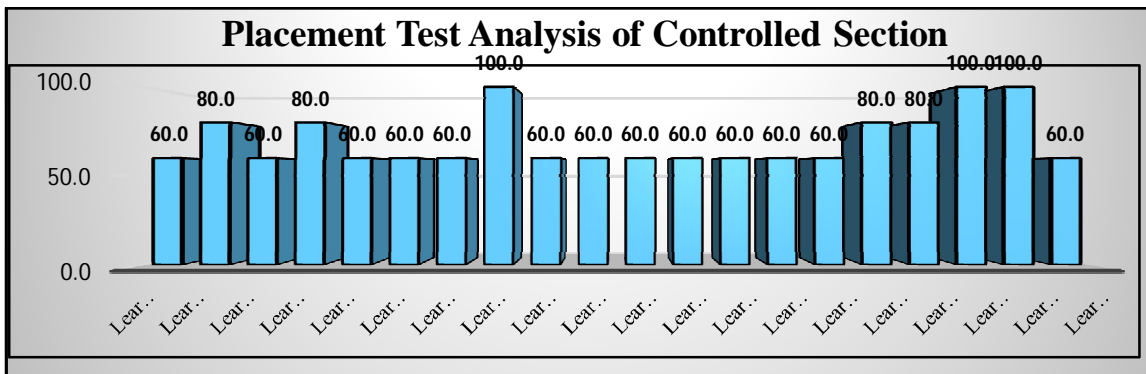
- ✓ Paragraph, Structure and Length
- ✓ Content
- ✓ Cohesion and Coherence

The pre and post tests were analyzed by using the rating scale provided by the curriculum unit at the institute. While calculating the final grades according to the rating scale, the researcher focused only the three categories: (a) Paragraph, Structure and Length; (b) Content; and (c) Cohesion and Coherence. The rating scale contained the performance scale for the division of levels accordingly: Above Level =20, Almost at Level =16, At Level =12, Below Level =8, Far Below Level=4, Zero (Illegible) =0.

Microsoft Excel 2013 and SPSS were used to analyze the data. Percentage was taken out and the analysis through the comparison of the pre and post-writing tests was done. Percentage was taken out and comparison charts were also prepared. The data collection procedure was carried out in the period of approximately three months. The data was evaluated by calculating the frequency counts, percentages, mean scores and standard deviation of the teachers' response to infer the data findings. The overall analysis for the 31 items is portrayed in the tables below. The graphs also represent the analysis of the pre-test and post-test of the controlled and experimental section.

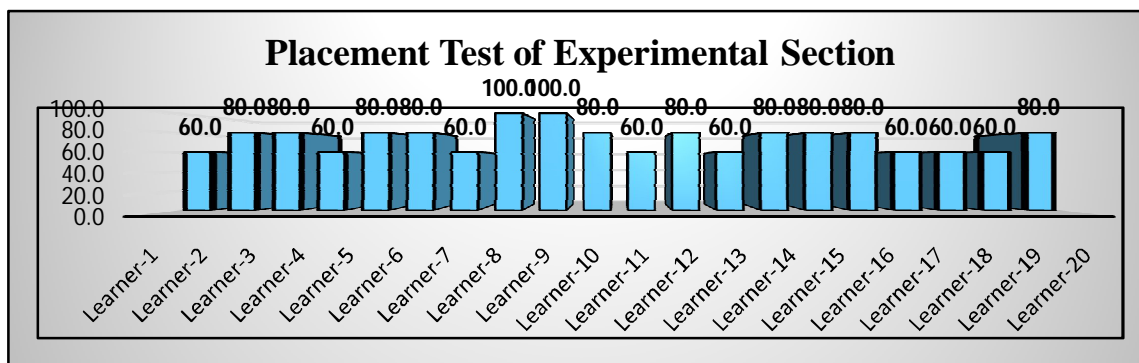
6. Interpretation Of The Results: Placement Test

Graph 6.1: Placement Test Analysis (Controlled Section)



The graph 6.1 represents the placement test percentage scored by the learners. There were 20 learner’s in the controlled section who attempted the placement test and the percentage on all the learners’ individual basic score gained out of 60.0 has been taken out by using the average formula on the Microsoft Excel 2013. Three out of 20 learners scored 100.0%, while 4 learners gained 80.0% and 13 students achieved 60.0% in the test. The overall percentage of all the 20 learners in the placement test was 70.0%.

Graph 6.2: Placement Test Analysis (Experimental Section)



Graph 6.3 Data Analysis: Teaching EFL Writing Skills

The graph 6.2 represents the placement test percentage scored by the learners of the experimental section. There were 20 learner’s in the section who attempted the placement test and the percentage on all the learners’ individual basic score gained out of 60.0 has been taken out by using the average formula on the Microsoft Excel 2013. Two out of 20 learners scored 100.0%, while 10 learners gained 80.0% and 8 students achieved 60.0% in the test. The overall percentage of all the 20 learners in the placement test was 74.0%.

