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Using Thinking Maps for Developing Some English Writing Skills of Secondary School Students

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CHAPTER ONE

CONTEXT OF THE PROBLEM

Introduction

Writing is one of the productive skills that shows the outcomes of the other language skills development. Gaith (2004) highlights the importance of this skill in that writing enables students to explore thoughts and ideas and makes these ideas visible and concrete. It stimulates reflection and communication. It gives learners the chance to reflect on the ideas. Risnger (cited in Mogahd, 2004) believes that writing needs thinking and that is the responsibility of the learner. Bello (1997) pointed out that writing is a continuous process of discovering the most effective language to convey the thoughts to the learner. This skill has different sub-skills. So, the directives of the Ministry of Education in Egypt give emphasis on these sub-skills. They are as follows: using correct spelling, punctuations, grammar, using suitable words in the text, clarity of ideas, using smooth transitions to help the ideas flow together and using the topic sentence. (Mogahed, 2004).

Since writing is one of the main important skills, there are some studies that tackled the difficulties facing students during writing and how to remedy the weakness of the performance of students in writing (e.g., Basset ,2001; Kabka and Oberman ,2001 and Sanders,2000) . These studies suggested solutions to the points of weakness representing in activating cooperative learning, offering varied learning activities and training in the method of teaching writing.

Chakraverty and Gaotum (2000) conducted a study on a class of 70 students studying English as a second language in India. The researchers could define a number of problems related to the sub-skills of writing. They are:

1. The difficulty of gathering information through brainstorming.
2. The difficulty of organizing information and the sequence of ideas.
3. The difficulty of making rough drafts.
4. The difficulty of sorting past experiences.

5. The weakness of persuasion strategy and reaching a conclusion.

Therefore, they used two strategies for the first two stages of writing: an oral discussion in ***pre-writing*** and mind map and reading text in ***while-writing***. The third stage was to organize and revise the writing topic.

Kevin et. al. (2000) used semantic mapping and semantic feature analysis to develop vocabulary learning skills that are necessary for writing for the ESL students of preparatory and secondary stages, and encourage them to use words in meaningful contexts through using the Word Wall Approach developed by Green(1993). According to this approach, students are divided into groups which are called the Word Wall Panels; each group has specific task under the guidance of the teacher.

Other researchers suggested some solutions for the problems concerning writing skills weakness

1. Selecting the topics that match the interests of students (Hodilsso, 1986, Silva, 1995)
2. The practice of English writing skill because it helps students express themselves, increase their confidence and develop communication skill (Castello and Helman,1995).
3. Coherence and cohesion (Liu, 2000)
4. Developing student's abilities to organize ideas and understanding the relations between them (Mohan and Naerson, 1997)
5. Teaching students alternative strategies to improve their writing. (Leo, 2002)

In Egypt, there is some sort of reluctance from the part of students toward writing practice but they struggle to develop their writing skills. Their reluctance may be due to the lack of knowledge of writing process (Muhamad,2000 ; Shalby, 2000).

Besides, Ali (2002) studied the difficulties facing students during practicing writing identified by Gilhooly (1991). "Lack of fluency or adequate control over the language including inadequate vocabularies, general lack of knowledge and the consequent inability to write effective pieces, and errors in grammar and the mechanics of writing" (p.84).

Ali (op.cit.) used a teaching strategy called "Writing Workshop" that is the method of writing instruction developed by Lucy Calkins. This method of instruction focuses on the goal of fostering lifelong writers. It is based upon four principles: students will write about their own lives, they will use a consistent writing process, they will work in authentic ways and it will foster independence, Writing workshop is an approach to teaching writing in which the students choose their own writing topics and move through prewriting, drafting , revising, editing and publishing their work as though they were professional authors (Tompkins,1994). Writing workshop is supportive to English language learners because students are encouraged to discuss their ideas, work with a partner or group in revising and editing , and interact verbally with others (Diaz – Rico & Weed, 1995 in Herrell, 2001). Moore(undated) states the components of the writing workshop as follows : mini-lesson, independent writing, conferencing and sharing. It can be observed that the above mentioned studies are concerned with free writing which is of great importance for the following reasons: providing opportunities for students to express themselves and their thoughts, increasing the students' confidence in their abilities to communicate through writing, not confining to specific pattern of thinking that affects the creative abilities of students, choosing the right method in presenting and organizing ideas in a certain way.

Departing from the supposition that the weakness of sub-skills of writing affects the writing skill as a whole, the researcher conducted a pilot study of an essay test entitled:

"Write a paragraph of about 100 words on "*Pollution as a World Problem*" and " *The Picnic you had last Friday"*. This writing test was applied to one secondary school class (N= 28 students) .

The results were as follows:

1. Students were unable to collect ideas and write topic sentences. (36%)
2. Students were unable to use their ideas in a sequential way (21%)
3. Students were unable to describe things, people and actions in a proper way (15%)
4. Students were unable to express causes and effects in a proper way. (15 %)
5. Students were unable to compare and contrast things, people and actions.(13 %)

In order to tackle the problem, the researcher suggested that using Thinking Maps as a teaching strategy might solve that problem. These maps help learners organize their thoughts, get them motivated to learn, improve communication skills and high order thinking skills, enjoy solving problems and improve their skills in writing and other skills.

To Hyerle (1996), Thinking Maps are eight visual maps used by learners and teachers to improve language skills including writing and other skills. Also, he sees that these maps comprise cognitive content and are based on the main thinking skills. These skills are: defining in context, describing, comparing and contrasting, classifying, whole/parts, sequencing, cause and effect and relationships between things.

Thinking Maps are visual learning tools but they are different from graphic organizers from different aspects.

1. Thinking maps are based on fundamental skills while graphic organizers are based on isolated tasks.
2. Thinking maps are consistent while graphic organizers are inconsistent graphics across classrooms.
3. Thinking maps are characterized by highly flexible forms while graphic organizers are often static ones.(op.cit)

Thinking Maps help and encourage individualized learning and cooperative learning (Danville Public School District,2004). Throughout different works of Hyerle (2009,2003,2000) . The eight types of Thinking Maps are:

1. **Circle Map**: for defining in context, it develops dialogical thinking and it is used for brainstorming and recalling prior knowledge.

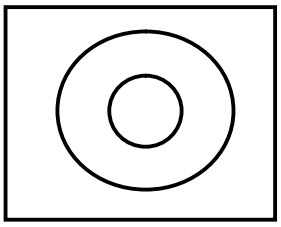


Figure (1) Circle Map for defining in context
Source: Hyerle (1995, 2003, 2009)

2. **Bubble Map**: for describing with adjectives, it aims at developing evaluative thinking.

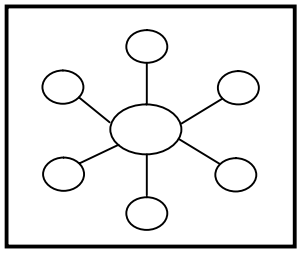


Figure (2) Bubble Map for describing with adjectives
Sorce: Hyerle (1995, 2003, 2009)

3**. Double Bubble Map**: for comparing and contrasting and it develops evaluative thinking.

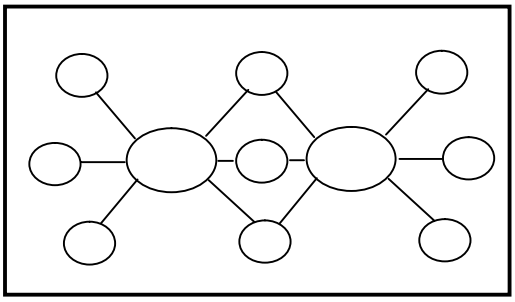


Figure (3) Double Bubble Map for comparing and contrasting
Source: Hyerle (1995, 2003, 2009)

4. **Tree Map**: for classifying/grouping, it aims at developing hierarchical thinking and it expresses the main idea and its details.

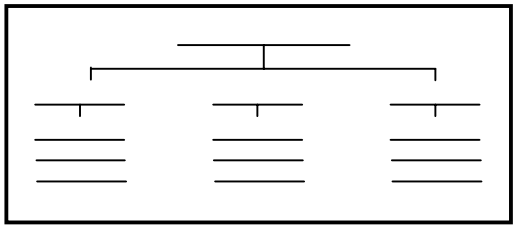


Figure (4) Tree Map for classifying/ grouping
Source: Hyerle (1995, 2003, 2009)

5. **Brace Map**: for identifying parts/wholes relationships and it aims at developing hierarchical thinking.

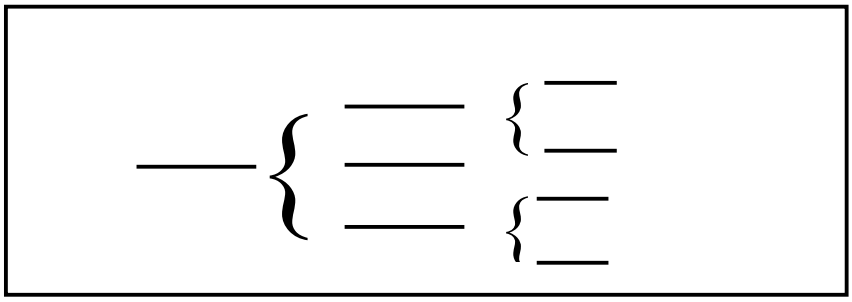


Figure (5) Brace Map for identifying parts/wholes
Sorce: Hyerle (1995, 2003, 2009)

6. **Flow Map**: for sequencing and ordering and it aims at developing system dynamics thinking.

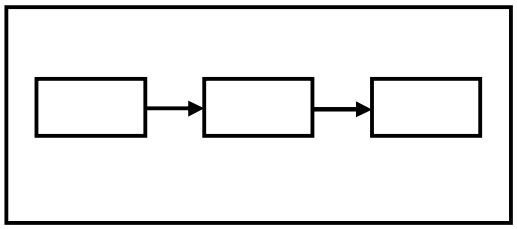


Figure (6) Flow Map for sequencing and ordering
Source: Hyerle (1995, 2003, 2009)

7. **Multi Flow Map**: for analyzing causes and effects and it develops system dynamics thinking.

