The use of mind-mapping technique in the EFL classroom

A critique and demonstration of methods

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Abstract

The current paper discusses the integration of mind-mapping in the EFL classroom. In the beginning, the writer describes the theoretical framework of utilising mind-mapping technique in education, particularly in EFL teaching and learning. This is followed by the discussion on the advantages, disadvantages and effectiveness of mind-maps. Then, a possible lesson applying mind-mapping is illustrated. In the conclusion, the writer also justifies his position toward the use of mind-mapping to support the EFL language learning. Finally, recommendation on how to improve the use of mind-mapping is presented.

Keyword: mind-mapping technique, mind-maps, education, EFL classroom, EFL language learning

1. Introduction

A mind-map is made based on radiant thinking, a concept which describes how the human brain processes various ideas and information that are associated to each other through relationship hooks (Buzan & Buzan in Budd, 2003; Murley, 2007; Siriphanic & Laohawiriyano, 2010; Al-Jarf, 2011). It consists of a central idea or theme and related ideas branching out that are connected together via relationship hooks. Subsequent ideas are linked together, forming a hierarchical map of the user's ideas. A variety of applications are possibly elaborated through mind-mapping. For instance, mind-mapping is an effective way of generating limitless ideas in that each

idea that branches out increases the range of possible associations (Buzan & Buzan in Budd, 2003).

In the context of the writer's workplace, where English is taught as a foreign language, he notices that there is an urgency to implement mind-mapping technique in the teaching and learning process. Some reasons generating demand for the use of mind-mapping technique are: lack of attractive teaching and learning materials, minimum exposure to the use of the right cerebral hemisphere, and insufficient technique to support creativity development in the EFL teaching and learning.

Thus, by carefully reviewing, analysing, and evaluating current literature and research on the use of mind-mapping technique in the EFL teaching and learning with reference to the current trend of mind-mapping technique in education, the writer would like to put forward his argument on the methodology critique and on how the use of mind-mapping technique is effectively implemented in the EFL teaching and learning .

2. **Definition**

    Mind mapping was developed as an effective method for generating ideas by association in the 1960s (Murley, 2007). A mind map is a graphic organiser in which the major categories radiate from a central idea and sub-categories are represented as branches of larger branches. It is a visual tool that can be used to generate ideas, take notes, organise thinking, and develop concepts (Budd, 2003; Murley, 2007; Siriphanic & Laohawiriyano, 2010; Al-Jarf, 2011). In other words, it is a tool for language teaching that helps the teacher introduce or bring together multiple words that are linked to one subject or theme.

    As with a traditional outline, a mind-map is based on organising information via hierarchies and categories. But in a mind-map, the hierarchies and

associations flow out from a central image in a free-flowing, yet organised and coherent, manner. Major topics or categories associated with the central topic are captured by branches flowing from the central image. Each branch is labelled with a key word or image. Lesser items within each category stem from the relevant branches.

In order to create a mind-map, we usually start in the middle of the page with the central theme or main idea. From that point, we work outward in all directions to create a growing diagram composed of keywords, phrases, concepts, facts and figures. Murley (2007) explains that mind-maps graphically show ideas in a relational context, with the main topic at the center of the map, major subtopics on branches radiating from the main topic, and sub-subtopics around each subtopic that can be created with paper and pens or with one of several computer applications.

3. **Mind-map features**

    The four main features of a mind-map are as follows:

    3.1. Each mind-map has a central node that serves as a starting location containing the main theme or idea. Buzan & Buzan (in Budd, 2003) emphasise that the central point in the mind-map must always be an image because the brain is drawn to an image more than a word.

    3.2. The ideas of the mind-map "radiate" from the central node as branches with subnodes connected to each other in parent-child relationships. Differences in the size of the branches and the associated words are used to reinforce associations and to add emphasis (Buzan & Buzan in Budd, 2003).

    3.3. The final structure of the mind-map becomes a hierarchy of linked nodes. The radiant structure of a mind-map with explicit branches promotes associations. Palmberg (2011) claims that our consciousness always analyses how things are connected to each other. And when that is done, the mind creates an image to symbolise the structure. A

lot of the brain's work is based on association and it automatically links different subjects together to create a system.

3.4. Each connector or branch has keywords or colourful images associated with them. The use of images in the entire mind-map is recommended. Budd (2003) points out that a traditional outline is often monochromatic whereas the use of colour is important in creating mind-maps. In particular, many mind-maps use one colour for each major category to aid in organisation. Each branch is captured by a single keyword, not a phrase or sentence. Using single words reduces ideas to their core. Important ideas are not obscured by extraneous words. And new associations are not limited by more specific phrases.

