The Use of Mind Mapping to Develop Writing Skills in UAE Schools

Shamma Al Naqbi
Shamma Al Naqbi graduated from the Higher Colleges of Technology’s B.Ed program at the top of her year in June 2008. She recently completed an M.Ed TESOL degree at the University of Melbourne, Australia, on a scholarship from the Sheikh Saqr bin Muhammad al Qasimi Education Trust. Shamma is a member of the teaching faculty at HCT’s Ras Al Khaimah Women’s College.
This chapter presents the process and findings of a classroom-based action research which was conducted over ten weeks of my second semester internship in a government high school located in the United Arab Emirates (UAE). The target population consisted of female Grade 11, English as a Foreign Language (EFL) learners aged between sixteen and seventeen years. The focus group of this research was three students selected based on their parents’ agreement to be participants in this academic investigation.

This research began during the first semester of my teaching practice with a preliminary investigation to gather information about the current practices that teachers in government high schools use to teach and enhance writing. The primary purpose of the preliminary investigation was to help students, in grade 11, move from a product-based approach to a process-focused approach to writing, and to evaluate the use of mind mapping in this context as a pre-writing brainstorming strategy in the EFL class. The preliminary investigation revealed that the process of mind mapping caused a noticeable transformation in the students’ writing, making them more active learners who also began to learn different skills such as asking questions to understand given writing topics, and generating their own ideas for different writing tasks. Moreover, the students seemed to understand the process of the mind map technique and the rationale behind using it.

As a result of these findings, the research in my second semester looked into the impact of the use of the mind mapping strategy under exam conditions, as students were preparing for sitting formal exams. The aim is to help the students plan and organize their ideas about the writing topic rather than just jumping in and answering the exam questions without planning. From my teaching practice experience, I noticed that students not used to planning writing almost always upset the balance of an essay in some way: too much middle, not enough beginning, or no conclusion. They may end their essays having too many specifics and not enough generalization or they may fail to develop their most convincing piece of evidence and give too many subsidiary points, or they may leave out the best examples to illuminate their argument. Indeed in exam essays, without the benefit of a second draft, a lack of planning can be disastrous (Payne, 2003).

Area of Focus

Writing an examination essay is a different kind of task to writing coursework essays. Students operate under strict time constraints so there will be less time to show what they know or think about the topic. Moreover, in exam essays students need to keep their answer sharply focused on the question. The findings of the preliminary investigation showed that planning an essay before writing by using the mind mapping technique can help students to answer writing tasks more effectively in their coursework.

The Common Educational Proficiency Assessment (CEPA) is another reason for choosing this research topic. CEPA is important to students in the UAE as it is administered to all students completing grade 12 of the Ministry of Education English curriculum. It was developed to assist the placement of students for English language study purposes across the higher education institutions after finishing grade 12.

Essay writing is not a component of the curriculum and students do not have essay writing included as part of their course books. However, students are required to write an essay for the CEPA exam, a task for which they are essentially unprepared by the curriculum. Therefore, teaching students the mind mapping technique at this level could be good practice for the coming year.

I have noticed that traditional teaching methods are common in the UAE; teachers historically provided students with particular topics and asked them to write the content. From my own experiences, teachers focus on spotting the mistakes or errors the students made and asking for corrections, because they believe this is the best way to improve students writing skills.
Accordingly, students begin to understand that the greatest written assignments are those which contained the fewest errors. However, it became further noticeable by some teachers that the students’ results in writing assessments which relied heavily on correctness of grammar and spelling only were not a true measure of students writing abilities. As a result, students began facing difficulties in developing their ideas and producing meaningful text, focusing more on the mechanical structure of the written piece.

According to Payne (2003) good exam technique depends on preparation before and during the exam. This means teachers may need to analyze a lot of past papers and adapt their class teaching methods as preparation for the exam. This process can, however, cause washback (Harris & McCann, 1994), an effect the test might have on the teaching process. In this investigation one of my aims is to provide positive washback, where my students will be equipped with the needed skills to perform well in their exam.

Accordingly, the investigation process sought to answer the following question:

How can the use of mind mapping help students in grade 11 to plan effectively for a writing task under exam conditions with strict time limits?