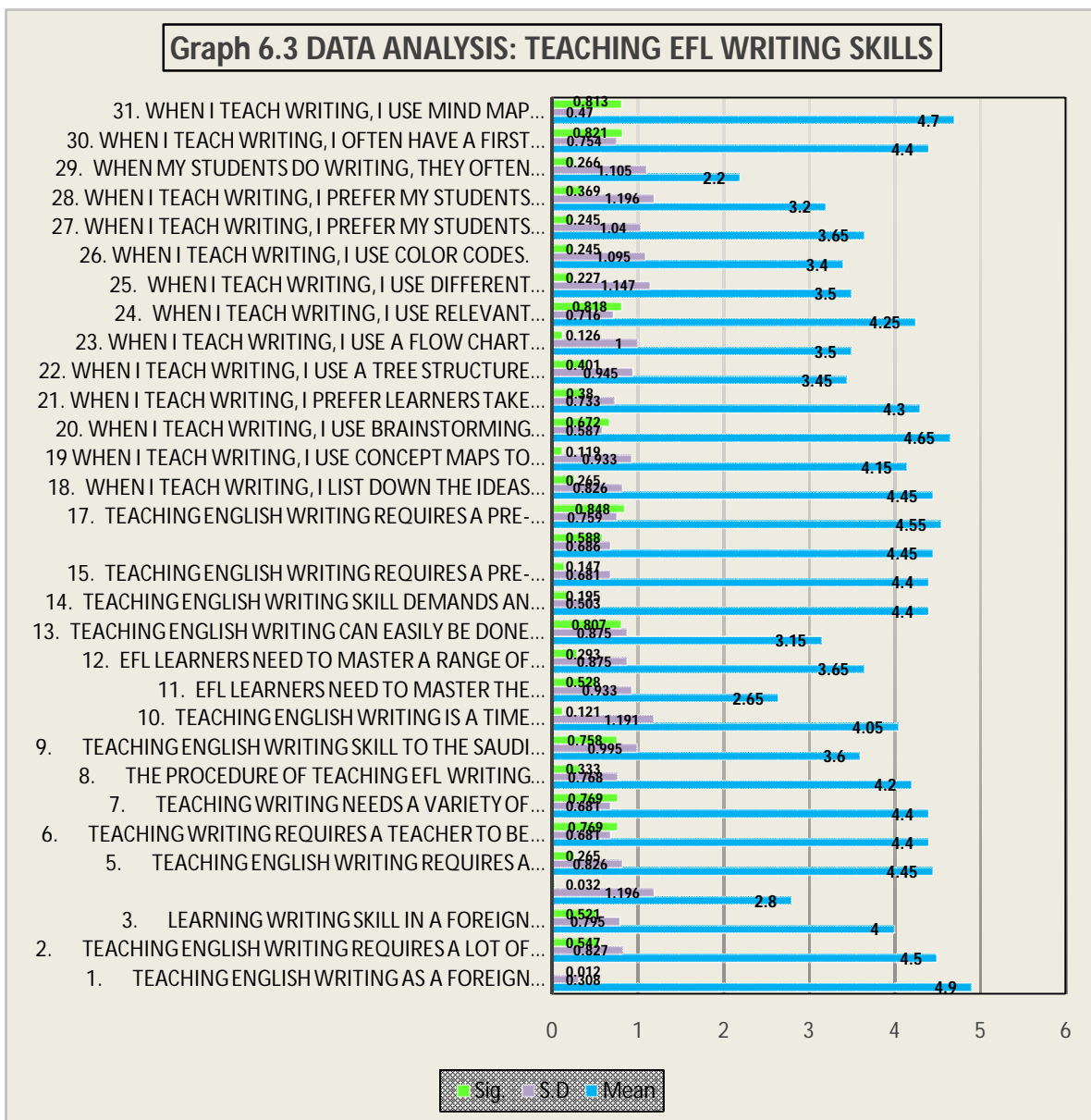
6.1 Interpretation of the Results: The Questionnaire

The graph 6.3 represents the collected Meta data obtained through the questionnaire used to probe into the problems related to teaching EFL writing and collect responses for the mostly used teaching techniques. According to the data extracted the mostly used techniques selected were listing, brainstorming, concept mapping and note taking. The data in the graph shows that (35.0%+55.0 %=) 90.0% respondents are agreed with the statement no. 16 that teaching English writing requires a pre-writing-ideas generating activity for the EFL learners; while 10.0% respondents are found neutral. The mean score of the statement is 4.45 which display a strong inclination towards the agreement. Its *p*-value is insignificant (.588), and is more than 0.05. The standard deviation of the statement is .686.85.0percentage respondents agreed with the statement no. 17 that teaching English writing requires a pre-writing-vocabulary bank for the EFL learners while 15.0% respondents neutrally responded.

