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Methodology Article

Luminosity of Mind Mapping in Teaching Writing

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Abstract: The study sought to scrutinize the impact of mind mapping teaching technique on the Sudanese tertiary EFL learners' writing performance. It aimed to diagnose the incompetence of traditional techniques used in that teaching to make well-use of identifying an appropriate teaching technique along with an application procedure to rectify such students' traditional writing outcomes. The investigation adopted the descriptive analytical method to raise data. The sample included thirty-college learners for empirical treatment and fifty eight English language instructors at universities and institutes. The study was divided into two phases; a survey phase and an experimental one. The survey phase experienced the learners' pretest, observation and interview as a preliminary technique for collecting data. The second phase experienced the posttest and the questionnaire which was distributed to EFL university lecturers beside some English native instructors. The statistical analysis for data was carried out by using Statistical Package for the Social Sciences (SPSS) beside a T-test to analyze the variables of pre & posttest. The findings have unanimously proved that the hierarchical structure of the mind mapping can highly inspire the learners' talent to better recall, generate and organize information needed. On the base of findings, the researcher hopefully recommends writing instructors exclusively to engage students use brainstorming as a useful prewriting stage so as to quickly help them design an inclusive mind mapping through which they can properly write a model essay that required.

Keywords: Mind Mapping, Active Learning, Brainstorming, Transfer of Learning

1. Introduction

The importance of writing skill manifests clearly in the holy Qur'an when the sacred verse links the acquisition of learning with the knowledge of writing: As illustrated in the following verse (Taught the use of the pen) - (Al-Alag Surah). From this holy verse, it is the scholarly consensus that the students' need for writing skill in order to learn, is just like their desire for water in order to live. Isn't it always easier to remember a household task or a website to visit later if we write it down somewhere? So, these papers aim to address teaching writing composition and how could it be more beneficial if it is delivered by Mind Mapping as a teaching technique. Undoubtedly, writing skills are complicated and to some extent difficult to teach, require mastery for conceptual and judgmental elements [1]. Students have to know some writing conventions as punctuations, paragraph, construction etc. Because it has become increasingly popular to use visualized tools in teaching, the mind mapping strategy is the most relevant teaching technique in writing to achieve a greater degree of utilization of mental abilities, helps students to associate ideas, think creatively, and make connections that might not otherwise make: The Mind Map book by Buzan addressed the question: How to use radiant thinking to maximize your brain's untapped potential? [2].

2. Background of the Study

The evident increase in recent on-going international learning competitions make the development of communicative competence represent the main objective of teaching English in most nonnative English countries. The mastery of science and technology becomes the key to win the competition. So, since learning a language involves getting ability to communicate and writing skills are definitely regarded as an important part of communication, then it became a must to care for writing competence via the best teaching techniques. In the beginning of a procession on the

way to oral proficiency, writing serves an assortment of pedagogical purposes [3]. Today we see more and more examples of poor writing skills both in print and on the web and of course such poor writing skills create poor first impressions and many readers will have an immediate negative reaction if they spot a spelling or grammatical mistake. As just one example, a spelling mistake on a commercial web page may cause potential customers to doubt the credibility of the website and the organization as a whole. Do not assume that spelling and grammar checkers will identify all mistakes as many incorrect words can indeed be spelt correctly. E.g. the two words principle and principal cannot be used interchangeably. So, the lack of teachers' monitor on the process of students' writing activity in general, aggravates the sufferance causing a lot of problems in the students writing skill. Some of the errors may point to unfamiliarity with the language itself. This unfamiliarity with the language leads to errors in lexical and grammatical features. Most of writing problems concern with improper development of analytical and cognitive skills, lack of writing practice, insufficient word stock and writing mechanics, no feedback on their writing, poor grammar and syntax skills. A study conducted by Supriyanto indicates that students' writing skill is still low due to the absence of using effective teaching methods [4]. To get rid of such long-lasting tribulation, mind mapping should be used as teaching technique because it is a matchless as a graphical way to represent ideas and concepts hierarchically. Mind mapping is also described as a diagram used for linking words and ideas to a central key word [5]. Based on the ideas above, these papers will investigate the effect of mind mapping on EFL learners, writing performance.

3. Objectives of the Study

To get all instructors, students and whoever it may concern with this study acquainted with the significance of using mind mapping in teaching writing essays, this study tries to:

1- Scrutinize empirically the impact of using mind maps in teaching writing essays on the Sudanese university students' abilities to write effectively about every textbook issue and on students' trend towards mind maps in general.