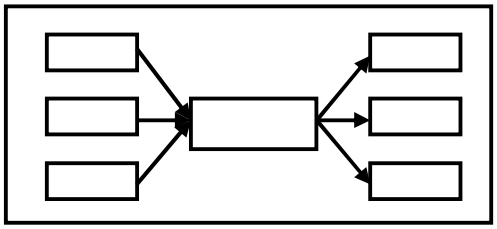


Figure (7) Multi Flow Map for analyzing causes and effects
Sorce: Hyerle (1995, 2003, 2009)

8. **Bridge Map**: for seeing analogies and metaphors, it helps to obtain new knowledge. Besides, it clarifies to clarify the relationships between concrete and abstract.

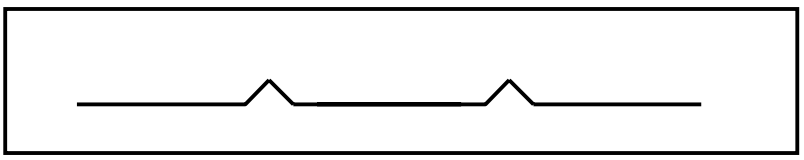


Figure (8) Bridge Map for seeing analogies and metaphors
Sorce: Hyerle (1995, 2003, 2009)

For Sadek (2008), Thinking Maps are an exciting way in teaching students to think and process the information. Thinking Maps are beneficial to learners because they help them learn, offer them the easiest way for speaking and writing, and help them develop their higher thinking skills. Moreover, they enable and help slow learners reach the required level, (Holesman, 2004)

Also, Holesman(2004) believes that when we use Thinking Maps, our purpose is to help students in using thinking process in their learning. He specifies the reasons behind thinking maps:

Students become aware of the types of thinking they can apply to assignment. Students learn ways to organize information. Students have control over the way they want to think. Students can easily demonstrate their thinking.

Hyerle (cited in Al-Hadi,2009) states that Thinking Maps are based on theoretical bases like the brain research, habits of mind and information processing but Al-Hadi (2009)emphasizes that Thinking Maps are connected with some modern theories such as constructive theory, schema theory, cognitive theories, the dual coding theory and transformational learning theory.

Al-Hadi (2009) studied the impact of five thinking maps (circle map, tree map, flow map, multi flow map and bubble map) on tourism and hotels students' reading comprehension of the expository texts in English language

Swartz and Perkin (cited in Fathallah ,2008) claim that the philosophy of Thinking Maps are based on three principles:

1. The clear of teaching thought has a strong effect on learners.
2. Activating mind inside the classroom leads to improving the way of thinking.
3. The connection between the process of teaching thought and the content of the lesson increase the students' thinking with the learned material.

Because of the importance of Thinking Maps, some studies were conducted and highlighted its importance in teaching many curricula. For example, the study of Hyerle (1996) that concluded that the use of thinking maps helped students organize their thoughts in a good way. So, their writing, reading and thinking skills were improved.

In his study, Holidy (2006) concluded that learning by Thinking Maps help learners develop writing skills and their life skills because thinking skills develop the main thinking skills and evaluate information.

Schultz (2005) studied the effectiveness of three Thinking Maps (circle map, flow map and multi-flow map) on reading understanding in English.

Holesman(2004) emphasized that Thinking Maps helped learners identify thinking processes of students and they also emphasize the increase of achievement of students in English and other subjects.

In his study, Singer (2004) explored the effect of Thinking Maps in improving writing skills and thinking skills of students.

Besides, Innovative site (2001) concluded that Thinking Maps as teaching strategy led to an assumption that teachers organize thinking skills during their teaching.

Problem of the study

Based on the related literature, previous studies and the researcher's experience in teaching English in secondary schools and the results of the pilot study, it can be stated that there are some different difficulties in English writing skill of first year secondary school students. These difficulties are: the inability to collect ideas and write topic sentences, the inability to use their ideas in a sequential way, the inability to describe things, people and actions in a proper way, the inability to compare and contrast things, people and actions, and the inability to express cause and effect relationships. Accordingly, the researcher

tries to overcome the difficulties of those students' writing skills by using Thinking Maps as a new teaching strategy world wide.

Questions of the Study

The current study attempted answer the following main question:

How to develop free writing skills of the first year secondary school students by using thinking maps?

There were some sub-questions stated as follows:

1. What are the required sub-skills in English writing for the first year secondary school students?
2. To what extent do students master these sub-skills?
3. What are the basics and the procedures of Thinking Maps used for developing writing sub-skills in English?
4. What is the effect of using thinking maps strategy on developing some sub-English writing skills?

Hypotheses of the Study

The following hypotheses have been formulated.

1. There would be a positive correlation coefficient between the study group's
   Thinking Maps awareness and their writing performances.
2. There would be statistically significant differences at 0.05 between the means of pre-writing performance test and those of post-writing performance test of the study group in favor of the post-writing performance.
3. The effect size of writing performance of the study group would be large.

Objectives of the study

The present study aimed at:

1. Identifying the writing problems facing EFL secondary school students.
2. Using Thinking Maps as a teaching strategy for developing some writing skills of EFL secondary school students.
3. Measuring the effect of using Thinking Maps on developing sub-writing skills of EFL secondary school students.

Significance of the Study

The present study is hopefully to be beneficial to the stakeholders of teaching English as a foreign language

1. Introducing a modern teaching strategy, i.e, Thinking Maps, to EFL teachers to develop sub-writing skills of their students.
2. Directing the EFL supervisors' attention to train teachers of English on how to teach EFL by using thinking maps.
3. Helping EFL supervisors to evaluate teachers and learners in the classrooms using Thinking Maps.
4. Recommending EFL secondary stage course designers to use Thinking Map as a component of cognitive strategies judged valid and reliable to be used in teaching

Limitations of the Study

The study was limited to:

1. Twenty three 1st year secondary school students at Al- Baramun Secondary School.
2. Five Thinking Maps : circle map, bubble map, double bubble map, flow map and double flow map.

3. Five sub-writing skills: collecting ideas and writing topic sentences, using ideas in a sequential way, describing things, people and actions in a proper way, comparing and contrasting things, people and actions, and expressing cause and effect relationships.

Tools of the study

To achieve the objectives of the study, the researcher prepared the following tools:

1. Difficulties of Writing Skills Questionnaire.
2. Thinking Maps Awareness Test.
3. Writing Performance Test.

Definition of Terms

Thinking Maps

To facilitate more precise understanding of the study, the researcher adopted the definition of Thinking Maps offered by Taher Al-Hadi(2009) in that: "Thinking Maps are visual tools representing fundamental cognitive skills/thinking processes. Each map has some guiding questions, key words and phrases and a frame of reference to be soundly constructed."

CHAPTER TWO

REVIEW OF RELATED LITERATURE AND PREVIOUS STUDIES

- MAPS AND CONVENTIONAL VISUAL LEARNING
- THINKING MAPS AS NON-CONVENTIONAL VISUAL LEARNING
- WRITING PROCESSES
- RESEARCHE AND STUDIES ON THE WRITING SKILLS
- RESEARCHES AND STUDIES ON THINKING MAPS

CHAPTER TWO

REVIEW OF RELATED LITERATURE AND PREVIOUS STUDIES

INTRODUCTION

In order to investigate the effect of using Thinking Maps in developing writing skills of EFL secondary school students, the review of related literature and previous studies is divided into four main parts .Part one deals with maps and conventional visual learning and semantic feature analysis . Part two deals with Thinking Maps (TM) as one of non-conventional visual learning: History of TM, TM overview, theoretical bases of TM, TM and meta-cognition, TM and constructivism, TM and reflection, TM and learning styles, TM and student interaction, TM and scaffolding, TM and thinking, TM and writing, TM and explicit instruction, TM and writing models, TM and discourse analysis, TM as assessment. TM and transfer of learning, TM and individualized learning, TM and cooperative learning, TM and habits of minds, matching TM to the Marzano strategies. Part three focuses on writing . It tackles the writing process: definition of writing skills, the importance of writing skills, free writing definition, techniques of free writing, objectives of free writing, , The steps for writing from maps, the three stages of writing, features affecting writing , the status quo of writing in Egypt, the relationship between Thinking Maps and writing performance, the importance of maps for students and teachers.

Finally**,** part four deals with researches and studies on the writing skills, and studies related to Thinking Maps.

A. Maps and Conventional Visual Learning

Mapping is one of the important strategies that has been discussed by different researchers from different lenses. **The first view** is of Shariatifar (2009). He states that a knowledge map is a graphical display for introducing information in the form of node-link made assemblies. The nodes contain key ideas and the links define the relationships between nodes and add structure and organization to the maps. The knowledge map provides students with a skeletal representation, it disregards the minor connecting words and gets the meaning. A map includes the important concepts in a topic. The concepts are written in boxes, ovals or circles and linked to one another by lines labeled with the named relation- represented by verbs or prepositional phrases. Vail(in Shariatifar,2009, p. 55) sees that "the knowledge map is a good way to share explicit knowledge and to capture what people with implicit knowledge hold in a given area". Nist and Simpson (in Shariatifar,2009, p. 55) suggest that "mapping benefits students who are persistent in using the strategy and who have high content knowledge in a particular domain". As for Freiberg,et.al. (2000) , mapping provides students with visuals as they think about and create relationships between ideas. In order to use mapping with students , the teacher should begin with easy and simple examples, motivate students, suggest words or terms related to the topic and write students' ideas. Another example may help the teacher see how relationships can be illustrated with mapping and also show the teacher that the student come up with relationships different from those that the teacher might

build. Such actions can make mapping an interesting way for motivating students.