The mean score of the statement is 4.55 which display a strong inclination towards the agreement. Its *p*-value is insignificant (.848), and is more than 0.05. The standard deviation of the statement is .759. The respondents 90.0% agreed with the statement no. 18, "When I teach writing, I list down the ideas gathered on the topic" while 5.0% respondents disagreed with the statement and 5.0% are found neutral. The mean score of the statement is 4.45 which display a strong inclination towards the agreement. Its *p*-value is insignificant (.265), and is more than 0.05. The standard deviation of the statement is .826.

(45.0%+40.0 % =) 85.0% respondents agreed with the statement no. 19, "When I teach writing, I use concept maps to gather students' ideas on the topic", while 10.0% respondents disagreed with the statement and 5.0% are neutral. The mean score of the statement is 4.15 which displays a strong inclination towards the agreement. Its *p*-value is insignificant (.119), and is more than 0.05. The standard deviation of the statement is .933. The graph also represents that (25.0%+70.0 % =) 95.0% respondents agreed with the statement no. 20, "When I teach writing, I use brainstorming of the ideas on the topic." The neutral response is 5.0%. The mean score of the statement is 4.65 which reveal a strong inclination towards the agreement. Its *p*-value is insignificant (.672) and more than 0.05 and the standard deviation of the statement is .587.

Graph 6.3 Data Analysis: Teaching EFL Writing Skills



Data shows that (40.0%+45.0 %=) 85.0% respondents agreed with the statement no. 21 that teachers prefer learners to take down notes on the ideas gathered on the topic. The neutral response percentage (15.0%) has also been recorded. The mean score of the statement is 4.30 which reveals strong inclination towards the agreement. Its p -value is insignificant (.380) and more than 0.05 and the standard deviation of the statement is .733.(25.0%+20.0 %=) 45.0% respondents are agreed with the statement no. 26, "When I teach writing, I use color codes", while 25.0% respondents are found "disagreed" with the statement and 30.0% respondents remained neutral. The mean score of the statement is 3.40 which defines an inclination towards the agreement. Its p -value is insignificant (.245), and is more than 0.05. The standard deviation of the statement is 1.095.(45.0%+20.0% =) 65.0% respondents agreed with the statement no. 27, 'when I teach writing, I prefer my students to work in small groups' while 20.0% respondents disagreed with the statement and 15.0% remained neutral. The mean score of the statement is 3.65 which reveals strong inclination towards the agreement.

Its p -value is insignificant (.245) and more than 0.05 and the standard deviation of the statement is 1.040. The data in graph 4.3 shows that (45.0%+50.0 %=) 95.0% respondents agreed with the statement no. 30, "When I teach writing, I often have a first draft and give it back to my students to edit it for a final one". 5.0% are neutral. The mean score 4.40 exhibits a strong inclination towards the agreement. Its p -value is insignificant (.821), and is more than 0.05. The standard deviation of the statement is .754.(30.0%+70.0% =) 100.0% respondents agreed with the statement no. 31, "When I teach writing, I use mind map structure". The mean score 4.70 displays a high level of inclination. Std. Deviation of the statement is .470.

Table 1.2 Controlled Section Pre-Test Analysis

Controlled Section Pre-Test Scale	Far Below Level		Below Level		At Level		Almost Above level		Above Level		Mean
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
Paragraph Structure & Length	0	0.0	11	55.0	8	40.0	1	5.0	0	0.0	10.00
Content	0	0.0	10	50.0	4	20.0	6	30.0	0	0.0	11.20
Cohesion & Coherence	0	0.0	7	35.0	7	35.0	6	30.0	0	0.0	11.80

The table 1.2 describes the analysis of the Controlled Section pre-test result. In the category of the Paragraph Structure and Length, 11(55.0%) students were below the level, while 8(40.0%) were at level and 1(5.0%) was almost above level and the Mean is 10.00. In the Content category, 10(50.0%) students were below level, 4(20.0%) were at level, and 6(30.0%) were almost above the level and the Mean is 11.20. According to the Cohesion and Coherence, 7(35.0%) students were below level, 7(35.0%) were at the level, and 6(30.0%) almost above level and the Mean is 11.80.

Statistics				
Pre-Test		Paragraph Structure & Length	Content	Cohesion and Coherence
N	Valid	20	20	20
	Missing	0	0	0
	Mean	10.00	11.20	11.80

The table 1.3 describes the analysis of the Controlled Section post-test result based on the three performance categories: Paragraph Structure & Length, Content, and Cohesion & Coherence. The students scored different grades according to the five performance levels. In the category of the Paragraph Structure and Length, 6 (30.0%) students were below the level, while 9(45.0%) were at level, 5(25.0%) were almost above level performer and the Mean is 11.80. In the Content category, 5 (25.0%) students were below level, 9(45.0%) were at level, and 6(30.0%) were almost above the level.