2- Broaden students' competence needed to write accurately and inclusively to contribute in providing societies with highly ensured useful texts as a whole.

3- Highlight the significant difference between the students who are taught writing essays via mind maps, and those who never do so.

4- Create a sense of competition among students to do their best while using mind maps in writing articles to come up with better educated community.

5- Enhance the relationship between learners and foreign languages by motivating them to know about other languages in responding to what the prophet Mohammed peace be upon him said about the advantages of learning foreign languages.

4. Questions of the Study

On the base of what mentioned in the introduction, this study sought to answer the following questions.

1- To what extent is there a gap in students' writing essay outcomes between those who use mind mapping strategy and their peers who never do so?

2. How well does the writing performance of students who receive training in mind mapping strategies help their achievement in language communication in general if compared with their peers who do not?

3. What made the use of mind mapping so highly effective in teaching writing skill that evidently getting so renowned despite its recent invention?

4. How can Mind Mapping be adopted in teaching writing an essay to promote learners' language to cope with life needs in general?

5. Literature Review

This particular study embraced several important areas of educational inquiry and many citations and research reports reviewed in this document that place the study into an integrated perspective concerns: "Luminosity of mind mapping in teaching Writing". This chapter is divided into the following sections: (a) definition of mind mapping, higher order thinking or problem solving (b) Compatibility of mind mapping with writing skill (c) the power of images and icons (d) the use of mind mapping in teaching. (e) Prestige of mind mapping in active learning.

5.1. Definition of Mind Mapping

Mind maps go under a variety of names. They are known as concept maps, semantic mapping, knowledge mapping, think-links, graphic organizers or cognitive maps [6]. According to Buzan, a mind map is a powerful graphic technique which provides a universal key to unlock the potential of the brain [7]. It harnesses the full range of a word, image, number, logic, rhythm, color and spatial awareness, in a single, uniquely powerful manner. (See figure 1) Another renowned definition is that Mind maps attempt, visually and graphically, to portray a relationship of ideas or concepts that help to better syntactically and semantically analyze, comprehend, synthesize, recall and generate new ideas. Or briefly, a mind map is a thinking tool that reflects externally what goes on inside your head [8].
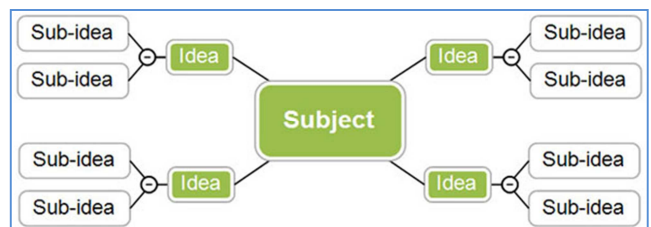

Figure 1. A simplified notion of mind mapping.

5.2. Compatibility of Mind Mapping with Writing Skill

The vast majority of writing experts at schools assured that students would often bring in drafts of essays that met all of

the formal requirements of their assignments but lacked creativity and complexity [9]. While these students were receptive to minor, sentence-level suggestions related to grammar, word choice, or formatting guidelines, so they were uninterested in discussing the ideas behind their writing. They were unwilling to delete or rearrange parts of their essays, let alone rethink their arguments. It seemed as if the students had forgotten that their essays were composed fundamentally of ideas, rather than punctuated sentences and properly formatted paragraphs. It is held believe that this mode of narrow-minded thinking about writing is rooted in how students are taught to write. At an early age, they learn how to spell, punctuate, and arrange words in a sentence. Then, a few years later, they learn how to format a simple tidy essay, with three body paragraphs neatly located between an introduction and a conclusion.