**Methods**

According to Wallace (1997), “action research has two essential elements: to improve and involve” (p.24). In this case the aim of the action research was to improve students' writing performance under exam conditions by using the mind mapping strategy. Teachers as researchers need to reflect on their teaching. According to Bell (1999) “viewing teachers as reflective practitioners assumes that teachers can both pose and solve problems related to their educational practice” (p.5). Furthermore, the cyclical nature of action research provides teachers with ongoing opportunities to reflect on and refine their own teaching practices (Wallace, 1997). Thus, throughout this study, I was engaged in a continuous action-reflection-cycle; I re-evaluated my teaching and was able to critically reflect upon the actions that required changing.

For this investigation, the action research process is based on the ‘action research cycle’ that was developed by Calhoun (Mills, 2007, p.25). Calhoun’s cycle consists of five phases of inquiry that includes selecting an area or problem of collective interest, collecting data, organizing data, analyzing and interpreting data, and taking action (see figure 1) (Mills, 2007). This particular cycle has been chosen because it proposes a practical framework that can be easily followed during my teaching practice and fits my research setting. Moreover, this cycle is very flexible while implementing the action research plans, because I can reflect at each stage of it and make changes as necessary to suit my action plans.

![Figure 1: Calhoun's Research Cycle (Mills, 2007 p. 25)](image-url)
Learners and Writing in the EFL Classroom

Writing is an essential skill in the teaching and learning of English as a Foreign Language (EFL). On one hand, it stimulates thinking, compels students to concentrate and organize their ideas, and cultivates their abilities to summarize, analyze, and criticize (Scane, Guy & Wenstrom, 1991). On the other hand, it reinforces learning, thinking, and reflecting on the English language (Harmer, 2001). Nevertheless, students find composing in English difficult because the writing process demands that they utilize many cognitive and linguistic strategies of which they are uncertain (Peregoy & Boyle, 2005). Some EFL teachers may be perplexed by such problems in their writing classes, they also cannot find an efficient way to awaken students’ imagination and set their minds working (Rao, 2007).

Brainstorming

The sort of teaching we propose for our students as teachers requires that we encourage active learning and that we become knowledgeable about the ways in which our students hear, understand, interpret, and integrate ideas (Harmer, 2001). One way of helping students to overcome some problems that they face in writing tasks is the use of brainstorming activities. According to Scane, Guy and Wenstrom (1991) “brainstorming activities motivate students who do not usually want to write by creating a nonthreatening atmosphere” (p.14). Therefore, in an EFL environment where students typically struggle with writing tasks, a nonthreatening atmosphere might assist in the development of their writing skills.

Essentially, writing is a way of expressing thoughts, and good writing comes from good thinking and preparation (Harmer, 2001). Before students start writing something, it seems reasonable to offer them opportunities to think about the topic in question. This brainstorming stage can assist students to activate their prior knowledge and skills to apply to the writing task, and find out what information they already have and what they still need (Rao, 2007). In addition, in each classroom, it is valuable to teach students different brainstorming techniques in order to activate their thinking and create ideas which are essential to second language acquisition (Harmer, 2001). However, the ideas obtained at this stage may or may not be directly related to the topic, so brainstorming is beneficial in giving students the opportunity to see their ideas down on paper before they actually begin to write (Harmer, 2001). One of the biggest advantages of brainstorming is that it requires virtually no preparation and it can be used with classes at any level and under any situation (Buzan, 1993).

The Mind Mapping Technique

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 (Svantesson, 1989). According to Buzan (1993), mind maps attempt, visually and graphically, to portray a relationship of ideas or concepts. In this study I will refer to these maps as ‘mind maps’.