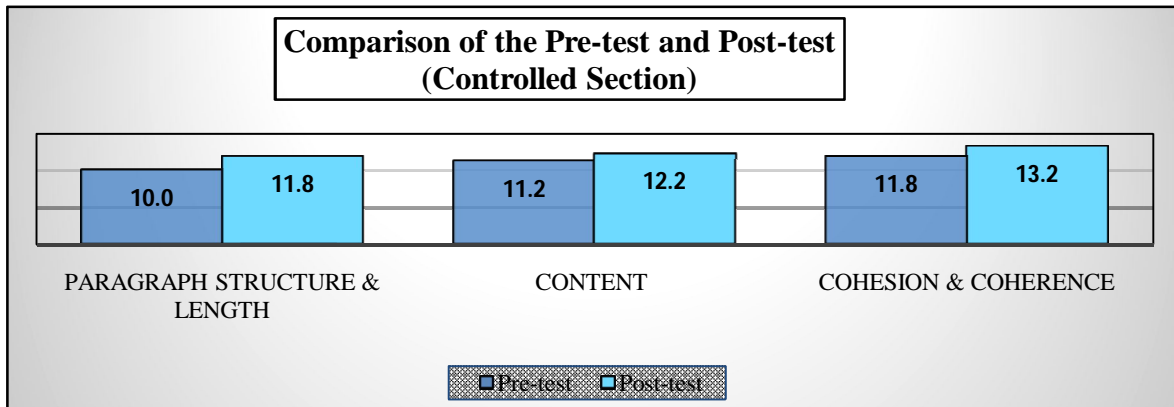
Table 1.3 Controlled Section Post-Test Analysis

Controlled Section Post-Test Scale	Far Below Level		Below Level		At Level		Almost Above level		Above Level		Mean
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
Paragraph Structure & Length	0	0.0	6	30.0	9	45.0	5	25.0	0	0.0	11.80
Content	0	0.0	5	25.0	9	45.0	6	30.0	0	0.0	12.20
Cohesion & Coherence	0	0.0	3	15.0	8	40.0	9	45.0	0	0.0	13.20

The Mean is 12.20. According to the Cohesion and Coherence, 7(35.0%) students were below level, 3(15.0%) were below level, and 8(40.0%) at level, and 9(45.0%) were almost above level performer and the Mean is 13.20

Statistics				
		Paragraph Structure & Length	Content	Cohesion and Coherence
N	Valid	20	20	20
	Missing	0	0	0
	Mean	11.80	12.20	13.20

Graph 6.4: Comparison of the Pre-Test and Post-Test: Controlled Section



Graph 6.4 represents the comparison between the pre-test and post-test of the Controlled Section which was taught through the usual teaching techniques. The graph clearly indicates that the collective grades in the Paragraph, Structure, and Length are 10.0% in the pre-test before they were taught the writing skills through the traditional (usual) teaching techniques, while it increased to 11.8% after the treatment was done. The content bar shows that it was 11.2% in the pre-test and it raised to 12.2% in the post-test. The students overall grades for Cohesion and Coherence were 11.8% in the pre-test and 13.2% in the post-test. Overall, it can be said that there was a little improvement in the grades as shown in the graph for the comparison of the pre-test and post-test results.

Table 1.4: Experimental Section Pre-Test Analysis

Experimental Section Pre-Test Scale	Far Below Level		Below Level		At Level		Almost above level		Above Level		Mean
	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	<i>f</i>	%	
Paragraph Structure & Length	1	5.0	7	35.0	11	55.0	1	5.0	0	0.0	10.40
Content	0	0.0	9	45.0	11	55.0	0	0.0	0	0.0	10.20
Cohesion & Coherence	1	5.0	13	65.0	6	30.0	0	0.0	0	0.0	9.00

The table 1.4 describes the analysis of the Experimental Section pre-test result based on the three performance categories: Paragraph Structure & Length, Content, and Cohesion & Coherence. The students scored different grades according to the five performance levels on the rating scale.

In the category of the Paragraph Structure and Length, 1(5.0%) was far below level, 7(35.0%) were below level, 11(55.0%) students were at level, while 8(40.0%) were at level and 1(5.0%) was almost above level and the Mean is 10.40. In the Content category, nine (45.0%) students were below level, and 11(55.0%) were at level; and the Mean was 10.20. According to the Cohesion and Coherence, 1(5.0%) was far below level, 13(65.0%) students were below level, 6(30.0%) were at the level, and the Mean was 9.00.