These lessons teach them that formatting is a central component if not the central component of good writing. So how can we reconcile this tension between the messiness of ideas and the rules of writing that are hammered into our heads when we are young? Educators were wrestling to come up with an exit to this dilemma; they discovered a solution to this long-rooted trouble. They concluded that by mapping out their essay ideas, students are able to see that there was an underlying structure, a bigger picture argument connecting all the work they had been doing for the past times. No longer were they fumbling through books and scanning pages of notes. So they began to produce pages, and then chapters, of writing, confident that their work would yield a coherent, powerful final product. Figure 2 below illustrates how does that function?
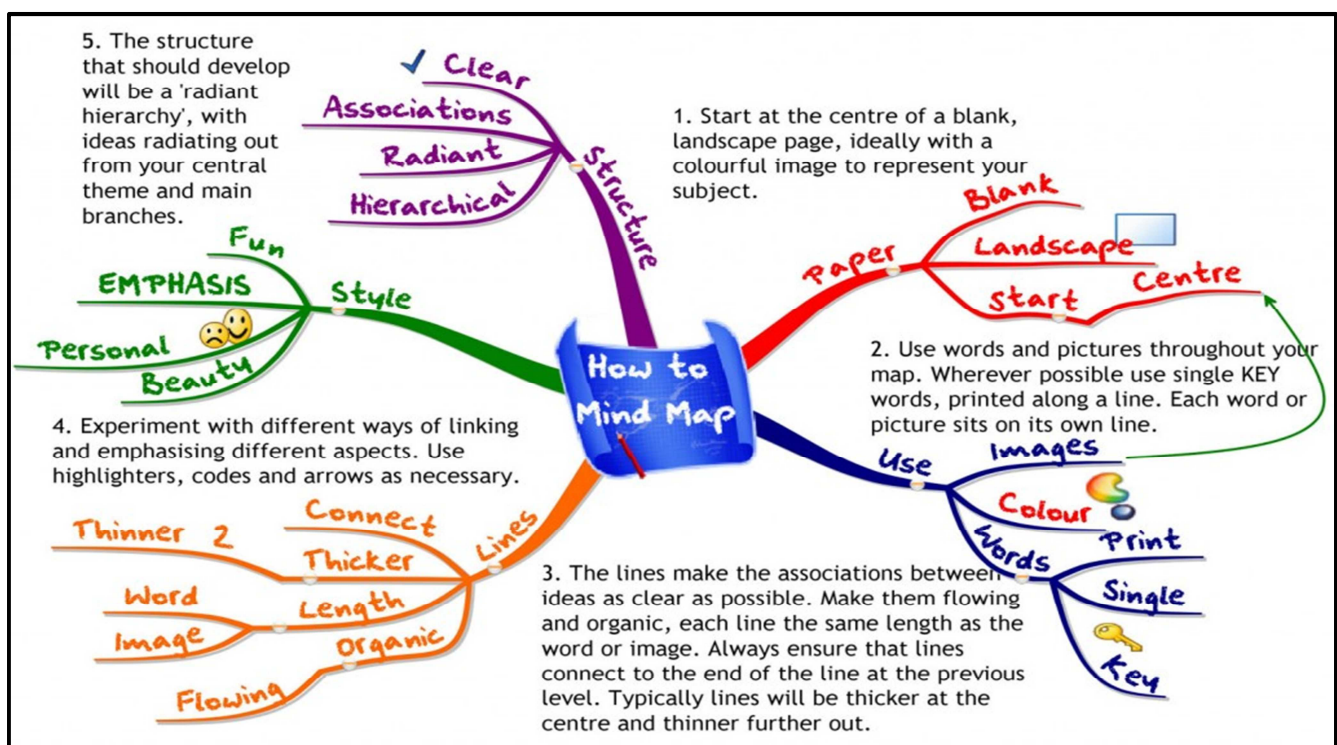

Figure 2. How does a mind map work?

While mind mapping drives their writing process by helping them create structure out of formlessness, it also gives the space to shift and mutate over time, allowing them to defy and undo the structures that they composed. In its visual form, their argument is not restricted by the rules of writing that stifle so many good ideas. Without any structure, our best ideas will be hidden in seas of thousands of others, never able to be conveyed through the vessels of words. However, sometimes a too-rigid adherence to structure can trap these ideas in undeveloped states, bounding their ability to grow.

Hence, instructional experts propose that mind mapping can be introduced to all students as a tool to support their writing processes because it provides a space for negotiating the tension between form and formlessness - the negotiation that is at the heart of the creative process.

5.3. The Power of Images and Icons

Mind Mapping emphasizes visual imagery so, to get the best out of the technique, it's highly recommended that you add fun and descriptive pictures, drawings, symbols and doodles to your Mind Maps. Using imagery stimulates the brain's visualizing capacity which brings enormous creativity benefits and enhances the memory's storing and recalling capabilities. Have you ever heard the phrase 'a picture is worth a thousand words'? Images convey more information than any amount of words that you could legibly fit into a single Mind Map therefore your notes can be as brief and compact as possible. Images can be utilized as a central topic to your Mind Map to convey a topic or to complement a key word on your Mind Map.