4. Technique of making a mind-map

There are a number of software packages that can be used to create mind maps on a computer. Regardless, to make a paper-pen based mind map, it is recommended to use a large sheet of white blank paper and turn it lengthwise, that is, in a landscape orientation. Pens that are used are in multiple colours and varying thicknesses (Murley, 2007). The following procedures are presented to describe how to make a paper-pen based mind map:

4. 1. Place the central theme or main idea or controlling point in the centre of the paper. We may find it easier to place our page on the side, in landscape orientation, which is easier for drawing purposes.

4.2. Use lines, arrows, branches and different colours as ways of showing the connection between the central theme or main idea. The relationships are important, as they may form our essay paragraphs.

4.3. Avoid creating an artistic masterpiece. We should draw quickly without major pauses or editing. It is important in the initial stages of mind mapping to consider every possibility of ideas, even those we may not use.

4.4. Choose different colours to symbolise different things. The method is entirely up to us, but try to remain consistent so that we can better reflect on our mind map at a later stage.

4.5. Leave some space on our page. The reason for this is that we can continue to add to our diagram over a period of time. If A4 sized paper is small, we may like to use A3.

5. Samples of mind-maps

5.1. The mind-map below is created by a ninth grade student describing the human brain, particularly the multiple intelligences. As can be seen in the mind-maps, some images and colours are used. Briefly, when making an artistically colourful mind-map, creativity is solely accommodated.

5.2. The following mind-map is a masterpiece of a student who was in the ninth grade of junior high school 3 years ago. She made a mind-map showing her self identity. Unlike the first mind-map sample which is colourful, the mind-map below is not provided with colours. Though it is colourless, it can still be said to be so artistically made.
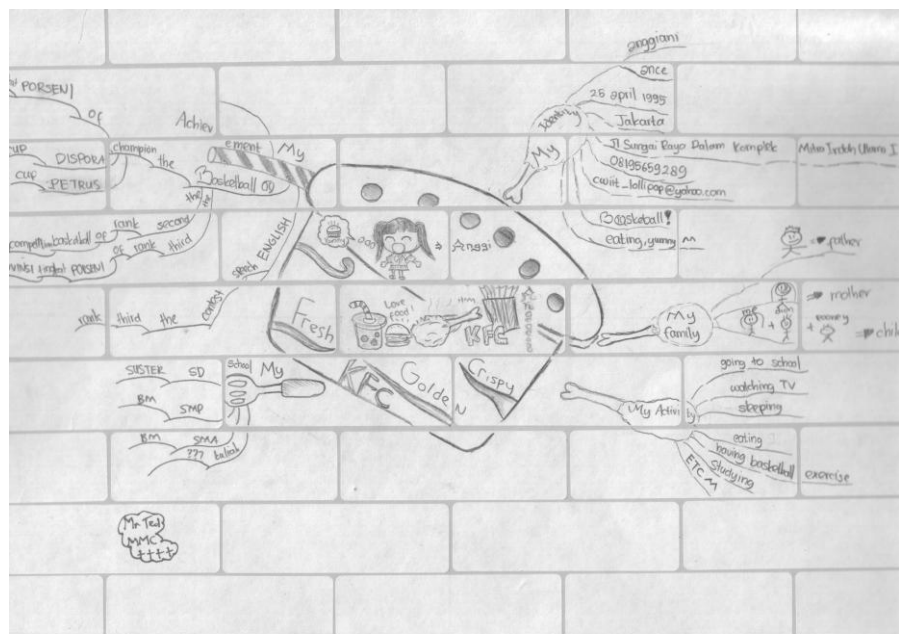
6. Positive values of mind-maping in the EFL classroom

Mind-mapping is a good technique for brainstorming because ideas can be captured as they are suggested, without worrying about where they fit in a hierarchy. Once all the ideas have been captured, they can be grouped and prioritised. Compared with traditional outlines and presentations, mind-maps offer more convenient advantages. Murley (2007) explain that the radiating design of a mind-map keeps the main topic or idea central, with all its major subtopics close to it. Similarly, sub-subtopics stay close to their topics. This arrangement keeps the big picture in focus and makes relationships and connections easier to see.

Next, because mind-mapping welcomes more flexibility than outlining does, students' creativity is subsequently encouraged. Memory retention is enhanced as mind-mapping allows displaying all related topics on the same mind-map, with emphasis and connections indicated by images, symbols, and colours. Not only does it trigger students' creativity, but also attract students' attention. The benefits of mind mapping include providing the students with a more attractive and enjoyable format for their eye or brain to look at, muse over, and remember.

Additionally, Murley (2007) notes that it is easy to understand the "maps" drawn on mind-maps. This benefits the students as it saves time and increases productivity. Different learning styles in EFL classrooms can also be accommodated. Mind-maps are especially helpful for strong visual learners who absorb information better when it is presented via diagrams and similar visual aids than through written text.