Statistics				
		Paragraph Structure & Length	Content	Cohesion and Coherence
N	Valid	20	20	20
	Missing	0	0	0
	Mean	10.40	10.20	9.00

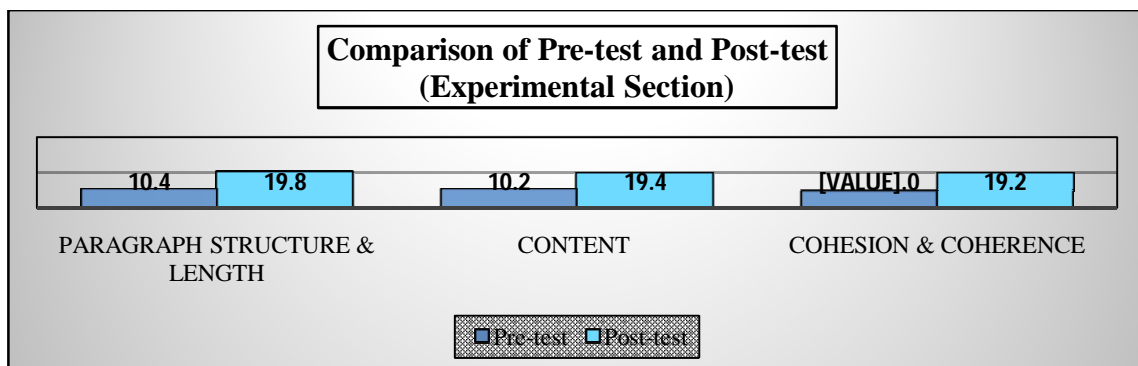
Table 1.5: Experimental Section Post-Test Analysis

Experimental Section Post-Test Scale	Far Below		Below Level		At Level		Almost above level		Above Level		Mean
	f	%	f	%	f	%	f	%	f	%	
Paragraph Structure & Length	-	0.0	-	0.0	0	0.0	1	5.0	19	95.0	19.80
Content	-	0.0	-	0.0	0	0.0	3	15.0	17	85.0	19.40
Cohesion & Coherence	-	0.0	-	0.0	0	0.0	4	20.0	16	80.0	19.20

The table 1.5 describes the analysis of the Experimental Section post-test result based on the three performance categories: Paragraph Structure & Length, Content, and Cohesion & Coherence. The students scored different grades according to the five performance levels. In the category of the Paragraph Structure and Length, 1(5.0%) student was “almost above level” performer, 19(95.0%) showed “above level” performance and the Mean is 19.80. In the Content category, 3(15.0%) students were almost above level, and 17(85.0%) performed above the level and the Mean was 19.40. In the Cohesion and Coherence, 4(20.0%) students were almost above level, 16(80.0%) were above level, and 8(40.0%) at level, and the Mean was 19.20.

Statistics				
		Paragraph Structure & Length	Content	Cohesion and Coherence
N	Valid	20	20	20
	Missing	0	0	0
	Mean	19.80	19.40	19.20

Graph 6.5: Comparison of the Pre-Test and Post-Test: Experimental Section

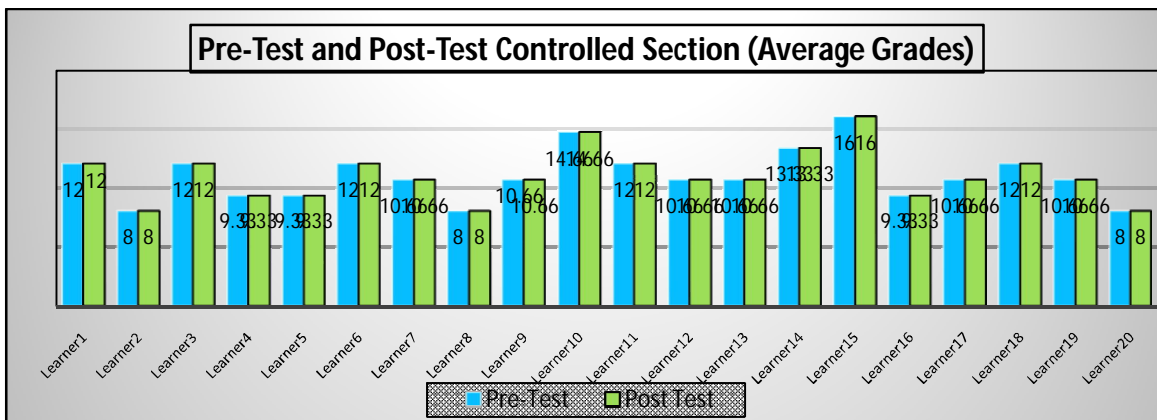


The graph 6.5 represents the comparison between the pre-test and post-test of the Experimental Section taught through the Mind mapping techniques. It clearly indicates that the collective grades in the Paragraph, Structure, and Length are 10.4% in the pre-test before they were taught the writing skills through the Mind mapping techniques, while it increased to 19.8% after the treatment was done. The content area shows that it was 10.2% in the pre-test and it raised to 19.4% in the post-test after the treatment phase.