The term ‘mind mapping’ was first used by Buzan (1993) who describes it as an instructional strategy where the learner “places supra-ordinate concepts on paper and subsequently links sub-ordinate concepts as appropriate” (p.59). It is seen as a powerful tool to help students overcome problems with the organization of their ideas and thoughts (McGriff, 2000). According to McGriff, “mind maps are an excellent way to help learners organize knowledge, to empower themselves to better comprehend the key concepts, and principles in lectures, readings, or other instructional materials” (2000, p.9). Buzan (1993) describes mind maps as a representation of cognition and comprehension in the learner, and as an excellent way to help learners to express themselves both verbally and visually. Indeed, in their mind map, learners may use graphic representation which may help in the brainstorming process. McGriff (2000) found that relating images to concepts is a creative task which requires thinking instead of memorizing. A recent study shows that students who could express their learning with visual skills had a 40% higher retention rate than that of just verbal learners (Adam & Mowers, 2007). This shows the potential
importance of using this technique in writing classes, and it seems it is a useful strategy to support students during writing tasks.

Even with the research that has been presented about the advantages of using the mind mapping technique, mind mapping has been considered by some writers not to be a useful skill. For example, sometimes it could be time consuming for the teacher to present and for the student to grasp, especially if the student is inexperienced, or uncreative (Buzan, 1993). This may be especially true when using this strategy in an exam situation if students are not familiar with the concept of the mind mapping strategy in such conditions. Therefore, it could be said that teachers need to give students plenty of opportunities to practice this strategy before the exam so they can use it in exams wisely and effectively.

Assessment and Learning

Assessment is “the process of collecting, synthesizing, and interpreting information to aid in decision making” (Airasian, 2000, p.10). Similarly, Payne (2003) defines assessment as “the interpretive integration of application tasks (procedures) to collect objectives-relevant information for educational decision making and communication about the impact of the teaching-learning process” (p.9). This means that assessment is a form of collecting data which has meaning when making judgments on students’ learning. Furthermore, Moon (2000) suggests that assessment is “a way of providing feedback on learning and teaching” (p.148).

Assessment may be conducted to serve several different purposes. One purpose of assessment is collecting data and information in order to formally measure students’ progress and achievement (Moon, 2000). Teachers also collect data from students' work in order to informally give them feedback on their learning. Indeed, there are two types of assessment: formal and informal assessment. Formal assessment, as Payne (2003) states, is “the use of evaluation data to determine the effectiveness of a unit, course, or program after it has been completed” (p.579). Moon (2000) notes that formal assessment “happens only periodically, e.g. at the end of term or year or period of study. It takes place when the teacher or someone else wants to check whether pupils have achieved certain goals or targets, usually through a test or exam” (p.152). Informal assessment, on the other hand, is defined by Cameron (2001) as assessment that “aims to inform on-going teaching and learning by providing immediate assessment task during the course or the term with direct feedback, whereas formal assessment is done at the end of the course or the year” (p.121).

Washback

Airasian (2000) defines washback as “the extent to which the test influences language teachers and learners to do things that they would not necessarily otherwise do” (p.243). On the other hand, Payne (2003) describes it as “the influence of testing on teaching and learning” (p.259). The washback effect on teaching can occur both before the test and after, depending on the type of test used. According to Harris and McCann (1994) the impact the test has on teaching and on learning may be either positive or negative.

Payne (2003) classified the washback effect into two headings, firstly “overt washback”, which involves, for example, doing a lot of past papers or adapting the teaching methods used in class as preparation for an exam, and “covert washback” which involves teaching a textbook as if it were a testbook (p.14). In overt washback, teachers emphasize the skills needed for achieving success in passing the final exam, in order to fulfill the students’ desire to pass the test and give the right skills and knowledge to pass the exam; accordingly the teaching methods are changed (Airasian, 2000). In other words, washback illustrates the direct or indirect effect of examinations on teaching methods, where teachers adapt or change their teaching strategies to help students pass their exam successfully (Payne, 2003).
In this study students were encouraged to use mind mapping as a pre-writing strategy to overcome some of the problems that they might face in answering the writing task under exam conditions. This positive step could eventually improve the students’ outcomes in the final test, and this is, as mentioned previously, the aim of this investigation. At this stage, I strongly believe that preparing students for exams using the mind mapping technique might provide more positive washback for the exam. Overall, assessment methods should mirror the practice students have been given during the learning experience (Moon, 2000).