5.4. The Use of Mind Mapping in Teaching

A study by i-mind-map addressed the use of Mind mapping in teaching stating seven ways to do that. To get this straight, a teacher doesn't have much time and he wants to know when will he use Mind Mapping and why. Have a glance at these five uses of Mind Mapping, and see how you could improve your planning, preparation and lesson delivery without hassle or wasting time.

1- Lesson Preparation

Teaching preparation can amount to files full of plans and documents, as a single lesson's preparation alone can generate reams of notes. By using Mind Mapping to plan your teaching, you can reduce the amount of notes you take into clear, concise plans which are easy to follow. With the Mind Mapping software tool, you can make organizing teaching plans even easier, as you can access all of your notes, files and education website links from within one Mind Map.

2- Delivering Lessons

Mind Maps are ideal for teaching and presenting concepts in the classroom as they provide a useful focus for students, delivering an overview of the topic without superfluous information. Now, with the advent of Mind Map's award winning Presentation Mode, you can be sure to keep your students engaged and amazed as your branches smoothly animate to show your next point.

3- Curriculum Planning

Teaching today hinges around well-organized curriculum planning. With new curriculum initiatives, briefs, objectives and aims, it can all become overwhelming. But with Mind Mapping you can plan your year in sequence, prioritizing key topics and adding deadlines as necessary. Mind-Map makes this process even more hassle-free through integration with Office software programs, such as Microsoft Word and Excel.

4- Encouraging discussion and independent thought as the nature of the Mind Map encourages students to forge links between topics and forming their own ideas and opinions. The Cambridge Primary Review recently assessed that classroom interaction and listening to students generate independent thought.

5.5. Prestige of Mind Mapping in Active Learning

The first objective of any act of learning, over and beyond the pleasure it may give, is that it should serve us in the future. Learning should not only take us somewhere; it should allow us later to go further more easily The best way to get a good idea is to get a lot of ideas. Active learning instructional strategies include a wide range of activities that share the common element of involving students in doing things and thinking about the things they are doing [10]. Active learning instructional strategies can be created and used to engage students in (a) thinking critically (b) speaking with a partner, in a small group (c) expressing ideas through writing, (d) exploring personal attitudes and values, (e) giving and receiving feedback and (f) reflecting upon the learning process.

Active learning is the process in which students engage in activities such as reading, writing, discussion, or problem solving that promote analysis, synthesis, and evaluation of class content. When students are actively engaged, they think deeper about the course content, and enjoy their learning. This can be through a range of activities: group work, project work, interactive online activities and peer teaching etc. Students must actively participate in and reflect on the activities to enhance their higher order thinking capabilities. (See figure 3).
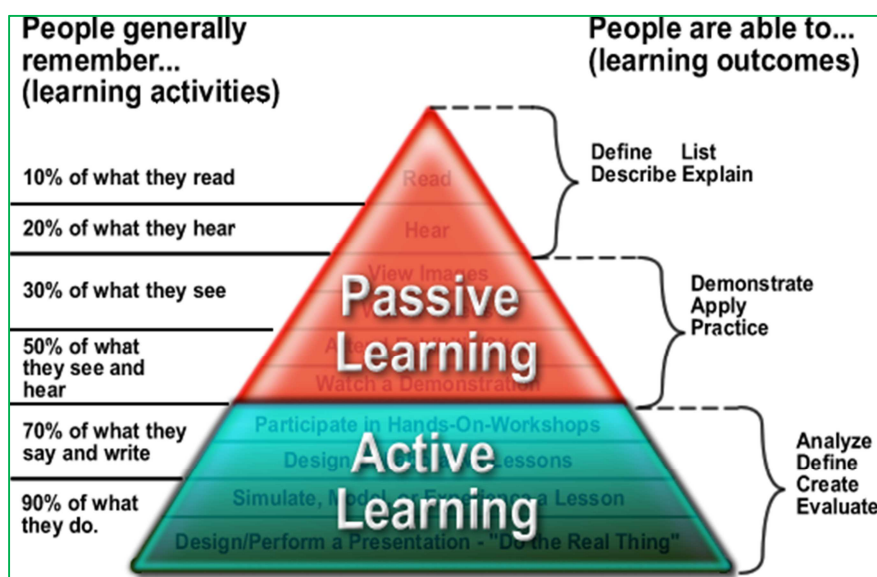

Figure 3. The difference between Rote learning and Active Learning.