The students' overall grades for Cohesion and Coherence were 9.0% in the pre-test and 19.2% in the post-test. Overall, it can be said that there was a weighty improvement in the overall grade percentage as shown in the graph for the comparison of the pre-test and post-test results.

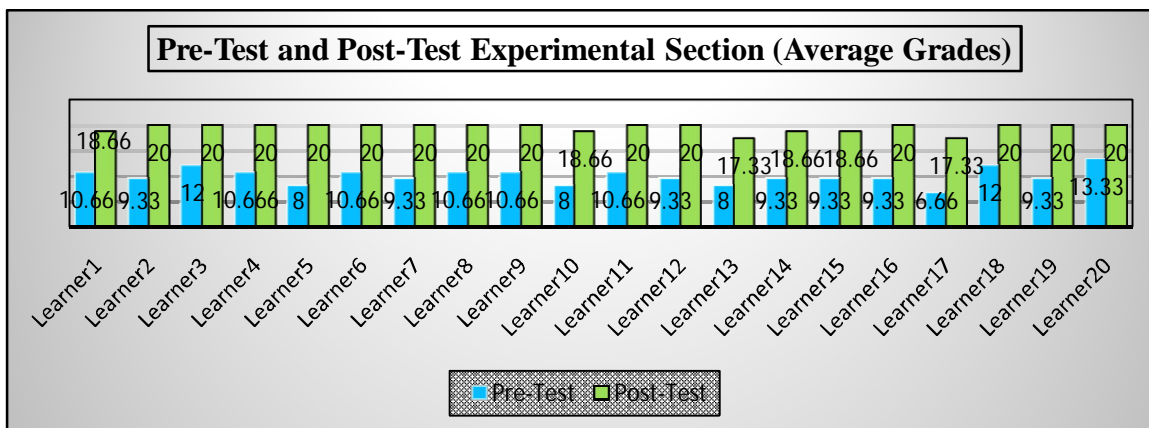
Graph 6.6: Pre-Test and Post-Test Average Grades of Learners: Controlled Section

Graph 6.6 represents the comparison of the pre-test and post-test results of the controlled section learners who were taught through the usual techniques during the treatment stage.



The graph bars give a view of the performance of the 20 learners individually. There was no significant difference found when the grades of pre-test and post-test were compared. The learners had a minor improvement in their overall grades in the post-test.

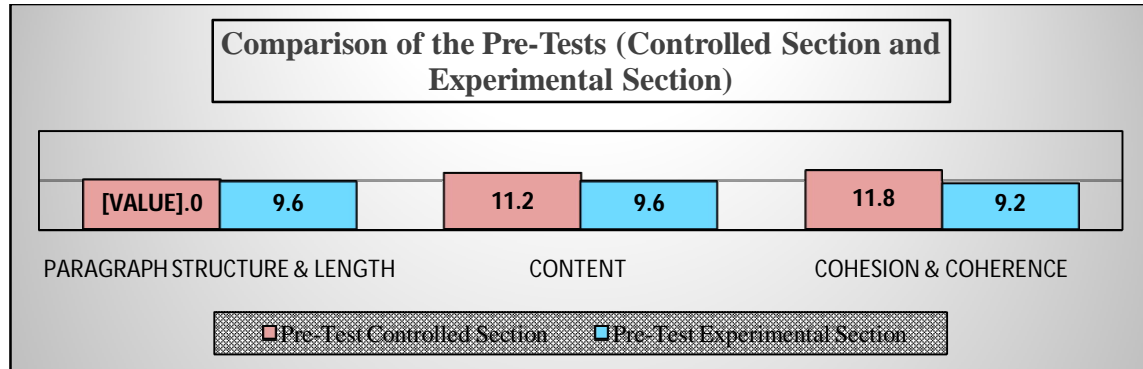
Graph 6.7: Pre-Test and Post-Test Average Grades of Learners: Experimental Section



Graph 6.7 represents the comparison of the pre-test and post-test results of the experimental section learners who were taught through Mind mapping techniques during the treatment phase. The graph bars give a view of the performance of the 20 learners individually. There was a significant difference found when the grades of the pre-test and post-test were compared. The learners showed great improvement in their overall grades in the post-test.