Data Collection Tools

In order to examine the effectiveness of using the mind mapping technique under exam conditions and to answer my research questions, I collected different types of data using different data collection tools. According to Mills (2003), researchers should “collect data that is appropriate and accessible” (p.51). In this study, the data collection tools that I used were observation, interviews and samples of students’ work (artifacts).

Observation

Cohen, Manion, & Morrison (2000) declare that “observation affords the researcher opportunity to gather ‘live’ data from ‘live’ situations” (p.305). In this investigation using observation notes as a data collection tool allowed me to obtain useful data about my students’ reaction towards writing tasks under exam conditions, and whether they use the mind mapping technique or return to their own writing. Moreover, it allowed me to write my reflective journals, using the comments from my observations. During the observation I acted as a passive observer where I stepped back and did not interact with my students and would just focus on data collection. According to Mills (2007) being a passive observer provides an insightful opportunity for teachers to watch their students in a different setting, through a different lens.

To allow me to keep a record of my observation that I could refer to later, an observation checklist was designed to observe the focus group in different categories. These categories listed certain characteristics that I was looking for that related to students’ ability to organize their ideas using the mind map technique before starting to answer the exam question. Moreover, these categories were designed to help me to answer my research question. In addition, I recorded what happened when students first received the exam question, and how they dealt with it. The students’ performance was recorded during the observation in order to increase the validity of the data. Mills (2007) asserts that “observation is considered a valid and true representation of the action” (p.36).

Interviews

According to Mills (2007) the interview is a useful tool to collect data about the participants from their perspective. Bell (1999) claims that the “interviewer can follow up ideas, probe responses and investigate motives and feelings” (p.135). An advantage of interviews is that misunderstandings can be sorted out during the interview time (Wallace, 1997). There are different types of interviews, and for this study I conducted informal interviews to collect the data. This style of interview is more like a casual conversation that allows the teacher, in a conversational style, to inquire into something that has presented itself as an opportunity to learn about their practice (Mills, 2007). This type of interview was chosen because it is highly individualized and relevant to the individual, so it gave me an insight into each member of my focus group (Wallace, 1997). Also, it gave me information that I could not have anticipated during my classroom observations. I interviewed the focus group individually and kept notes of their answers.
Samples of Students’ Work (Artifacts)
Classrooms are rich written or visual resources that contribute to teachers’ understanding of what is happening in their classroom (Mills, 2007). In this study my students’ work was used as a basis for the informal interview, which gave me a chance to get a greater understanding of my students’ perspectives of their learning. Moreover, the students informally engaged in conversation about their work, which was a good investment of time and gave me a clear picture of students’ abilities and responses to the use of the mind mapping technique in their writing. I analyzed the students’ work by looking at how effectively their mind maps helped them in planning ideas for their writing and organizing their essays. Moreover, analyzing my students’ work helps me to reflect upon my own teaching strategies and adapt them to suit my students’ needs.

Implementation of Action:
Teaching Strategies & Rationale

From my experiences as a student and teacher in the UAE schools, performance in the CEPA exam is not usually a true indication of learners’ abilities. The exam questions are often designed in a way that only test students’ skills in memorizing and recalling information rather than understanding it. It is my responsibility, however, to equip students with the skills needed to pass the exam successfully. Therefore, in this investigation mind mapping was introduced as a preparation technique that students could use to plan their ideas during the writing exam, rather than just memorize the information. Moreover, the mind mapping technique was implemented in order to draw students’ attention to the importance of planning and organizing their ideas before starting to answer the exam question. The implementation of the strategy was conducted within six weeks and was started in Week 4 of my teaching practice. I gave the students three mock exams to examine their use of the mind mapping technique as a tool to plan their writing. While implementing my teaching strategies I followed Calhoun’s research cycle (Mills, 2007) to improve my teaching strategies and get the best result from my students.

The Implementation Process of the Strategies

During the first three weeks of my teaching practice I revised the concept of the mind mapping technique, which was introduced in the previous semester. I provided the students with the opportunities to practice the mind mapping technique to brainstorm some ideas for different writing topics, and got them to write short reports about different topics.