The second one is of Bello (1981) who mentions that maps have an added advantage over both pictures and charts in that they represent something real, and at the same time do so in the form of a summary . Every map is a symbolized summary of the real thing and the information, it shows a very condensed content and thus requires close study. As for Holcomb (2001), the conventional visual learning tools involve **flowcharting, Venn diagram** and **fishbone**. **Flowcharting** is defined by Holcomb as " a graphic tool to introduce steps in a process and relationships between departments and other divisions in an organization,(p. 30.). To him, flowcharting can be used in time-lines, problem solving and critical decision points. **Venn Diagram** in Holcomb's view(2001,p.115) is "a set of two or more circles to intersect, be concentric or not touch at all as a way of illustrating relationships." The Venn diagram can be used to illustrate complex relationships, display data or generate discussion for problem solving and it helps groups compare and contrast different ideas or interests. **And** finally, the fishbone- as Holcomb thinks is "a visual representation of the relationships between contributing factors and problems. Because the picture branches act like the skeleton of a fish, it has become known as a" fishbone"(P. 66) .

Semantic feature Analysis as a visual learning tool is defined by Andrew and Bos (1985) as" a strategy used by the teacher to teach students both

vocabulary and concepts needed for comprehension". They claim that this strategy improves vocabulary development and reading comprehension. "Vocabulary should be taught because it is related to the main ideas presented in the text" (pp:2-3). But Ohillips (2002, p. 1) gives another definition to the semantic feature analysis . To him, it is a post reading strategy that increases the students' ability to categorize and conceptualize certain information".

Research and Resources (2012) indicate that the semantic feature analysis strategy helps students specify the characteristics of a concept by comparing its features to those of other concepts that fall into the same category. Research and Resources believe that strategy differentiates features of people, places, events and motivates student to think. On the other hand, Pronowski (1982) holds the view that semantic feature analysis focuses on the categorical nature of memory structures for individual words and on the ways in which words are alike and different…(p. 37)

Since the non-conventional graphic organizers are numerous, the researcher finds it suitable to shed light on some that are really connected with TM: semantic maps, mind maps and concept maps. **The Semantic map-** to Raymond and Jones (2006) is "a visual strategy which shows the major ideas of a certain topic and how they are related"(p.1). Zaid(1995) holds the belief that "semantic mapping has been a beneficial learning/teaching technique for native speakers or non-native speakers." He introduced the five phases of semantic mapping as follows: introducing the topic, brainstorming, categorizing,

personalizing the map and post- assignment synthesis. Also, Johnson &Pearson(in Bronowski,1982) outline that semantic mapping is a categorical structuring of information in graphic form. It is an individualized content approach, in that students are required to relate new words to their own experiences and prior knowledge.(pp: 34-35).

According to Novak and Canflas (2008), the concept maps are as "graphical tools for organizing and introducing knowledge. They include concepts inside circles or boxes, the relationships between them are linked together with links (lines or arrows) words on lines referred to linking words or linking phrases, specify the relationships between the two concepts" (p.1) .And finally, Wikipedia (2010) defines the mind map as "a diagram used to represent words, ideas, tasks or other items linked to and arranged around a central key word or idea". This site states that mind maps are used to illicit, visualize, structure and categorize ideas and as an aid in study, organization, problem solving, decision making and writing. Wikipedia refers to the difference between the mind map and the concept map in that the mind map is based on radial hierarchies and tree structure denoting relationships with a central governing concept while the concept map is based on connections between concepts in more diverse patterns. To put it clearer, the mind map and concept map are different in that mind maps focus on only one word or idea each, whereas concept maps connect many words or ideas.

McTighe and Lyman (in Freiberg and Driscoll,2009) reviewed the research on mapping and found that mapping is successful in improving learner retention of information : Their findings yielded that the use of the process of mapping :

> 1) aid memory by giving important prompts to focus on a topic or a problem, and providing a visual representation of concepts, 2) provide a common frame of reference by offering heading ,sub-heading and specific prompts for action (individual, small or large group), 3) provide a motivation to act by making students write out their thoughts,4) create a variety of mapping options in the mind for transfer to other situations,5) promote relationships between ideas and information by asking questions and discussing during mapping. Seeing enhances understanding, help students organize, analyze and evaluate their representations, p.315).

These trials are thought to have paved the way for David Hyerle to initiate Thinking Maps (TM) as a new strategy worldwide.

B.THINKING MAPS AS ONE OF NON-CONVENTIONAL VISUAL LEARNING

INTRODUCTION

In this part, the researcher gives a brief account of history of TM, TM overview, theoretical bases of TM, TM and meta-cognition, TM and constructivism, TM and reflection, TM and learning styles, TM and student interaction, TM and scaffolding and TM and Thinking, TM and writing, TM and explicit instruction, TM and writing models, TM and discourse analysis, TM as assessment, TM and transfer of learning and TM and individualized learning, TM and cooperative learning , TM and habits of mind and matching TM to Marzano strategtes.

1. HISTORY OF THINKING MAPS

David Hyerle, the creator of thinking maps, became interested in linking thinking ideas visually, first as a student and then as a teacher. Hyerle(in Hickie,2006). When he was at the university of California at Berkely, he became

interested in the teaching of writing and learned how to use webbing techniques with the Bay Area writing project. (op.cit.).During that time , Hyerle began to create his own personal visual language using the webbing techniques. Later, teaching at an inner city middle school in Oakland, California. In the 1980s, he became frustrated in trying to help students make connections to content and introduced his students to webbing. The students became comfortable with visual brainstorming techniques and success with quantity of ideas they web. However, students who brainstormed numerous, exciting and imaginative ideas ,had difficulty organizing them for a completed writing piece". Hyerle (in Hicikie ,2006).

When Hyerle began piloting a " thinking skills" program that contained diagnoses based on numerous thinking processes, he started to investigate different techniques that were based on students using more structured mapping for concept development. By the late1980, Hyerle had begun to develop the common visual language of the eight flexible maps that became the basis of the thinking maps program.

In 1988, Innovative Sciences, Inc. published Thinking Maps, and training methods began for teaching. In 1992, Thinking Maps resource materials were created for all elementary grade levels, and in 1998, Thinking Maps Tools for learning was published as the collective resource and training manual for using Thinking Maps. Hyerle (in Hicikie ,2006, p.51)

In 1998, *Write ... from the beginning,* a writing program by Jane Bucking based on Thinking Maps, was published initially as a writing program for KG students. By the year 2000, there were 2,000 whole schools across the United States where teachers had received in depth and follow up training Thinking Maps". Hyerle (in Gibbs, 2009, p.19)) mentions that "Thinking Maps have proven applicable in the areas of reading comprehension, writing, mathematics and technology".

2. THINKING MAPS OVERVIEW

INTRODUCTION

In this section, the researcher discusses some points relevant to Thinking Maps that need to be discussed: definition of thinking maps , thinking maps as visual tools , the basic qualities of thinking maps and the differences between thinking maps and other graphic organizers.

In David Hyerle's (2004) view , “Thinking Maps” are not a theory nor a program of development lessons. It is a language that enables learners with mixed abilities to communicate what and how they are thinking . Through this language, students can convey, negotiate or deduce meaning with others. Gawith (2006) sees that thinking maps as a language for learning stating that "it is language by doing". She might take Hyerle's (2004) view into consideration that is: "Thinking Maps become a new language for deepening conversations so that students come together. Through the maps, students face their own and each other's thinking opening space for problem solving and transforming the quality of thinking and learning across whole school". Hyerle (2006) sees that Thinking

Maps as a transformational language where information is processed and transformed into knowledge. To him, Thinking Maps are eight designs: each represents a thinking process. Each map has a common name , a name for a specific thinking process, each map is used to construct and show knowledge. Hyerle (in Hicikie, 2006). According to Hyerle and Yeager (in Hicikie,2006) , “the eight fundamental thinking skills upon where the maps are based were identified by early psychologists and present day cognitive scientists as basic cognitive structures for thinking, language development and learning"(p.50)

"The purpose of creating Thinking Maps was to have common visual language for learning, Transferring thinking processes and integrating learning". (Madiri, 2008, p.27). In other researchers' view (e.g. Mata- Kawryga, et. al., 2001).Thinking maps is an instructional strategy that can help teachers and all students with all different abilities to communicate what and how they are thinking. In the researcher’s belief, Thinking Maps might be a strategy for transforming the verbal language into a visual language.

Out of 400 graphic organizers in the world , Hyerle (2004) represented eight thinking maps based on eight thinking processes taking place in the mind. As visual tools, Thinking Maps not only represent cognitive strategies(Holesman ,et. al. 2004) but also are the cognitive bridge to literacy (Hyerle, 2008). Hyerle elaborates this idea stating that " Students are better able to make sense of a selection when they… identify the text structure or pattern of thinking

and map it out (either in their head or on paper), they are then able to remember , analyze and synthesize information into meaningful understandings (op. cit.)

As for the base qualities of thinking maps, Hyerle (1996 , pp: 99-106) states the five characteristics of Thinking Maps as follows:

a.Consistency is the source of small minds unless it is balanced with a high degree of flexibility. Most languages are consistent and flexible and the maps are consistent when each map has a unique form and specific way for easily designed.

b.Flexibility of forms. The flexible and generative quality of each map is essential for students as they engage in both creative and analytical thinking. The linked characteristics of consistency and flexibility are most important because students, in cooperative learning groups and teachers working with a whole class, are able to think together, share ideas and synthesize different patterns of information". This means that each map can be expanded ,modified and used in different contexts.

c. Developmental use from novice to expert. This means that Learners can use the same graphic tools from pre- school through levels of complexity. Also, these tools may be a common set of communication tools for multi- age. This common visual language supports the basic needs learners have for continuous cognitive development from novice to expert uses of Fundamental thinking processes".

d.Reflectiveness."One of the central concerns of constructivist cognitive revolution is the development of students' meta- cognitive abilities or epistemic

cognition"., Costa (in Hyerle, 1996 b). Through meta- cognition students become aware of thinking processes, their own problem- solving strategies, learning styles and the nature of knowledge whether it is received or construct. While using Thinking Maps, students are taught how to use a visual cue to elicit their reflection about how they are thinking" (Hyerle,1996). These maps motivate students to share and compare visual representation with one another and teachers.

e. Integrated and Interdisciplinary Use of Maps. Thinking Maps are used across disciplines and for interdisciplinary problem solving. It means that thinking maps could be used in other school subjects. Different maps can be blended together to make one map that addresses two different thought processes. For example;

flow map could be combined with tree map, also, flow map could be combined with multi-flow map.