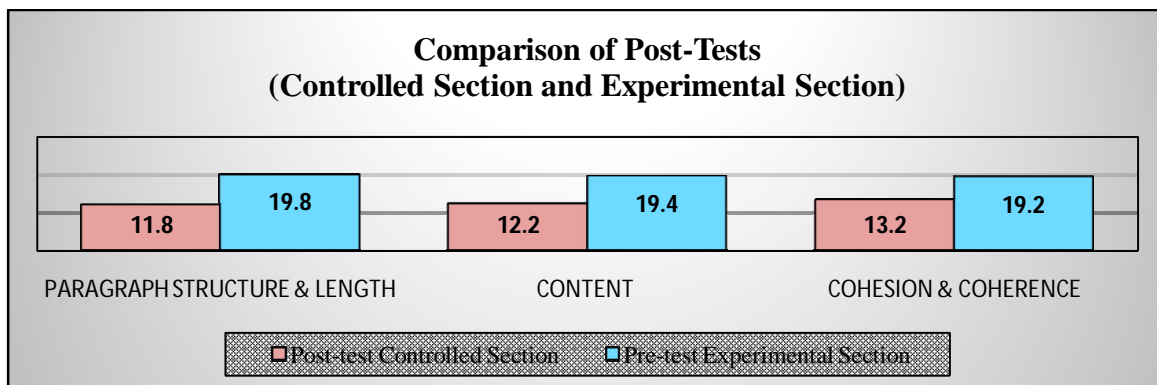
Graph 6.8 Comparison of the Pre-Tests: Controlled and Experimental Sections

The graph 6.8 represents the comparison of pre-tests taken in both the sections (Controlled and Experimental) and the average of the three areas focused while checking.



The overall percentage of the learners of the control section in "Paragraph Structure and Length" is 10.0% and the experimental section learners gained 9.6%, whereas the Content area shows 11.2% for the controlled section and 9.6% for the experimental section. The control section learners got 11.8% in "Cohesion and Coherence" and the experimental learners got 9.2%.

Graph 6.9: Comparison of the Post-Tests: Controlled and Experimental Sections



The graph 6.9 represents the comparison of post-tests taken in both the sections and the average of the three areas focused while checking. The overall percentage of the control section learners in "Paragraph Structure and Length" was 11.8% and the experimental section learners gained 19.8%, whereas the Content area shows 12.2% for the controlled section and 19.4% for the experimental section. The control section learners got 13.2% in "Cohesion and Coherence" and the experimental learners got 19.2%. There is a great difference in the overall result of the experimental section learners from that of the controlled section learners.

7. Discussion, Conclusions And Recommendations

7.1 Discussion

Present study aimed at identifying the application procedure of the appropriate Mind mapping techniques to teach writing skill to the Saudi intermediate learners to enhance their writing ability. Initially, to understand the different techniques usually used to teach the EFL writing, some questions were posed in the study such as (a) What are the different techniques frequently used by the EFL teachers to teach EFL writing skills? (b) What application procedure of the Mind mapping techniques is appropriate for the Intermediate Saudi EL Learners? (c) Does the use of appropriate Mind mapping techniques enhance English Writing ability of the Intermediate English Language learners at ELI, KAU? The present research addressed all the answers in detail.

The major objective of the study was to examine the techniques used in teaching the EFL writing skill and apply Mind mapping techniques to enhance the EFL learners' writing skill. All the objectives after keeping the major focus of the study were set as: to review the usual techniques used in teaching English writing skill to the Saudi learners at the Intermediate level in ELI, KAU; to examine the techniques used in teaching/learning English Writing skills to the Saudi learners at the Intermediate level; to identify appropriate Mind mapping techniques to teach EFL to the Saudi learners; and to recommend appropriate mind mapping techniques with an application procedure to enhance the Saudi EFL learners' writing ability. The literature review of the present study suggested that there are many different teaching writing techniques such as, brainstorming, listing ideas, tree structure, concept maps, note taking, and flow charts etc. which are commonly used during the process of the EFL writing skill. Efforts have continuously been made to teach EFL learners the writing skill as approaches to teach writing skills vary in the different academic and social contexts due to the different indigenous specific circumstances. As far as the Saudi learners are concerned, not only their learning psychology but their contextual and social backgrounds are different which require beyond the simple embrace of one technique.

Keeping in view all techniques that may or may not suit the Saudi learners and that the EFL writing is a complex task (Kroll, 1990), the researcher applied the Mind mapping technique in real classroom situation. As also mentioned in the literature review, the mind maps are a creative and effective way to map our ideas (Buzan, 2006) and the organization of ideas can capture the spatial, bodily-kinesthetic, and visual intelligences of learners (Gardner, 1985, 1999). The researcher agreed to the fact that there are many techniques applied by multiple teachers around the world. Some Mind maps have also been applied for the enhancement of the areas related to vocabulary, grammar, and mechanics; and the Mind mapping techniques (Buzan, 2000 and Howitt, 2009) have proved for the EFL learners to be successful. The researcher's focal point of using the Mind maps was specifically for the enhancement and development of the areas of content, cohesion, and coherence along with the paragraphing structure and length in writing. The researcher had thought to apply the Mind mapping techniques during the treatment phase in the Pre-Writing stage along with the color codes, pictures, key words, some clues, and in a proper hierarchal paragraphing structure of the writing (discursive) to organize the entire main and sub ideas along with relevant supporting details on the topic. This application of the Mind mapping proved successful when the results were evaluated. When the learners (experimental section) attempted the post-test after the treatment, a significant difference in the mean was found after the results of the pre-test and post-test were compared. It became evident through the improvement in the results of the learners that the application of the Mind mapping techniques in the Pre-Writing phase enhanced the intermediate Saudi learners' writing in the areas under focus by the researcher.