In Week 4 I gave my students the first mock exam, where I created an atmosphere that was similar to the normal formal assessment. In the exam the students were asked to write a report to “compare between two countries”, and they were given forty minutes to complete the task. To record students’ performance during the exam, I used my observation checklist to write comments about my focus group. From my observations, I noticed that the students faced the same problem, which was not finishing their writing by the end of the forty minutes. Referring back to my comments on the checklist, this seemed to be because the students spent a long time designing their mind maps. From my observations I could see that Student A spent ten minutes and Student B, fifteen minutes.

By spending fifteen minutes creating her mind map Student B ended up with only twenty-five minutes to write her report. Under real exam conditions this could be a problem, because students may be given an unfamiliar topic to write about with limited time and twenty-five minutes is not enough to complete such a task.

In Week 5 I modified my teaching strategies and focused more on overcoming the time issue, and trained my students to create their maps in less than ten minutes. I prepared an activity where students were asked to brainstorm ideas using the mind mapping strategy for a given
topic in five minutes. I used the same activity four times as a warming up task to start my lessons, but each time I offered my students a different topic.

In Week 6 I gave my students the second mock exam, and they were given forty minutes to write a report about "the sun and its bad effects". From my observations, I noticed an improvement on the time students spent on creating their maps, with Student A spending eight minutes and Student B spending ten.

The students managed to complete the task within the forty minutes although some of them missed the conclusion part. I was satisfied with the results, and I noticed that the students were able to easily generate ideas about the given topic using the mind mapping strategy, the challenge, however, was how to choose the best ideas to write about rather than mention all of the ideas. To get more information about this issue I had a casual conversation with one student from my focus group. The student said; “I can write many ideas, but I do not know how to choose the best to write about, I feel confused so I end up mentioning them all in my writing”. In this exam this was not a big issue that affected the students’ performance, but I planned to highlight this issue in my next class.

In Week 7 I planned to teach my students how to choose the best ideas to write about after brainstorming their ideas in a mind map. I gave them three key points to think about before adding any idea to their writing. For example, can they elaborate this idea, do they have examples to support it and does it answer the given question. I prepared a worksheet with a pre-designed mind map and lot of ideas, and students were asked to choose the best five ideas in their opinions by following the previous criteria. There was no right or wrong answer, but the aim of this activity, which was implemented four times, was to make students think carefully about their ideas before jumping to answer the writing questions. This will save time in the exam and will help the students to be specific and focus in their writing.

After that, in Week 9, I gave my students the third and final mock exam. In this exam they were given forty minutes to write a report about “how sports can be dangerous and how to protect themselves while exercise”. From analyzing the students’ mind maps and the comments from the checklist, I was pleased with the quality of the students’ maps, the ideas which they included in their maps and the way they selected those ideas. Table 1 is an example of Student C’s process as recorded in my checklist.

Checklist for observation during the exam time

<table>
<thead>
<tr>
<th>Categories</th>
<th>Teacher Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before answering the question S drew a mind map</td>
<td>Yes she did</td>
</tr>
<tr>
<td>How long did S take to create her mind map?</td>
<td>5mins, she divided her map to main ideas, sub-ideas and examples.</td>
</tr>
<tr>
<td>Did S go back and forward to add new information to her mind map while she was answering the question?</td>
<td>Yes, she added some examples to mind map and rub out some ideas.</td>
</tr>
<tr>
<td>S referred back to her mind map during the writing process</td>
<td>She did... I noticed that she referred back and read her ideas. She did this more than once.</td>
</tr>
<tr>
<td>Did S check that she added all the information in her mind map to her writing before handing the exam paper?</td>
<td>Yes she did... she put a star next to some ideas and X next to other ideas.</td>
</tr>
</tbody>
</table>

Table 1: Observations of Student C for 3rd Mock Exam
Accordingly, most of the students finished the exam on time and they had the chance to proofread their writing and produced well written pieces of writing, compared to the first and second mock exams, regarding the organization of their paragraphs and the depth of their arguments.

**Data Analysis and Interpretation**

The purpose of this research is to investigate the impact that mind mapping had on helping students in planning and organizing their ideas in an assessment situation. The impact of mind mapping was determined by interviewing the research participants, classroom observations, analysis of student created mind maps and examinations.