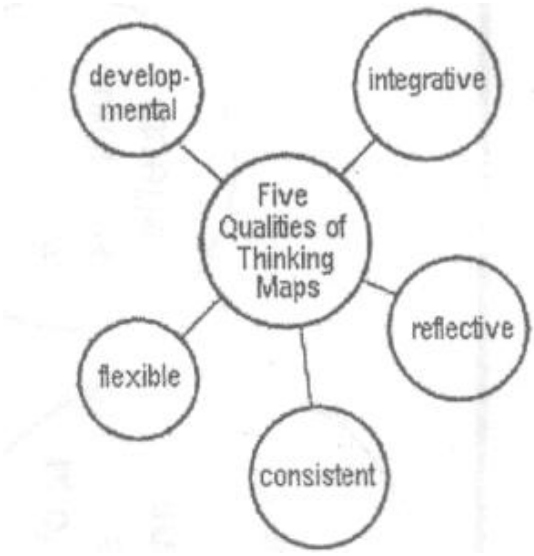


Figure (9) .Source: www.thinkingmaps.com /htthinkmap.php3

The differences between Thinking Maps and other Graphic Organizers:

" What distinguishes Thinking Maps from other graphic organizers is that each map supports a specific thinking process such as qualifying, sequencing, comparing and contrasting and classifying. Thinking Maps move students beyond the brainstorm toward focused organization of information. Each map Provides a consistent, visual language for engaging with information using a specific method of processing. Thinking maps are student-centered and teacher mediated . Thus, everyone in the environment speak…A visual language helps to allow for efficient communication and reflection about content and about process". (Thinking Foundation , 2010).

In general, Madiri (2008, p.22) states that there are some studies ,Ex(Barbara and Merchant,1990; Snapp and Glover,1990) indicating that graphic organizer is one of the study skills that proves its benefits, gains on learning and intelligence.

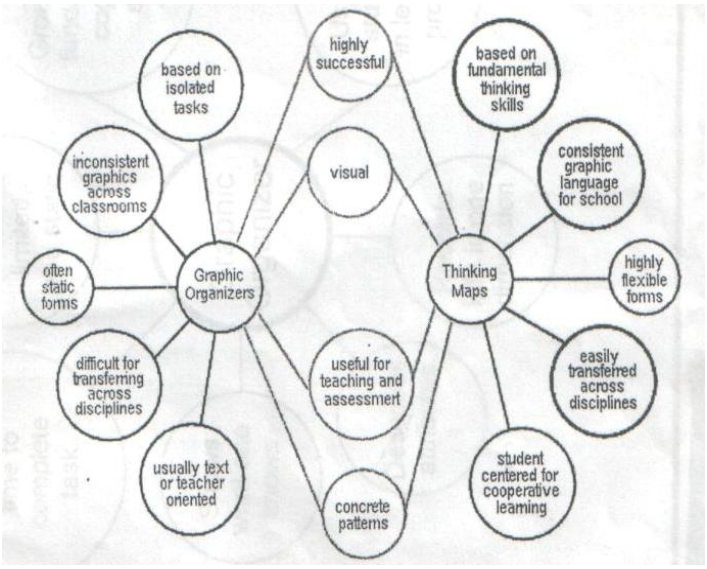


Figure (10) . Source: www.thinkingmaps.com /htthinkmap.php3

3.THEORTICAL BASES OF THINKING MAPS

Hyerle and Yeager (2000, P:28-57) mention that the brain- based learning researches support the use of Thinking Maps. Students first use Thinking Maps by their own way with their own information. This way makes students feel comfortable and not to feel threatened or anxiety when they think deeply . The Thinking Maps provide meaning because they are repeated. The repeated use of these specific maps help store knowledge. When the brain is alert to information that has meaning, it tries to store that information in short memory (Kotulak, 1996). In order for the information to be stored in long term memory, an individual must do deep process the materials,(Danielson ,2002).Wolf and Brandt (1998) states that "The brain …is always trying hard to make connections between the new and the old. Hyerle(1996) states that the creators of thinking maps provide the experiences that help students understand patterns that connect.

Al- Hadi (2009) sees that the theoretical bases of Thinking Maps are related to schema theory, brain research, involvement load hypothesis, cognitive apprenticeship, the dual coding theory and the transformational learning theory, in addition to the ones referred to by Hyerle. While Madiri (2008) sees that " The theoretical foundation of the thinking maps to Hyerle's (1995) view, are based on constructivism developmental learning and interactive learning.

On the other side, Sunseri (2011) mentions that Thinking Maps are based on the theory of Vygotsky's (1975) Zone of Proximal Development. He believes that the teacher should utilize from the two developmental levels that students have , one of them is the actual developmental level that represents the skills and the abilities the students own, the other is the potential developmental level that represents the skills and the abilities the students should own.(p.3). Anyhow, the research will tackle in the coming sections- the relationship between Thinking Maps and some areas of concern in visual learning and thinking processes.

4.THE RELATION SHIP BETWEEN THINKING MAPS AND METACOGNITION

Meta-cognition

Meta-cognition is the ability to know what we know, know what we don't know and know how to remediate what we don't know", Cae and Nietfeld (in Hetzel and Laskey, 2010, p. 5). While Costa (2004) refers to an awareness of one's own cognitive processes and the regularity mechanism learners and teachers use to problem solving, there are some meta-cognitive strategies identified by O'Malley and Chamot (1994, p.47) : selective attention, planning, monitoring, and evaluation. Therefore, visual tools enable students to look into their thinking…as they might look at their own reflection in a pool of water". Costa (in Hyerle, 2010).As students move from novice to expert use of thinking maps, a meta-cognitive stance develops from gathering data from their senses and questioning how they are perceiving and mapping the information. The

Thinking Maps thus offer a space for displayed meta-cognition.When students represent their cognitive strategies with visual tools, they practice meta-cognition, a principle of learning in which they describe the thinking processes; they use to organize content knowledge into patterns and to solve problems", "Hyerle (1996, p.48). Thinking Maps are a form of meta- cognition. By having students show their thinking using graphical representation, they expand their understanding of a concept and enhance their ability to communicate that understanding. They can interpret and connect with other maps…" (Constructed Response. Wordpress.com.2011).

Spiegel (2009) states that when students display their knowledge by using visual tools , they practice meta-cognition. Also, thinking maps are effective for communication and assessment about what they are learning.

5. THE RELATIONSHIP BETWEEN THINKING MAPS AND CONSTRUCTIVISM

Constructivism,defination

Richardson, et al. (in Abdel-Haqq,1998) defines constructivism as " an epistemology, a learning or meaning- making theory, that offers an explanation of the nature of knowledge and how human beings learn. It mentions that individuals create or construct their own new understanding or knowledge through the interaction of what they already know and believe and the ideas, events and activities with which they come in contacts" (p.2). Smilstein (2003) refers to the main objectives of constructivism: Learning happens from

exploration ,discovery , and participation in real life activities , it is a group activity ,assessment is done from the beginning to the end and that the outcomes are unique and varied. Russell (2010), states that constructivism is one of the elements in Thinking Maps Program that help students translate their ideas onto paper and write well- structured composition. Buxon ,et.al. (2009) hold the belief that Thinking Maps are used to construct, record and display the processes of thought going on inside students' minds. By doing this, the students make their thinking visible . This view seems to go in parallel lines with Hyerle's (2005) view that Thinking Maps can be used to create different types of some content information and his [Hyerle's] (2010) view that Thinking Maps help students organize ideas to complete a task and to create networks of knowledge. The researcher sees that the relationship between Thinking Maps and constructivism is reflected in valuing the students' point of view and valuing the student thinking in the classroom in the stages of constructing knowledge and information. Besides, Hyerle(2009) sees that Thinking Maps can be used to create mental models of the same content information. Furthermore, Cognitive constructivists believe that students create knowledge individually based on what they have in their minds. Cobb(in Wang,et.al. 2004). Hyerle (2000) mentions that Graphic organizers are visual representations that provide a framework for students to construct meaning and link learning. Sunseri (2011) added that constructivism form the basis of Thinking Maps when students use a map to

illustrate a concept and make meaning when they break down a concept or idea into its parts on paper.

6. THE RELATIONSHIP BETWEEM THINKING MAPS AND REFLECTION

Reflection

" Reflection is a form of self-evaluation – distorted in the sense that judgment is emphasized rather than data collection" (Curtis,2001.p. 18) Brockbank and Mcgill (1998) explains that the term " reflection" has two senses. First the process or the means by which an experience in the form of thought, feeling or actions, is brought into consideration". Secondly deriving from the first, the creation of meaning and conceptualization from experience and the potentiality to look at things as other than they are" (p.66)

Hatton ans Smith (1995), mentions four strategies for fostering reflection , they are as follows: 1) Action research project, 2) Case and cultural studies, 3) Practical experiences, 4) Structured curriculum tasks , 5) reading fiction and non-fiction , oral interviews, 6) Writing tasks such as narratives , biographies, reflective essays and keeping journals.

" Bray and Harch (1990, p.3), highlight the importance of reflection to teachers and students. As for teachers, reflection creates greater awareness and objectivity, feedback useful for adjusting teaching methods, additional basis for evaluation and classroom-based research. As for students, reflection creates awareness and autonomy, recall, use and review for language development,

corrective feedback, questions answered and advice received. Reflective learners think about *what they are learning,Why they are learning it, How they are using What they are learning.What their strengths and weaknesses in learning one.*

When students refer to and use a frame of reference around any of the eight maps, they reflect on that frame of reference in order to be ensured of its validity . At the same time, that reflection might reach its highest point and become critical especially when those references need to be tested and validated. In the same line of thought, Hyerle and Williams (2010), stress that “frames of references inspire students' critical reflection” (p. 36). At the same time, " when using Thinking Maps, students and teachers become self-reflective ,looking into their own thinking and become self-regulated learners" Hyerle (2004). To Hyerle (2010), reflection is seen in asking questions and giving students wait time to reflect or think about the answers. These questions require multiple steps of thinking.