To make it more obvious about visualized presentation of mapping technique, figure 4 below elucidates a simple way through which mind maps can make it easy for students to keep breast with learning process by taking part with completion.
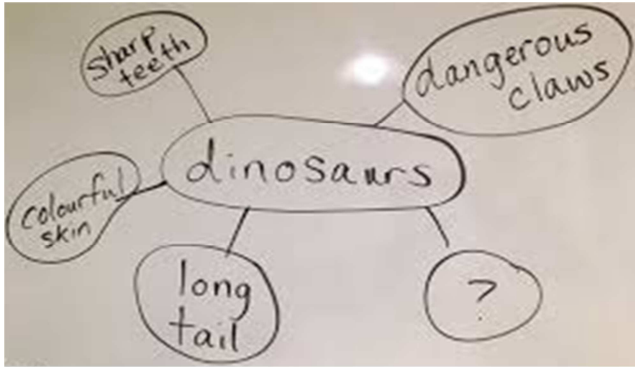
Figure 4. Mind maps to activate learning.

6. Method

In order to examine the effectiveness of using mind mapping technique under exam conditions and to answer the research questions, the author collected different types of data using several tools. Researchers should collect data that is appropriate and accessible [11]. This study contains four data collection tools: observation, interviews questionnaire and pre & posttest. Here they are in some details:

6.1. Observation

Observation gives a researcher opportunity to raise live data from live situations [12]. The author used observation notes while teaching to obtain useful data about students' disposition towards writing task under exam conditions, and behold to what extent they are able to use the mind mapping technique in their own writing. During the observation the researcher acting just like a passive observer where he stepped back and did not interact with his students at all. Instead, he would just focus on data collection. According to Mills, being a passive observer provides a penetrative opportunity for teachers to watch their students in a different setting, through a different lens. To allow keeping a record of observation, an observation checklist was designed to observe the focus group in different categories. These categories contain certain characteristics the researcher was looking for which related to students' ability to organize ideas with mind map technique before answering exam questions. These categories were designed to help answer research questions. The students' performance was recorded during the observation to increase the validity of data. It was asserted that using observation checklist is considered as a valid and useful tool in collecting information [13]. (Cont'd results) (see table 1).

Table 1. Observation checklist for students' evaluation in mock exam.

Categories	Teacher Notes
Did Students draw a mind map before answering the question?	Yes they did
How long did they take to create mind map?	5mins, with good division
Did they go back and forward to add new information to their mind map while they were answering the question?	Yes, they added some examples to mind map and rub out som ideas.
Could they refer back to their mind map during the writing process?	They could... they referred back and read their ideas.
Did they check that they transfer all the information in their mind map to their writing before handing the exam paper?	Yes, they put a star next to some ideas and X next to other ones.

Accordingly, most of students finished the exam on time and they had a chance to proofread their writing and so produced good writing, compared to the first mock exam, regarding the organization of their paragraphs and the depth of their writing structure and arguments.

6.2. Interviews

According to Mills an interview is a useful tool to collect data about the participants from their perspective. An interviewer can follow up ideas, probe responses and investigate motives and feelings [14]. An advantage of interviews is that misunderstandings can be sorted out during the interview time [15]. There are different types of interviews, and this study conducted through informal interviews to collect data. This type of interview was chosen because it is highly individualized and relevant to the individual, so it gives the investigator an insight into each member of his focus group. Also, it gives him information that he could not have anticipated during his classroom observations. After interviewing the focus group individually keep notes of their answers.

6.3. Questionnaire Procedure

The creation of good questionnaires does not have to rely solely on researchers' perspective. At some stage in the design process the questionnaire should be subjected to a field test [16]. Consultation was conducted with three English native speakers who are lecturers at Saudi universities. The central purpose of this pilot study was to make sure that all items included in the questionnaire were easily understandable by respondents. This consultation was found positive of no need to any further modifications. Finally the questionnaire was distributed to fifty eight respondents; see table 2 below which elucidates statistics of responses.

Table 2. Summary of the Questionnaire Responses.