Burn (1999) asserts that data analysis “is the point where statements or assertions about what the research shows are produced” (p.153). It means, moving away from the action steps to more systematic observing and reflecting on the results. The analysis of the data was conducted by organizing the relevant data into themes which were identified as, planning effectively using the mind mapping technique, and using the mind mapping technique under exam conditions.

**Planning Effectively Using the Mind Mapping Technique: Generating Ideas**

Throughout my observations I noticed that the students did not have problems with brainstorming ideas using the mind mapping technique for their topic. For example, I gave them a task to write about the benefits of doing sports and the students came up with lot of interesting and valuable ideas to write about. This was supported by the results I got from interviewing my students regarding this point. When asked if designing her own mind map improved her understanding of the writing topic, Student B responded:

Yes, when I design the mind map I have a chance to think more about the topic so I can write many ideas and information and that makes my writing strong. Overall, it encourages me to think of lots of ideas to write about.

What was seen as an obstacle at this stage, however, was that the students could not narrow-down their ideas and be specific in their selections of what they were going to write about. Figure 2 shows the broadness of a student mind map.

![Figure 2: A student’s mind map](image-url)
The problem was noticed also during the second mock exam that was given to the students while implementing my teaching strategies. From analyzing the students’ work, I noticed that the students focused on listing down their ideas from their maps rather than focusing on the structure of their writing. One of the interview questions was designed to address this problem. It seemed that they all had the same misguided idea, which was that the more ideas they added, the better their writing would be. This idea is emphasized in Student A’s response when asked if designing her own mind map improved her understanding of the writing topic:

Yes, because I can write all the ideas and information that I know about the topic. Also, by using the mind mapping I have time to think and then start to write. Moreover, I believe that if I add a lot of information, example and ideas to my writing, this will make my writing strong.

Therefore, my task was to help my students understand that they could produce an excellent piece of writing using two or three ideas but needed to support them with lots of relevant examples to make their argument strong.

To achieve my aim I implemented different strategies to help the students overcome this problem. There was a noticeable transformation where students learnt after brainstorming ideas how to be specific in choosing the best ideas to write about. This was clearly shown in the final mock exam. In this exam I noticed that Student B produced a second draft of her original map where she selected only four ideas to write about from her other ideas (Figure 3).

![Figure 3: Student B’s revised mind map](image-url)
This showed that the students understood the importance of being specific and precise in choosing ideas to write about. Regarding this aspect and by referring back to the literature review, McGriff (2000) states that the mind mapping strategy is seen as a powerful tool to help students overcome problems with the organization of their ideas and thoughts, and this seems to be evident in this case.

**Timing**

The mind mapping technique has been considered somewhat time consuming (Buzan, 1993). According to McGriff (2000) this could be true when using this strategy in an exam situation where students are not familiar with the concept of the mind mapping strategy in such conditions. As mentioned during the implementation of the mind mapping technique students took a long time to design their maps. For example, when I gave them the first mock-exam I used a checklist to highlight the concept of time. The exam was forty minutes and from my observation the students spent too much of their time on designing their maps rather than focusing on writing their essay. As a result they handed me unfinished pieces of writing at the end of the exam time. From analyzing the students’ papers I noticed that they focused on writing as many ideas as they could and how their mind maps will look after they finish. While interviewing my focus group Student C’s response to the question about mind maps improving her understanding indicates that this was an issue for her:

> Yes, I think about the topic more and I have more ideas to write if I use mind mapping. But I always face difficulties with the time, sometimes I will just forget myself while planning my mind map and I will not be able to finish the exam at the end. It will be good to know how to use mind map and save the time for writing, because I need mind mapping to brainstorm ideas.