7. THE RELATIONSHIP BETWEEN THINKING MAPS AND LEARNING STYLES

Definition of Learning Styles

Shaugnessy (1998) sees learning styles as the ways that the students concentrates on processes , internalizes and remembers new and difficult academic information or skills". No two people think exactly in the same way. Also, no two people learn in the same way, (Orlich,et. al. , 2007,pp: 162-163).

In any classes, there should be students. So, there should be different ways of understanding and organizing information. The language teacher should be aware of these different learning styles in the process of teaching. He should use or practice individualized instruction, or his teaching should be aimed at the majority of students and special care for those who are weak or poor",((Delopenz, 1993,p. 13). One way of organizing information is the use of Thinking Maps where learners practice visual learning (Richard and Lockhart, 1995,60).

Thinking Maps display information in a logical and systematic way. Also, some of the characteristics of learning styles are logical and systematic presentation of new learning. These similarities between thinking maps and learning styles create a strong relationship between them. Besides, Richard and Lockhart (op.cit.) stress that students learn best from discussion and group work mapping what they are thinking of. And since the students differ in their cognitive styles, they have different ways to respond to learning situations. Thus, this can be shown during the brainstorming stage of thinking maps. Hyerle and Curtis (2001) mention that Thinking Maps are language that enables learners with mixed abilities to communicate what and how they are thinking. Also, Thinking Maps develop high order thinking .

8.THE RELATIONSHIP BETWEEN THINKING MAPS AND STUDENT INTERACTION

Law and Huang (in Wang et. al. 2009,p.96) define interaction as "sustained two way of communication between students and students , students and the instructor with the purpose of task completion or social relationship building". English et al. (2002,p.47) claim that" interaction depends on the ratio of questions to statements. The higher the ratio of questions to statements, the more interactive the teaching". This means that maximizing the number of questions in the brainstorming stage, encourages students to participate and shape their ideas that lead to the developing skills of students in writing a composition.

The interaction dialogue constitutes the relationship between teachers and learners, learners and learners, the material of the dialogue is generated through communication. Brockbank and McGill (1998, pp: 66-67). This interaction dialogue is affected in the discussions between the teacher and the learners about each map. To Langman (2001,p.20), asking questions can be an effective way of getting students to think about a topic from different angles. The questions help students generate details about a topic and get ideas on how to organize these details. This is what happens with each thinking map.

The relationship between Thinking Maps and student interaction is also reflected in designing the maps and asking questions from the part of the teacher to students and vice versa. Such questions generate thoughts and ideas from

students. Also, these questions lead to increase student interaction inside the classrooms. Thus Thinking Maps motivate students to establish dialogues with people ,they help students promote the skills of negotiation to persuade the others.

9. THINKING MAPS AND SCAFFOLDING

In an attempt to find a relationship between Thinking Maps and scaffolding, Sunseri (2011,p.) holds the view that " Scaffolding can be … applied to thinking maps in the way that concepts can be reproduced on paper. Teachers create a thinking map to connect related concepts and use scaffolding to help students form a writing outline from the map. In this way , a scaffold can be used by teachers to help students process information by taking the concepts from the writing outline and fleshing it out by writing expository paragraph. An example of a thinking map used as a scaffold for writing in the tree map". However, the researcher sees that all types of Thinking Maps can be used as an outline to help students write a composition, in that students are scaffolded when composing sentences, paragraphs, then compositions for given concepts, words, information , or designing Thinking Maps from given sentences or paragraphs or compositions.

10. THINKING MAPS AND THINKING

Since thinking maps are strongly connected with and have interrelationships with different types of thinking. It deals with the mostly related ones: visual thinking, critical thinking, evaluative thinking , systems thinking

followed by eight specific thinking skills and skills associated with effective thinking. Also, according to Jensen (1996) " The best thing can be done from the point of view the brain and learning is to teach learners how to think" . Thinking skills are necessary today for everyone because of the rapied changing of the world(Gough,1991, Cotton,1991).

a-Visual Thinking

Wileman (in Cyrs, 1997) defines "visual thinking as the ability to conceptualize , present thoughts , ideas and data as pictures and graphics, replacing much of the verbiage".(p.27).

The objectives of visual thinking in Dake's view is empowering individuals with visual language skills , promoting interaction with visual imagery , increasing storage and retrieval of imagery , encouraging flexibility in visual thought , developing deeper meaning in visual messages and reusing existing visual imagery for Communication.

While Idonresources.com (2012, p. 1) refers to the objectives of visual thinking in different ways in " Improving the quality and speed of interaction enabling better teamwork for greater productivity and commitment supporting new ways of exchanging ideas, encouraging holistic thinking and accelerating learning on the job".

Types of visual Thinking

Wileman (in Cyrs, 1997) explains that there are three types of symbols are used in visual thinking: pictures , graphic symbols and verbal symbols". Verbal

Symbols represented as words only are the most common and most accurate way to communicate but are often the most difficult time- consuming and expressive type of symbol to obtain. Graphic symbols consist of image related graphics , concepted – related graphs and arbitrary graphics.

Components of Visual Thinking

Visual Thinking- according to Cyrs (1997) - is composed of three overlapping strategies of thought: imaging , seeing and designing".**Imaging** involves perceiving different roles for given objects and being aware of alternative realities. For example, if we see a book, we know that its purpose is to convey a story or information in written and/ or graphic form might also be there. **Designing** involves expressing an idea in some type of visual form, such as… drawing a picture". **Seeing** is the visual perception of two or three dimension objects and the linking of these perceptions with the past experiences of the viewer.

b. Reflective Thinking

Reflective thinking identified by Chen and Seng (1992, p.4) as "an integrative thought process. It is an interaction of critical thinking and creative thinking in the course of problem solving and decision making. It connects a teacher's private thought process with the social context."

c-Critical thinking

Wang et al. (in Enis, 2009) see critical thinking as reasonable and reflective thinking skills that focused on deciding what to believe or to do.

Critical thinking involves a set of skills. and the use of these skills to guide behaviors. For this, there is a close relationship between critical thinking and knowledge construction. Critical thinking plays an important role in the process of knowledge construction and knowledge construction occurs as a result of critical thinking as (Dinks, 1998) believes, Merra and kumczak (2004) find evidence of students' critical thinking in generating new ideas, clarifying information and linking ideas. Such views may encourage the researcher to claim that the relationship between Thinking Maps and critical thinking is reflected in choosing the suitable thinking maps for organizing students' ideas and information , connecting and evaluating them in the light of their previous knowledge and experiences.

d. Evaluative Thinking

Evaluative thinking is as a means of thinking of viewing the world, an ongoing process of questioning, reflecting, learning and modifying. It is also, a means of resolving the creative tensions between our current and desired levels of performance". (www. research matters. Net)

Since teachers use evaluative thinking to assess the performance of a project or a person at the end of a task, it allows students to define the lessons they want to learn , to determine the means for capturing those lessons and to design systems to apply them in improving their performance. Thus, the relationship between Thinking Maps and evaluative thinking is reflected in the process of evaluation that the teacher uses to evaluate the performance of

students and tries to bridge the gap between what students know and what students should know.

e. System Thinking

Thornton et al. (2004) define systems thinking as "the ability to understand (and sometimes to predict) interactions and relationships in complex, dynamic systems." (p.222).

While Coprd (in Hung, 2008) identifies the elements of system thinking which are wholeness interrelationships and dynamics . Hung (2008) refers to the objectives of systems thinking in that enabling individuals to develop an integrative understanding of a given subject and helping students develop systems. To Thornton (2004), systems thinking improve organizational productivity, and organizations develop frames of refence , recall of past experience (events). Prusak (cited in Thornton ,2004) Besides, " when system thinking becomes an integral part of the instructional process, the benefits of systems thinking as a method for improving students achievement' can be enormous".

The eight specific thinking skills

To Kizilk (in Hickie, 2006,p. 40) there are eight specific core thinking skills : **focusing skills** (attending to selected pieces of information and ignoring others **), information gathering skill** (bringing to consciousness the relative data needed for cognitive processing), **remembering skills** (storing and retrieving information), **organizing skills** (arranging information so it can be

used more effectively), **analyzing skills** (clarifying existing information by examining parts and relationships), **generating skills** (producing new information, meanings and ideas), **integrating skills (** connecting and combining information**)** **evaluative skills** (assessing the reasonableness and quality of ideas" Senge (cited in Thornton ,2004) identifies five disciplines for exhibiting learning organization :personal mastering, mental models, a shared vision, team learning and systems thinking .

Skills associated with effective thinking

Goswami and wringlet (in Orlich .et al.1998) discusses some skills associated with effective thinking. These skills are: (a) **observing skills** which include identifying patterns , relationships, cause and effect relationships , assumptions , reasoning errors , logical fallacies and bias, establishing criteria and classifying , comparing and contrasting inferring and interpreting. (b) **summarizing skills** which include analyzing , synthesizing and generalizing, hypothesizing and imagining distinguishing relevant from irrelevant data , verifiable from non verifiable , data and problems from irrelevant statements . From another point of view, Lipman (undated) identifies some of thinking skills that include **reasoning skills** (inductive , deductive and analogical skills), **inquiry skills** (observation , description and narration skills), **concept formation Skills** (definition and classification) **, translation skills** (comprehension, listening and writing), and **critical disposition skills** (wondering, asking for reasons , judging with criteria and questioning).

By using thinking maps, each with its specific frame of reference, one can claim that nearly all types and skills of thinking aforemetioned are manifested in thinking maps as a visual language for communication, an international strategy for different teaching settings, a visual learning tool and an assessment tool for assessing how far thoughts are webbed, how far words , phrases and sentences are mapped and how to construct texts and contexts out from different maps.

11. THINKING MAPS AND WRITING

Thinking maps- according to Blount (1998) - create a visual approach that manages students to organize, generate, and retain information" (p. 1). Hyerle ((in Blount , 1998 , p. 2) outlines that thinking maps are beneficial for students with limited English as well as students whose performance is not well. Besides, the use of thinking maps will have a positive effect on retention levels in reading and will improve the student's narrative writing. Worsham and Austin (in Blount, 1998, p.3). Blount (ibid) mentions that when he assesses the performance of students in narrative writing, he sees a difference in the students' writing abilities when using thinking maps. He adds that students' performance improved in organization, and specific details in their writing. Most students finished in the allotted time when using thinking maps. "When students write from maps , writing will be easy and more fluent. Sufficient time helps students to share and discuss with other students because much of organizing, selecting and connecting ideas goes on during the mapping and sharing. (Siegel, 1995, p. 313).