Mind-maps also help students see connections between prior knowledge and new information, which helps them transfer what they learn and apply it to new situations. When faced with writing tasks, compared to traditional writing instruction that depends on the textbook only, mind-mapping technique proves to be a powerful tool for improving students' ability to generate, visualise and organise ideas (Al-Jarf, 2009).

Moreover, Al-Jarf (2011) points out that mind-mapping is used to enhance learning. Visual learners find it useful as an illustrative tool that assists with managing thought, directing learning, and making connections. Al-Jarf (2011) also adds that mind-mapping enables students to better organise, prioritise, and integrate material presented in a course.

From the discussion above, it is clear that mind-mapping is an effective technique for harnessing the power of both sides of the human brain to foster studying, problem solving, critical thinking and memory recall.

7. Drawbacks of mind-maping in the EFL classroom

Not being blinded by the powerful advantages mind-mapping offers as stated above, we also need to admit the disadvantages mind-mapping brings about in the EFL classroom (Hofland, 2007).

First, mind-mapping is not unfamiliar in the teaching and learning process, yet it is not widely used in schools. Budd (2003) states that the students will probably find it a bit odd to make even one very simple mind-map when first using mind-mapping technique. This results into a complicated experience as the students may think it is time consuming. However, this must appear to be so only in the beginning. There is one solution to cope with it: any students who get involved in mind-mapping technique to improve their leaning need to practice regularly. In other words, the more the students use the technique, the easier it becomes.

Another disadvantage in mind-mapping technique is that it uses many images, symbols, and colours. This could make it difficult to get some students to use mind-mapping technique (Hofland, 2007). As the students need to use coloured pencils or crayons, they might feel uncomfortable to know that there are students out there are writing in their notebook. Moreover, not all students are good at drawing and colouring. It appears to be awkward to force all students to draw images and symbols and colour them when making a mind-map.

8. Effectiveness of mind-mapping in the EFL classroom

8.1. Reading Ability

Siriphanic & Laohawiriyano (2010) point out that mind-maps are effective in teaching and learning. They are helpful in terms of helping communicate information because complex concepts can be easily clarified into simple ones. Furthermore, they are also able to provide students with meaningful displays so that learners can develop a holistic understanding of the content to be learnt.

A study on the use of mind-mapping technique to improve reading comprehension ability was conducted by Siriphanic & Laohawiriyano in 2010. The results from the study show that, after teaching mind mapping technique, the majority of the students improved their reading ability. The results suggested that:

- the English reading comprehension post test mean score of students was higher than the pre test mean score at the 0.05 level of significance;
- most students were satisfied with their own reading comprehension ability;
- they enjoyed working in group and agreed that mind-mapping technique was a useful technique and can be applied to non-English subjects.

From the research finding stated above, it can be concluded that mind-mapping technique is effective when used to improve reading comprehension ability. In addition, it also revealed that the students felt satisfied with their progress achieved through the use of the mind-mapping technique. Finally, the students also showed excitement when getting involved in teaching and learning process in which the mind-mapping technique was used.

8.2. Writing Ability

Mind-mapping technique is also seen as a teaching tool that can effectively improve students' writing ability. It helps the students brain-storm, generate ideas, relate main ideas and supporting details. Buzan (in Al-Jarf; 2009) asserts that mind-maps can be used to generate ideas, take notes, develop concepts and ideas, and improve memory. Additionally, it is a great way to introduce an overall topic, increase student involvement, and get thoughts down quickly.

A research on the use of mind-mapping software in enhancing the students' writing ability was conducted by Al-Jarf (2009). The findings of the research are presented as follows:

The sample groups consisted of students who had difficulty generating ideas in writing paragraphs with topic sentences and supporting details. A mind-mapping software was used to help students brain-storm, generate ideas, relate main ideas and supporting details. The mind-mapping software uses lines, colours, arrows, branches to show connections between the ideas generated on the mind map. Every week the software was used to create mind maps for the essays they had to write.

Before instruction, no significant differences were found between both groups in their writing ability. Both groups were exposed to the same writing instruction. After instruction, post-test results showed that experimental students who used the mind-mapping software, made higher gains in writing. Significant difference in writing achievement were found between students who received tradition writing instruction that depended on the textbook only and those who were trained to use a mind mapping software to brainstorm, generate and organise ideas as measured by the posttest.

This means that use of the mind mapping software proved to be a powerful tool for improving students' ability to generate, visualise and organise ideas. It made the topic more tangible. Mind mapping raised the good and average student performance and the performance of the lowest-performing students as well. They became faster and more efficient in generating and organising ideas for their paragraphs and were able to generate more detailed ideas than students who did not use the mind mapping software. Moreover, the present study revealed positive effects of mind mapping on students' attitudes towards the mind mapping prewriting activity.