The learners' pre-tests had already shown overall low means in the different areas of writing and exposed that they needed different techniques with an appropriate application process of writing. Regarding all the learners' prior ability in the paragraph, structure, and length, the pre-test showed that the learners were unable to meet the desired length of the text. As for writing content proficiency, the learners' mean was low. They wrote poor introduction and their essay development wasn't clear. The paragraphs that they produced were not well developed. As all the learners' writings lacked coherence and cohesion, it became clear that the prior learning through different techniques were not sufficiently had developed in them the writing skill and were not helpful for them to perform well in the post-test stage. The results of the post-test showed significant improvement in the learners who were placed in Experimental group. Their level of performance in the focused areas in writing exalted with significant improvement which benefited the learners in achieving excellent grades in the post-test. Thus, it became clear that the application of appropriate Mind mapping techniques enhanced the English writing ability of the Intermediate Saudi learners.

The study also concluded that when Mind maps are applied in the pre-writing stage of the writing process, they help the learners to not only organize their ideas in a hierarchal structure but also make them enable to produce linked and better connected concepts. The associations of the major and minor ideas with the central theme to make an overall coherent structure of their writing are obvious in writings. The hierarchal structure kept the learners on the track leading to the development of thoughts and supporting details. On the other side, when the controlled section learners attempted the post-test, the results showed that there was no significant difference in the scores of their pre-test and the post-test and also that the learners had not gained the skill to the level of performance that they could generate a coherent structure of their writings.

The learners were taught through the usual techniques and their level of performance in the areas focused by the researcher remained almost the same with a very little improvement in the whole text. Thus, the learners (experimental) achieved a significantly different result with the help of the structured techniques applied to teach them the skill. It became evident that the pre-writing phase can rationally be used to enhance the intermediate Saudi learners' writing ability with the help of a suitable technique.

7.2 Conclusions

This study aimed at identifying appropriate Mind mapping techniques for the enhancement of the Saudi intermediate learners' writing skill. Using the survey method in the first phase of the study; the self-developed questionnaire on different problems in EFL teaching/learning writing skill and teaching writing through usual techniques, the researcher concluded the phase by extracting some of the usual techniques to further use in the experimental phase of the study.

A placement test was taken to determine the language proficiency level of the intermediate learners to be the reliable sample of the study. The study progressed through the experimental phase, where the sample learners of two different sections, already named as controlled and experimental, had a pre-test of writing and then a treatment phase according to the division of the flow of the stages in the second phase. The treatment phase was followed by a post-test where the learners attempted a post-test of writing. The results were analyzed and gave a clear picture of the learners' performance before and after the treatment phase. The comparison of the pre-test and post-test results of both the sections showed that there was a significant difference in the grades of the learners who were taught through the Mind mapping techniques from those learners (controlled section) who were taught writing through the application of some usual techniques.

It became apparent that the Mind mapping techniques enhanced the writing abilities of the learners of the experimental group more than the learners who were taught through the usual teaching techniques. The analysis of the pre-test and post-test results showed a higher degree of improvement in the learners' use of cohesive devices, sequential patterns, connoted ideas which ascertained that the Mind mapping techniques, if applied in the pre-writing process of teaching writing, are effective in producing significant outcomes. The result of the learners taught through some usual techniques also confirmed the fact that the traditional techniques or methods applied to teach writing to the EFL learner may not give fruitful benefits to the learners or the teachers. The understanding of the whole process, thus, a waste of time and the energies on the part of both; the teachers and the learners will suffer a serious death by a red pen (Furneaux, 1999).

7.3 Recommendations

1. It is necessary that the teachers should give equal emphasis and attention to teaching the learner the writing process as they give to teaching grammar and vocabulary.
2. The teachers need to realize that writing helps learners to reinforce their knowledge of grammar and vocabulary, and also develop other language skills; as language, skills are integrative. Thus, writing should be adopted as a culture.
3. It is recommended that there should be as much use of the different techniques as an alternative idea and modification of those techniques to maximum benefit the learners according to their learning preferences.
4. The EFL teachers should use Mind maps in the pre-writing phase during the teaching-writing process. Teachers should make their learners use mind maps independently to construct their own ideas on different topics so that they realize the power of this tool.
5. The Ministry of Education or other responsible bodies need to train teachers, especially in the implementation of the process approach towards teaching EFL writing.
6. Future research may be undertaken on identification of the different application procedure of Mind mapping techniques in different contextual environment.
7. Future research may be commenced in the direction of the further identification of the usefulness of the Mind mapping techniques to enhance the other skills of language.

8. Future research may be undertaken for the identification of the usefulness of the Mind mapping techniques to enhance the EFL/ESL writing skills of the learners in different contextual background.

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