Thinking maps help students reflect the text and construct knowledge. If students see their thoughts connected in a visual tool , their writings and their words will make (seem) more sense. (Morgan, 2001). This is because as Eric Jensen (1996) claims educators should exploit that " over 70% of all information that comes to our brain is visual".

Mayor (1999), sees that the maps help students greatly in writing in preparing them psychologically in the process of writing, structuring the information into a writing plan, making students think carefully and practice reflection, retrieving information relevant to the writing task, selecting the most useful information and helping them work individually, in pairs and in groups.

Hyerle (in Russeell, 2011) states that Thinking Maps , as graphic Organizers, showed the characteristics of effective reading comprehensions strategies as well as effective writing strategies. They can act as a cognitive bridge to literacy through the conscious identifications of a thinking pattern , mapping it out then remembering , analyzing and synthesizing information into meaningful and purposeful understandings. Two of the three administrators expressed the belief that the use of Thinking Maps had great impact on writing achievement rather than reading achievement (Op-cit).

12. Thinking Maps and Explicit Instruction

Russel (2011, p.27) mentions that “there are some studies that have supported that the effective use of graphic organizers required explicit teacher instruction, modeling and regular use before a student could successfully and

independently generate them and facilitate their own comprehension.". Many researchers (e.g. Griffin,1995; Hyerle; 2000; Merkely& Jeffries,2000). Grffin, et al. (in Hickie, 2006), stress the relationship between Thinking Maps and explicit instruction in that without explicit instruction in a procedure such as graphic organizer instruction, students might not achieve any more successfully than with traditional methods.

Explicit Instruction

Anita, et al. (2011, p. 1) defines explicit instruction as "a structured, systematic, and effective methodology for teaching academic skills. It is called explicit because it is a direct approach to teaching that includes both instructional design and delivery procedures. Explicit instruction is characterized by a series of supports or scaffolds. Rosenshine (in Anita,et,al; 2011) describes this form of instruction as " a systematic method of teaching with emphasis on proceeding in small steps, checking for understanding and achieving active and successful participation by all students".(p. 1).

Elements of Explicit instruction

There are sixteen elements of explicit instruction. They are as follows: focus instruction on critical content, sequence skills logically, break down complex skills and strategies into smaller instructional units, design organized and focused lessons, begin lessons with a clear statement of the lesson's goals and your expectations, review prior skills and knowledge before beginning instruction, provide step by step demonstrations, use clear and concise language,

provide an adequate range of examples and non-examples, provide guided and supported practice, require frequent responses, monitor student performance closely, provide immediate affirmative and corrective feedback, deliver the lesson at a brisk pace, help students organize knowledge and provide distributed and cumulative practice. (op.cit).

13. THINKING MAPS AND WRITING MODELS

Sunseri(2011) defines writing models as " an outline or schema that is presented to students prior to their composing that helps them organize their writing and structure their thoughts"(p.). To some researchers (e.g. Englert and Rafael, 1992; Graham and Harris,1989, 2005a). There are two main writing models: the self-regulated strategy development and cognitive strategy instruction in writing.

a.THE SELF-REGULATED STRATEGY DEVELOPMENT (SRSD)

SRSD was introduced by Graham and Harris (in Sunseri,2011).

" It involves explicitly teaching students strategies for completing specific writing assignments. These strategies include knowing the specific attributes of writing styles such as how to compose an expository paragraph. Students are taught self-regulatory practices like goal-setting and self- monitoring to motivate them and keep them on track as they are writing .The emphasis of this instruction is showing students how to adapt a writing strategy to a particular task"(p.18).

In the same stream, Russell (2010) mentions that many researchers and educators have indicated that through the explicit instruction of comprehension strategies, such as graphic organizers, students increased comprehension and improved writing quality through an enhanced understanding of their own meta-cognition processes and self- regulation of learning.

According to Leinemamet et.al. (2006) the use of SRSD process improved the quality of writing (Leinemamet et.al, 2006). It could have a positive impact on students who had difficulty in writing. Similarly, the finding of Goddard and Sendi's (2008) and that of Sunseri' (2011) study showed that the quality of the students' writing improved due to the SRSD.

b. COGNITIVE STRATEGY INSTRUCTION IN WRITING (CSIW)

CSIW was another writing model designed to help students write effectively. In this model, teachers give a writing prompts to their students with a writing outline the students would complete in preparation for writing. Teachers would then respond to the prompt themselves and use their writing as a model to share with students. Then the teacher would help the students complete the writing outline and guide them through the writing process". (Sunseri, 2011,p.21).

There are some studies (e.g. Englert, Anderson, Anthony and Stevens ,(1999; Torrance, Fidalgo and Gordia ,2001) reached a conclusion that quality of students' paragraphs was much greater due to CSIW. Good and prophy (in Cohen,et.al. (1996) recommended as a step of such strategy to informing an effective writing model. They hold the belief that modeling can be a useful device for the teacher or students… Many skills can be learned more easily through observation and imitation than by trying to understand and respond to only verbal explanation and instruction. The process of modeling may be seen as a means of enabling a student to re-assemble components of behaviour he or she

already possess into new and alternative combinations". Moreover, Mackin and Witherell (in Gibbs, 2009) suggested the use of graphic organizers made students mindful of cognitive processes and they interact with text. They advised instructors to use graphic organizers to meet the varied needs of learners.

The researcher believes that graphic organizers can be more effective if students follow the five attributes that Merkley and Jefferies (in Gibbs,2009) offered: verbalization of relationships among the concepts portrayed by the organizer, shared student input, connection of new learning and prior knowledge, reference to upcoming texts, reinforcement of decoding and structural analysis.

14. THINKING MAPS AND DISCOURSE ANALYSIS

Hatch (1992) defined discourse analysis as " the study of the language of communication-spoken or written"(p.1). In written discourse analysis, the writer focuses on describing the similarities and differences of the topic and think about the ideas related to the description of the topic by showing the similarities and the differences, the causes and the results, in addition to, the description of the logical events. In discourse analysis, Juez (2009) believes that the common characteristics of schools of thought is that they are interested in what happens when people use language as well as how they do things with language, such as express feelings, entertain others, exchange information and so on. R. Susan,et.al (undated) mention that the goal of analyzing written text is to arrive at systematic descriptions that provide a basis for comparing written texts with one another. So, Thinking Maps have certain similarities to the discourse analysis in that both

of them have features that give students some prompts to describe the events in the form of a composition. Also, TM and DA make students think deeply to retrieve, organize and inference the information.

15.THINKING MAPS AND ASSESSMENT TOOLS

Assessment should tap the connectedness of concepts and the student's ability to access interrelated chunks, (Shepard, 1989). Assessment is multi-dimensional, it must link interaction between teachers and students in the classrooms with the formal component of the teacher's professional knowledge in order to record and support each student's progress. Thinking Maps give the teachers the chance to gather (collect) information about their students formally and informally, through the observation of products and process. Thinking Maps offer multiple ways to assess student thinking. Four powerful applications include maps as ; pre/post Measure, portfolios, student conference and student self- assessment.

a.Pre/Post Measures: by examining maps made by students before and after teaching, teachers can record the achievements of students' abilities.

b.Portfolios : by setting (including) maps in students' portfolios as a mirror for reflecting the progress of students , they activate their abilities to use their learning in new situations in their own life.

c. Students conferences: Thinking Maps provide a means of discussions and depict how students are relating and connecting information. When students bring one or several thinking maps to the conference, they bring a visual

representation of thinking. Maps help to discuss the quality of thinking as they apply to mean making and set new goals for learning.

d.student-Self-Assessment: student Self-Assessment enhances personal responsibility for learning. It can be reflected in reviewing the thinking maps in their portfolios and think carefully on their strengths and areas for growth " With time , experience and conversation, students' ability to read their own portfolios with depth and understanding also develops". (Schwartz,1990)

16.Thinking Maps and transfer of learning

Kyriacou (1992) defines transfer of learning as “the pupil's ability to make use of previous learning in dealing with new tasks and new situations”. (P. 49).

Kyriacou thinks that the transfer of learning is one of the most important tasks of effective teaching. It is revealed in using Thinking Maps in the process of writing. When students learn how to use the five maps as an outlines to write free compositions using certain sub-skills of writing, e.g. formulating topic sentences, using their ideas in a sequential way, describing things, people and places, expressing causes and effects in a proper way and comparing and contrasting things, people and actions, they will have the ability to transfer what they have learned to new learning tasks and real life situations as a result of intensive practice . Therefore, But the problem facing students regarding the applied techniques based on the memorization of certain clichés and expressions without proper understanding, can be resolved. Besides, can have positive

attitudes to practice writing and get able to write compositions from their life situations.

17. **THINKING MAPS AND INDIVIDUALIZED LEARNING**

To Hyerle (1996, pp: 83-84) , " thinking process maps support individual students' capacities to understand and transfer cognitive processes to apply these tools to construct and analyze conceptual structures. If an individual learns how to use thinking process maps, they become life long tools for independent learning and problem solving.". Besides, though useful for all students , thinking process maps are helpful for those with special needs who have difficulties applying fundamental cognitive process, constructing concepts and retaining information.

18.THINKING MAPS AND COOPERATIVE LEARNING

" Most thinking process maps are designed with a high degree of flexibility so that students work together to expand each map as reflected in the dynamism of analytical and creative thinking. These attributes make thinking process maps quite useful as collaborative, student-centred, tools for communication, group problem solving and dialogue in cooperative learning formats". (Hyerle, 1986, p.85). Hyerle (op.cit) stresses that the completed design of the maps becomes a platform from which the group can conduct further research , predict future events, write a research paper and present its analysis to other groups. Students may also begin to compare their mental models to those presented by other groups and evaluate their own process and product. Finally, if students from

other groups have used other thinking process maps during their investigation about what kinds of thinking and tools were most effective way raise the learning process to a higher level". Hyerle and Yeager (2000) mention the reason behind Thinking Maps have achieved great improvements in student performance is the fact that the graphics are consistent but flexible and used individually or together. Also, the maps allow students to construct and communicate mental models of both linear and non- linear concepts.