Statement	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Total
1st	37	20	1	0	0	58
2nd	33	23	2	0	0	58
3rd	28	23	7	0	0	58

Statement	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Total
4th	19	25	14	0	0	58
5th	19	26	10	3	0	58
6th	19	36	2	1	0	58
7th	16	20	17	5	0	58
8th	15	31	10	2	0	58
9th	27	21	6	4	0	58
10th	20	25	6	7	0	58
11th	13	35	9	1	0	58
12th	26	26	5	1	0	58
13th	16	18	17	7	0	58
14th	30	20	3	5	0	58
15th	22	25	10	1	0	58
16th	12	35	7	4	0	58
Total	352	409	126	41	0	928
Percent	37.93%	44.07%	13.58%	4.41%		100%

6.4. Pre and Posttest

The author conducted a test to the 4th year students (n=30) on writing composition away from using mind mapping as a (pretest). After the intervention of mind mapping on the same sample of students on the same writing topic, the author retested the students again; the marks obtained this time were recorded as posttest (see table 3). In order to find out whether there is a significant difference between the means of (pre-test and posttest), the researcher conducted the experiment at the potential value (p = 0.05).

Table 3. *The 4th Year- Students Marks in the Pretest &Posttest (Full mark = 20).*

Student's No	Pre-test	Posttest	Student's No.	Pre-test	Posttest
1	12	15	16	9	13
2	9	14	17	11	14
3	10	14	18	16	18
4	11	15	19	9	14
5	8	13	20	11	13
6	10	14	21	14	16
7	14	17	22	12	15
8	11	14	23	8	13
9	12	14	24	10	14
10	9	13	25	10	13
11	15	17	26	11	15
12	10	14	27	9	14
13	14	16	28	14	14
14	12	15	29	8	12
15	15	17	30	10	13

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Pretest marks - Posttest marks	-3.3000	1.20773	.22050	-3.7510	-2.8490	-14.966	29	.000

Figure 5. *The difference between the outcomes of the two tests.*

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pretest marks & Posttest marks	30	.880	.000

Figure 6. *Correlation between the two variables (the pre & posttest).*

Overall, the data needed in this research were the scores of students and the opinions of English teaching experts at universities with their students' opinions toward the significance of using Mind Mapping in teaching writing an

essay. Those data were collected using both quantitative and qualitative methods. Quantitative data included the participants' fourth grade scores (pre & posttest) and provisional assessments (questionnaire). Qualitative data included analysis of students' work as observations as well as interviews. Gender differences in the application of mind mapping skills were also examined.

7. Results

By virtue of data analysis, the study reached the following

findings:

(1) The empirical phase of both observation and interview asserted that the use of mind mapping in teaching can highly improve students' abilities to smoothly write within a discipline by virtue of its unique spatial hierarchical design that enables students to get a great deal of content in one single page.

(2) Pretest and posttest positive score variations made it clear that mind mapping would prolifically furnish students with a powerful incentive and makes it worthy to look more closely at possible consequences of integrating this model of writing more widely into the whole educational curricula.

(3) As for speed, the empirical part of the study demonstrated that with mind maps you can develop ideas fast because you draw those ideas in the form of keywords in hierarchical shapes and likewise you can review your ideas fast too, as you don't have to skim through different pages of notes. All information is in one page, a single sheet of paper.

(4) The controlled group posttest outcomes have confirmed that the current shortcoming in the students' free writing composition competence is largely attributed to the persistence on using traditional methods in teaching which in turn gets students feel laborious due to their monotonous linear note taking.

(5) Classroom procedures have also revealed that students ability to use mind mapping do not vary according to age. So the study refuted the idea of that older students are more experienced and better motivated than younger students, and thus are more likely to perform at a higher level on tasks requiring mind mapping.

(6) All responses assured that with mind maps, you can go back and easily attach additional notes, links and even whole files to your map and thus add lots of information to it without diminishing the great overview it provides. This would particularly be great if the lecturer doesn't present information in a completely linear way and instead tends to jump around a little giving students way of more self-innovation when trying to explain something.

(7) Mind maps can mimic the way our brain thinks, so enable us to generate a lot more new ideas, identify the right relations among the information stored in our brain and ultimately improve our retention.

(8) The spatial design of maps makes it come in handy to create a deeper understanding of the topic of interest, which means you will get a perfect overview of all related ideas, concepts and thoughts.

(9) The questionnaire demonstrated that some instructors have little a bit or even no background about mind maps. Of course this would severely exacerbate the crisis of the rote learning. It would highlight the need for the development of teaching practical training courses for English instructors to keep abreast with the most updated teaching methods.

(10) The high level of students' scholastic attainment as a result of using mind mapping will be conclusive evidence to engage faculty members to adopt this method in teaching their own classes instead of traditional methods.