9. Possible lesson plan using mind-mapping in an EFL lesson

Let's take an example of a classroom session where a teacher wants to discuss the seasons in western countries (let's say the United States of America) and more specifically the following three points:
- Introduce the four different seasons
- Talk about weather conditions in each season
- Talk about activities that people undertake in each season

The three points above are the learning objectives which the students are expected to able to at the end of the lesson. It can be clearly seen that enhancing certain vocabulary and improving the students' speaking skills are emphasised in the lesson. The learning and teaching process is conducted through some steps as illustrated below. Additionally, the guidance pictures in making the mind-map step-by-step are also presented. No images and colours are used in the mind-map, yet it is still able to visualise information and organise ideas, as can be seen below:

First, start by putting down the word 'Seasons' in the centre of the writing space, like this:

Next, ask the class what comes to their mind when they think of seasons. When doing this stage, the students can come up with words in other languages (it is highly recommended that the teacher always encourages the students to speak up in the target language, English). Subsequently, the teacher helps them by putting down the correct word in English. As the students come up with words, the teacher starts drawing out the mind-map branches, like this:

Then, after the branches of the mind-map are drawn, the students now have the names of the four seasons on the partly-finished mind-map. The teacher can take the conversation forward by asking pointed questions about the weather conditions in the four seasons. For example, "What is the weather like in summer?" Once the teacher gets the answers to these questions, the teacher notes down all the words in the corresponding branch of the mind-map like this:

Then, the class now has an almost complete mind-map of the seasons and the weather conditions in those seasons. After that, to take the class to the next level of season and weather related vocabulary, the teacher asks them questions about what each of them does in a particular season.

The teacher can also take a different route and discuss what each of them likes or dislikes about a particular season. This is a good illustration of the great advantage of using a mind map. It gives us the flexibility to spontaneously change tracks while the class is in progress without losing focus the subject. So, for example here, the teacher could choose to talk about which seasons are liked or disliked or the teacher could talk about activities linked to a season depending on what the mood of the class is and what the students are more interested in talking about.

In this stage, the class now has a complete mind-map that covers the three questions that the teacher sets out to cover at the start of the class. And it looks like this:

Follow-up activities:

The following are a series of possible activities (after completing the above procedures) that the teacher can take forward:

- Ask the students to write a short paragraph about one season that they like or dislike.

- Ask the students to be seated in pairs. Then, hand out one reference conversation guide to one pair of students and get them to have a conversation about what they each do in a certain season, in winter, for example.

- Engage the entire class in conversations about favourite seasons, weather conditions etc.

- To make a more artistic mind-map, the teacher can ask the student to draw some symbols or images representing each keyword (if possible).

10. Conclusion

The writer hopes that the current paper provides some clear insights that mind-mapping is a technique that offers many possibilities for teachers of English as a foreign language, that it can be used to support various language learning activities and that it is recommended as a way to deliver meaningful learning for students (Buzan in Budd, 2003).

A mind-map is an effective means to take notes and brainstorm essay topics. Consequently, mind-mapping technique seems 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. The evidence suggests that mind mapping may impact on students' abilities to plan and organise their ideas for writing tasks under exam conditions. Besides that, mind-maps are also most valuable when the key objective is to develop a comprehensive understanding of all the key concepts involved in a subject area. It can aid creativity, organisation, productivity, and memory.

A mind map involves writing down a central theme and thinking of new and related ideas which radiate out from the centre. By focusing on key ideas written down in our own words and looking for connections between them, we can map knowledge in a way that will help us to better understand and retain information. Furthermore, in the reading aspect, mind-mapping technique is helpful to provide students with meaningful displays so that learners can develop a wider and deeper understanding of the content that is learnt.

However, there are some drawbacks in terms of getting used to making mind-maps that need to be paid attention to. As mentioned earlier, the undeniable obstacles of using mind-map technique in the EFL classrooms are apparently highlighted.

Overall, the writer finds the disadvantages of mind-maps are far outweighed by their advantages. In his opinion, the best thing about mind-mapping is that it is so simple to make that it is worth being given a try.

11. Recommendation

Based on the aforementioned discussion, it is recommended that schools stakeholders pay more attention to the use of mind-mapping technique for teaching and learning in the schools. They should maintain the high levels of mind-mapping technique usage among students though continuous education and promotion of the benefits attached to mind-mapping technique. This can be made possible if there is a requirement to integrate mind-mapping technique in the EFL subject at schools.

Lastly, regarding classroom practice, as a way to introduce the mind mapping technique the writer thinks that 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. Additionally, any teachers who

introduce mind-mapping technique in their classrooms should, as a matter of urgency, be aware of the awkward situation experienced by the students when first making a mind-map in which many images, symbols, and colours are often used. The teachers, therefore, should give sufficient time and guidance for the students to practice making it regularly. As a result, the integration of mind-mapping technique in the EFL classroom will not become a haunting spectre that hinders the students' improvement in the English teaching and learning.

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