19.THINKING MAPS AND HABITS OF MIND

Costa & Kallika (2000) mention that " a habit of mind means having a disposition toward behaving intelligently when confronted with problems, the answers to which are not immediately known…" (p. 1). For this, Hyerle (2010) believes that thinking maps support the development of habits of mind, deepen interdependencies and link the activation of these eight cognitive patterns as visual representations and the sixteen intellectual behaviours as follows: **"**persisting, managing impulsivity, listening with understanding and empathy, thinking flexibly, thinking about thinking (meta- cognition), striving for accuracy, questions and posing problems, applying past knowledge to new situations, thinking and communicating with clarity and precision, gathering data through all senses, creating imaging, innovation, responding with wonderment and owe, taking responsible risks, finding humor, thinking interdependently and remaining open to continuous (P. 157). Thus, when students as Hyerle thinks ((op.cit) choose the suitable thinking map for their thoughts, they begin to map out their information and then begin to transfer their thinking from the map into a paragraph writing . Also, when students suggest a map to use, they have created cognitive and meta- cognitive stance in relationship to the text. The researcher sees that the above-mentioned processes help to activate the habits of mind.

20.MATCHIN THINKING MAPS TO THE MARZANO STRATEGIES

Marzano, et.al., (2001) identified nine strategies that directly impact student achievement. These strategies matche to thinking maps as follows :

Table 2. Matching Thinking Maps to the Marzano Strategies

Marzano Strategy	Thinking Maps
Identifying similarities and differences	Bridge Map, Double – Bubble Map
Summarizing and note taking	Bubble Map , Tree Map
Reinforcing effort and giving recognition	Flow Map, Multi-Flow Map
Homework and Practice	Circle Map, Flow map for planning All maps for doing
Nonlinguistic representations	Use illustrations with, or instead of, words
Cooperative Learning	All maps well-suited
Setting objectives and giving feedback	Tree Map
Generating and testing hypotheses	Multi-flow Map, Tree Map
Cues,questions,and advance organizers	Brace Map,Bubble Map, Flow Map,tree map

Adapted from :Powerful Thinking: Students Using Visual Tools, Annual Conventions, 2008

Part Three: Writing

This part highlights the process of writing, importance of writing, free writing, its definition and stages, factors affecting writing , the statues quo of writing in Egypt and the context of the current study.

WRITING PROCESS

One writes what are known. That is the most powerful writing comes from the authenticity of experience. What are known is prior knowledge and previous experience and it is from this pool of information the students produce written text…(Ruddle, 2009).

DEFINATION OF WRITING PROCESS

Bello(in Mogahed, 2004 , p.11) defines writing as a continuing process of discovering how to find the most effective language for communicating one's thoughts and feelings."

THE IMPORTANCE OF WRITING SKILLS

The importance of writing skills is seen from different lenses by different researchers (e.g. Ibrahim, 2004; Lane, et.al; 2008 ; Marquette.edu; Mogahd, 2004) . As for language development, “writing" reinforces the grammatical structures , idioms and vocabulary that are taught to students", Raimes (in Ibrahim, 2004). Writing enhances language acquisition. Bello (1993) claims that writing has different functions for students. It helps students have a chance to be adventurous with the language to go beyond what they just learned to say and take risks. Also, writing makes students very involved with the new language.

The effort to express ideas and constant use of eye, hand and brain is the unique way to reinforce learning. It also provides evidence of learner's achievement(P)

To Marquet edu (2010), writing expresses who you are as a person, makes your thinking visible , equips students with communication and thinking skills. whereas Mogahed (2004) believes that writing shifts the responsibility for learning away from the teacher and toward the students . Writing helps students develop the ability to make reasoned decision, to act responsibility and create a new medium of communication between people. Writing helps students demonstrate their knowledge and provides a powerful mechanism for communication self-expression and self-reflection. Graham (in Lane et.al, 2008). For teachers, writing helps teachers refine the ideas when they give others feedback.

Free writing: definition

Free writing is defined as a writing warm up activity in which the writer writes without preparation for a set length of time without judging his work.

Techniques of free writing

There are different techniques for free writing. One of them is that the writer starts free writing for about five minutes. This allows him the opportunity to plant some seeds on paper, read what he has written and reconsiders what it is he wants to say. What is interesting is how original ideas - change and evolve as he writes and reads. While he begins the free writing with a clear topic in mind, the composition process tends to change and classify his plans, Shaher (cited in Mogahed, 2004).

Objectives of free writing

Helping the learners get in touch with the big picture without getting sidetracked with details. (Mogahed, 2004), helping learners to understand that not all writing they do is equally good and not all writing must be kept. (Darlling,2004,p30)

The stages of free writing

The stages of the writing process have been dealt with in different ways by different researchers (e.g. Ibrahim ,2004; Mayers,1998; and Ruddell , 2007). As for the three stages distinct in writing – planning , translating and reviewing. Hayes and Flower (in Mayer, 1998) state that Planning means getting information from long term memory, from the assignment and from what has been written … and using this information to establish a plan for producing text. "Translating involves producing text that is consistent with the plan, that is, the act of putting words on the page". Reviewing involves improving the written text using the sub- processes of reading and editing. But Hayes and Flower (in Mayer, 1998) see that the planning stage has three sub-processes, which are generating (retrieving information from long term memory), organizing (selecting the information that is relevant to the topic), and goal setting (criteria for the excution of the process of writing).

According to Ruddell (2007), there are three stages for the writing process: before writing (pre-writing), during writing (drafting), after writing, (reviewing), editing, publishing (sharing), evaluation.

Before writing

Ruddle (2007) mentions that prewriting is a key to variety of writing and learning events . It consists of jotting, speculations , predictions . maps and compilations of ideas . It is a listing of ideas at the beginning of a learning event that can lead to an elaborated writing experience. The purpose of pre- writing is to activate prior knowledge and set the stage for learning. Pre- writing activities help teachers to discover what students know and do not know about a given topic…

During Writing: Drafting

Ruddell (op .cit.) states that " drafting extends pre- writing as students \ create a new text from what they have read , seen , done , thought about or examined". Spivey (in Ruddell , 2008, P. 296) describes this process as one in which the reader creates a knowledge through the interaction with the text and transforms that knowledge through organizing , selecting , and connecting ideas and then constructs new meaning in a new written text.".

After writing

After writing has many phases: revising , editing , publishing (sharing) evaluating revising and editing, Ruddell (op. cit) states that many writers like to get as much as they can on paper as rapidly as possible without any revision. While others Prefer to polish their writing sentence by sentence (sometimes word by word) as they go . Revision and editing involves many of the same cognitive and writing process as drafting. The difference is that in the

revision and editing process , students are truly transforming information and incorporating it into their own knowledge base". In most classrooms, published writing takes the form of the final paper turned to the teacher or a formal class presentation. In some cases, students share their writing composing in small or large groups." (p.297).

FEATURES AFFECTING WRITING

There are, to the researcher's belief , some factors that affect the writing process, negatively or positively. One of the most common factors that negatively affect writing is the apprehensive writers. They are the learners who are featured by specific characteristics: (a) they avoid writing wherever possible and when they are forced to write, (Onwuegbuzie, 1998) .,(b) They consider writing as unrewarding or punishing Daly& shamo (cited in Kurt & Atay, 2007). Besides, they have low self-concept, lack self-confidence, report low success in prior experiences with school related writing (Reaves, 1997). and (c) They have more difficulty with invention, produce shorter pieces of writing, have ideas that are not well developed, and write essays that are judged of lower quality when holistic scoring is employed, (Reaves, 1997).

On the other side, prior, background knowledge (ideas ,facts , information , attitudes) and experiences about the writing topic help students anticipate what is the topic going to be about and can think a long with the teacher. (Stoodt , 1998).

The Status Quo of Writing in Egypt

Writing in Egypt is not taught as a separate subject from language arts. Students do not engage in writing but generally teachers do not present instructional models for students to follow. Students receive guidance in various areas, including writing topic sentence, organizing ideas or information, detailed support, connected key ideas with transitions and writing conclusions.

According to Culhan (2003), Teaching students to practice writing help them gain control and confidence in their own writing. Writing may not be getting the systematic attention it deserves. Topics of the essays are controlled or guided. Most students dislike writing and try to avoid it at almost any cost. Writing for them is not a means of self-expression but a tiresome chore. Their vision seems logical when considering the nature of the writing exercises presented at our schools that focuses on requiring students to represent in writing a set of developed thoughts and established ideas. Writing activities are mainly concerned with showing that a student can communicate his understanding without making use of external support or contribution from others through a piece of language of his own. In this way , the writing tasks are mostly stressful and even discouraging sometimes as they focus on the final product ignoring the processes or the mediate stage involved (Pando&Blanco and Lewis (in Abou Zaid, 2009. P. 65).

The RELATION BETWEEN THINKING MAPS AND WRITING PERFORMANCE

It is obvious that thinking maps does not only develop thinking skills but also they develop the cognitive content in the process of teaching writing skills. They are one of the visual strategies to writing instruction and assessment. So, thinking maps as a new strategy differs from other strategies to writing instruction and assessment. They have different advantages. From these advantages, thinking maps have the potential of enhancing writing performance since they are based on different psychological theories which encourage and motivate students to learn best.

However, promising thinking maps seem for developing writing performance, the researcher could find only one empirical study investigating the impact of thinking maps on expository texts. This study was carried out by Sunsseri (2011).

THE IMPORTANCE OF MAPS FOR STUDENTS' WRITING AND TEACHERS' WRITING

Writing from maps has a great importance for teachers and students. As for students, Siegel (in Ruddell ,2008) states that" Maps … are each student's prewriting plan, they show what ideas the students selected as most meaningful …. Through the process of transmediation , students are able to reconfigure content – to create new information, with mapping as the primary method for

organizing, selecting and connection information. Mapping therefore serves as a product foundation for student writing to increase knowledge constructed from reading"(p. 312).