At this stage I felt that unless I did something to help them with the time issue the mind mapping could actually create a real problem. As mentioned previously I gave the students different tasks which focused on the time issue to train them how to use their time wisely to design their maps. At the beginning I did not witness any improvement; however, in the third mock exam I noticed from my comments on the checklist that the students improved their time management techniques and their skills in using the mind mapping technique. This could be related to an improvement in the speed of their thinking abilities and their abilities to evaluate the information before start writing. From my observation and notes which I recorded during the final mock exam it can be seen that there was a noticeable transformation in the amount of time that students took to complete their mind maps and start writing. This actually gave the students enough time at the end to proofread their writing. Also I noticed that some students went back after finishing their writing to make sure that they had included all their ideas from the maps in their writing. This shows that the students understood the importance of using their time wisely during the writing tasks.

**Using Mind Mapping Under Exam Conditions**

It is too early to judge the success of using the mind mapping technique under exam conditions because this strategy was only implemented over six weeks. However, from analyzing the students’ performance in the three mock exams I noticed a slight improvement in the students’ final writing outcomes. The students were able to plan their ideas effectively using the mind mapping technique and as a result they produced well organized reports. This was clearly shown in the final mock exam where all the students handed me a completed writing task, there were also links between the ideas on their maps and their writing. It seems that the students’ mind maps mirrored their writing and the other way around. In this regard, as highlighted in my literature review, both Buzan (1993) and McGriff (2000) agree that using the mind mapping technique is an excellent way to help learners organize knowledge.
Students’ Cognition and Information Retrieval

From analyzing the data I collected from conducting my teaching strategies I came across a further point which emerged from the implementation of the mind mapping strategy. I noticed a development in my students’ thinking skills, where they became better in generating ideas and evaluating them quickly. Moreover my students were able to retrieve their prior knowledge about different topics and design mind maps using this knowledge. Therefore, it could be said that mind mapping can impact student cognition and aid in information retrieval in an assessment situation, at least in this particular case. To find out my students’ perceptions towards this point I added a new question to my interview. From their answers it seems that my students also noticed this point during the planning process and they appreciated the idea of being able to retrieve their prior knowledge before starting to write. Below are responses to the question: Has the use of mind mapping been a useful strategy to recover your prior information and knowledge about the topic?

Yes, because I studies (sic) the topic and by using the mind mapping I could take one minute to remember what I know and to remember the teacher explanation of this topic (Student A).

Yes, because while I am drawing my mind map I can take time to think about the topic. Because some time if the topic is new in English I studied about it in Arabic. So all I need is time to think and mind mapping give me the time (Student B).

Yes, I feel that it helps me but I don’t know how to explain it (Student C).

Recommendations and Conclusion: Main Finding of the Investigation

The evidence suggests that mind mapping may impact on students’ abilities to plan and organize their ideas for writing tasks under exam conditions. Moreover, using the mind mapping technique can help in developing students’ cognition skills and aid in information recovery in an assessment situation. This conclusion was made based on the qualitative data received during the participants’ interview, the components demonstrated on the mind maps and the results of the mock examinations. Mind mapping is a form of a graphic organizer which has been recommended as a way to scaffold meaningful learning for students (Buzan, 1993). As a result, the mind mapping technique would seem to be particularly suited to helping students in planning their writing as the approach encourages students to reach for and adapt a deeper level of understanding of the writing topics.

Recommendation for Future Practice

Regarding classroom practice, as a way to introduce the mind mapping technique I think it might be useful to ask the students to brainstorm ideas for topics of their choice. This can make the concept of this strategy more meaningful for the students. From the results of the preliminary investigation the use of images was successful, so it could be valuable to implement this concept also when using mind mapping strategy in an exam situation. Moreover, this research has shown the effectiveness of using mind mapping as a planning tool. The increased use of mind maps and the emergence of other educational materials which have the same purposes as mind mapping and support for the use of this technique should therefore be welcomed.
Action Research contributions to Professional Growth

I believe that doing this action research has enriched my teaching experience, and has made a positive contribution to my professional growth. For example, doing the investigation developed my skills of critical reflection on my teaching strategies. In other words I become a more reflective practitioner, where I had opportunities to reflect, modify and improve my teaching strategies. Moreover, from reading and completing the literature review section, I learnt about new teaching approaches and methods from the viewpoints of different researchers and authors. Overall, I learnt many valuable skills which will allow me to deal with obstacles that I may face in my future classroom.

References