8. Discussion

This study began as a quest to discover why students even at tertiary institutes keep facing remediation classes in English Language at a widespread level and evolve into finding personal solutions to transfer themselves for example, from casual writing responses toward a more advanced approach to a better script? Therefore, the primary underlying concern of this study is to ensure how mind mapping can best help students develop their writing abilities. This is because it has recently become increasingly popular to use visualized tools in teaching and that mind mapping is so prosperous and fully abounded with such visualized images, [17]. This issue is an important one, since the ability to use mind maps to write properly is traditionally viewed as a fundamental characteristic of an educated person and is also seen by educational reformers as an essential outcome of contemporary education, necessary to meet the demands of high order thinking to recall information in an education and of successful employment in such rapidly changing life needs. Despite widespread interest in developing students' writing abilities, both educational reformers and critics of the system contend that students are not being taught to write properly.

9. Conclusion

Now looking for better techniques to teach became inevitable action to meet students' trends in this rapidly growing technical world. In this regard, mind mapping technique has been found as the most effective teaching technique compared with other modeling techniques in teaching writing for the Sudanese university students at Dongola university-Faculty of Education, 4th grade 2017 academic year. The writing achievement of those students who used mind mapping was better than those having non-mind mapping. There is an interaction between the genre of teaching technique and students' performance. Mind mapping technique is clearly more suitable for students with both high and low IQ. Based on the research findings, the conclusion is that the Mind mapping technique is an effective teaching method for teaching writing to the 4th grade students of universities. Since Mind mapping technique is simple, fun, and arousing students' creativity in generating and organizing their ideas, students are getting more active and more encouraged to study writing and improve their writing skills [18]. As a result, the students' writing performance has increasingly improved.

References

[1] Heaton 1988. The impact of mind mapping on teaching writing skill. p, 10 Get inside their heads with mind mapping. School library journal.

[2] Buzan 1993. Brainstorming Approach and Mind Mapping in Writing Activitypp, 93-100 the Relationship between Student Engagement and Selected Desirable Outcomes in the First Year of College.

[3]   Byrne, 1997. Reflective thinking on communicative teaching in Writing, Enhancing Freshman students' Writing Skills with a Mind mapping software p, 6.

[4]   Supriyanto, Impact of mind maps on teaching writing skills, Significance of advance organizers on learning 2008: p, 2.

[5]   Steele, 2004: Students, writing performance through mind mapping: Improving learning through interventions of student-generated questions and concept maps p, 1.

[6]   D. Keenan, 1994: Mind mapping for specific cooperative learning in Economics pp, 358-361.

[7]   Buzan, 2005. Stirring what goes on inside your head with a mind map: How to Use Radiant Thinking to Maximize Your Brain's Untapped Potential p, 6.

[8]   Novak, J. D. 1990. Concept mapping, the useful tool for science education. Journal of Research in Science Teaching, 27, 937-949.

[9]   Annika, 2017: Advanced Grammar Rules, Contextual Spell Checker, Plagiarism Checker and Corrects Writing Mistakes. p, 13.

[10]   Bonwell & Eison 1991. The Influence of Active Learning on the College Student Departure Process: p, 66.

[11]   Mills 2003, Appropriate and Accessible data for researchers.

Observation to afford The researcher opportunity to gather live data from live situations 2003: p, 51.

[12]   Cohen, Manion, & Morrison, 2000: Observation to afford the researcher Opportunity to gather live data from live situations. p, 305.

[13]   Mills 2007 observation as a valid and true representation of the action Improving Teaching and learning in science and mathematics with the use of check list. p, 36.

[14]   Bell. 1999, doing your research project: A guide for first-time researchers in Education and social science: p, 135.

[15]   Wallace, 1997. Advantages and Disadvantages of four Interview Techniques In Qualitative Research: p, 23.

[16]   Hoinville G; Jowell R & Associates 1978. Appropriate use of Quantitative thought. Strengthening students' composition writing skills through visual maps to overcome Their over self-criticism.

[17]   Wandersee, J. H. 1990 Concept mapping and the cartography of cognition. Multidisciplinary design of Mind mapping to Teaching Writing 27 (10) pp, 923- 936.

[18]   Bryan Collins, 2016, How to Create a Mind Map: A Practical Guide, get your ideas onto the page faster by organizing them for an article or a book before you write. Annual review 2016, March 31 at 3:03 p.m.