As for teachers, they should remember that the fullness of the mapping activity itself is extremely important to successful writing when students have had sufficient time to develop their maps with other students, because much of the organizing, selecting and connecting of ideas goes on during the mapping and sharing"

In the researcher's view, maps can be a group activity and an individualized one. So, the maps help teachers to deal with the mixed ability or different learner styles.

Part Four: Researches and Studies on writing skills and Thinking Maps

A.Researches and studies on the writing skills .

Writing has received much attention in scientific research. Writing problems have been dealt with in different ways. For example, cooperative learning activities and writing process techniques were used by Sanders (2000), to help students be more confident and have more comfort during writing classes through group work since teaching the process of writing helps the majority of students to recognize and appreciate the value of rethinking, rewriting and reorganizing.

McFarland (1993) conducted a study that addressed the inability of students to become involved with writing assignments in two high school sophomore honor classes, peer evaluation, conferencing ,and broadened literature selection. Students responded to pre-workshop and workshop surveys to assess individual attitudes toward learning to writing and writing abilities. Students were allowed to complete assignments in collaborative groups. Students were also allowed to choose the literature to be studied by the group. Results indicated increased interest in writing among the target group. Additionally, students in the target group demonstrated improved writing performance on the final writing project. Findings suggested that increased student participation in the selection of writing assignments and literature selections, along with interaction with peers on assignments , brought about improved performance on class writing assignments.

Gonzales (1994) investigated the effect of using peer-clustering on improving basic writers' writing performance and revision skills. Because basic writers are inexperienced in written discourse, they lack the intuitions necessary for applying revision skills to their own writing . Peer-clustering was defined in this study as a method for teaching revision which combines collaborative learning principles, language acquisition theory and computer technology to create a learning

Kapka and Oberman (2001) developed academic achievement by writing skills based program. Data indicated an increase in students' writing skills. Students' knowledge of writing elements increased as demonstrated by documented work in the classroom setting.

Angelova's (2001) study investigated the effect of the holistic approach and meta- cognitive knowledge on writing in English as a foreign language. The results of this study indicated that there is a direct relationship between the quality of writing and the holistic approach. The quality of the written product seems to be affected by the students' knowledge about their method of planning and about the conventions of writing in the target language.

(Ahmed,2003, , , , Ateia,2006, ,)

In the Egyptian context, there are some researches tackling developing writing skills by the use of different methods, approaches, strategies and techniques. (e.g. Ahmed, 2003; Atia,2006; El-Bassuony,2005; El-Enany,2009; Farahat,2006; Ibrahim,2004; Mogahed,2007; Seif, 2003):

In 2003, Ahmed's study aimed at developing some writing skills for first year secondary students through the use of school journalism. The researcher designed a program based on process writing. The results of the study were positive and provided evidence for the effectiveness of writing school journalism in developing the experimental group students' writing skills.

Seif (2003) overcame the problems of some English writing skills and improve EFL college students' writing skills by integrating graphic organizers into the writing workshops. This integration maximizes students' learning and increases their benefit and expose students to the various stages and writing processes helps develop students as writers.

Ibrahim's (2004) study was to determine if some indirect learning strategies in developing paragraph and letter writing skills for first year commercial school students. The participants in at study were two classes randomly selected. They were assigned to two groups , experimental and control, 40 students each. The results of the study indicated the effectiveness of using indirect learning strategies in conjunction with the process writing approach in developing the students' paragraph and letter writing skills.

Elbassuony (2005) investigated the effect of a program-based on the process approach and learning style preference to develop EFL prospective teachers' writing skills. Results showed the value of the program in developing writing skills.

Ateia (2006) asserts that the effectiveness of using cooperative strategy in developing students' writing performance and the advantages of competitive writing strategy in developing students writing performance. The process writing approach can be integrated successfully with the cooperative writing procedures due to some common grounds among the three of them.

Farahat (2006) Points out that reflective writing program proved effective in developing fourth- year English department students' meta-cognitive strategy use.

Abou-Zaid's study (2009) investigated the effect of a program training the student teachers on using the reflective approach in thinking and practice on their classroom management and instruction performance and their writing skill level. The study sample included twenty-seven, third year student teachers at the English section , Faculty of education, Fayoum University. They were trained on the use of the reflective approach through the suggested program and were helped to implement what they learned during their practice teaching sessions. The student teachers were also asked to keep a teaching journal. The sample of the study teaching performance was assessed during the practice teaching sessions. The results of the study and their analysis clarified a clear enhancement in the student teachers' level of classroom management and instruction performance. The writing related skill areas of the student teachers were also significantly developed through the use of the study program and its related.

Mogahed (2007) investigated the effect of using the process writing approach (PWA) in developing the EFL writing skills of Al-Azhar secondary stage students and their attitudes towards it. The researcher used the experimental design, the experimental group and the control group, the study provided evidence for the effectiveness of using PWA in developing students' writing performance and attitudes towards writing, further, the study heightened the advantages of PWA in developing writing skills and attitudes towards writing .

El-Enany(2009**)** conducted a study in which he made a program based on predictive reading to develop the creative writing skills for students at the faculty of education. The results indicated that the performance of students' creative writing skills was improved the predicative reading strategy had a significant effect on developing fourth year EFL students' creative writing skills and the program was effective.

B. Studies Related to Thinking Maps

Sunseri (2011) examined the scaffolding strategies in the thinking maps program to see if students' compositions were more organized, and if they used a thinking map in responding to write a prompt. The participants were 71 students in three fourth grade classes in the South Bay School District. Two of the classes were experimental in that the teacher helped students create and use thinking maps in addressing two writing prompts. The other class was a control class because thinking maps were not used with students. The results were thinking maps did not have a statistically significant impact on students' writing.

However, English Language Learners (ELLs) in the experimental classes appeared to realize a slight benefit in using TMs compared to the non- ELL students in the control class. Although the evidence is weak , students appear to benefit from using thinking maps.

Al-Hadi (2009) investigated the impact of thinking maps instruction on tourism& Hotels students' reading comprehension. The participants of the present study were sophomore students at the faculty of tourism & Hotels, Suez Canal of university. The total number of the participants was 60 students . Two instruments were required to serve the purpose of the study: the Thinking Maps Awareness (TMA) test and the Reading Comprehension (RC) test. The results of the post tests showed that the mapping group did significantly better than the non-mapping group in thinking maps awareness and reading comprehension.

Hickie, (2006) conducted a study to determine the relationships between thinking maps instruction and student achievement in fifth grade students in reading and mathematics as reported by the state NCE scores of the criterion referenced portion of the Tennessee Comprehension Assessment Program (TCAP) Achievement test in 3 title elementary school in northeast Tenessee. Based on the analysis and findings of this study, implementing thinking maps program in the whole school approach was a successful step in improving student achievement in the area of reading skill.

In his study (2004), Gold explained that thinking maps are a common visual language for learning. They are a set of tools for showing relationships and

patterns in information. Students need to think strategically and plan their thinking . Thinking maps provide a framework in order to better facilitate this by using thinking maps. Students would be able to visualize their learning and identify critical areas in information.

The purpose of Schultz's(2005) study was to find out what happens to reading comprehension when visual thinking maps are used in reading instructions. Students in at that study were part of Minneaoplis Public Schools, Wellstone International High School, Lehmann Centre. The high school is designed for students aged 17- 21 who are new to the country and have little or no English skills. The findings of that research indicate the following :

1. There was a decrease in error responses in three areas:
    a. Finding the main idea (9 errors to 6 errors)
    b. Sequence (11 errors to 3 errors).
    c. Cause and Effect (5 errors to 1 error).
2. Many learners had prior school experience .
3. Students' practice in using thinking maps increased reading comprehension.

Holesman(2004) investigated the effects of thinking maps on the achievement of higher academic students . As measured by the standard tests given in California, the results indicated developments gains 13.6 percent of students in language arts (writing, reading, phonetics speaking , grammar and punction) and that 16 percent of students in math.

Manning(2003) conducted a study to identify the effects of visual tools on increasing reading comprehension of disabled students. Students' performance was measured using MCAS reading scores before and after the introduction of thinking maps . Assessment results indicated that reading comprehension was increased. It was also observed by classroom teachers that levels of performance rose in the areas: concept attainment, reflective thinking, recall, retention, writing, creativity, motivation and cooperative learning skills.

Curtis's (2001) study investigated how thinking maps : tools for constructing knowledge can influence teacher reflection and cognition. The data indicated that students' behavior , motivation and thinking improved due to thinking maps implementation . Teachers reported more clarity, purpose, and efficacy when using thinking maps in planning and instruction, thinking maps provided a visual representation of student knowledge that helped teachers and students be reflective about themselves and their learning.

Blount (1998) conducted a study on the effect of thinking maps on reading retention. The findings of the study indicated an improvement of performance level when low performing and achieving students used thinking maps.

The aforementioned reviewed literature helped the researcher in many aspects throughout this study. The first benefit was related to the formulation of the hypotheses of the study. As it was indicated in chapter one, the hypotheses of the study were directed. This was due to the fact that there is an evidence regarding the impact of thinking maps on writing performance .

The reviewed literature guided the researcher in formulating an operational definition for writing skills and sub-writing skills to be used in the present study. Many definitions were found for each of these constructs while collecting the literature. This helped the researcher in formulating the operational definitions suitable for his study. Moreover, the researcher made use of the literature review in developing the instruments of the present study. As will be indicated in chapter 3, these instruments are : Pre-Post Writing Performance Tests, Difficulties of Writing Skills Questionnaire and Thinking Maps Awareness Test.

The researcher also made use of the literature review in selecting the types of thinking maps he would use in his experiment as indicated in the literature review. There are working thinking maps – documenting the learning process students go through.

In the present study the researcher decided to follow an eclecting approach combining different types of thinking maps – as it will be indicated in chapter three. Students of the study group were asked to select examples of their essays but at the time, they were required to include multiple drafts of each essay. Also, in this study, Thinking Maps were used because they organize information easily, they transform verbal information into visual information, they develop thinking skills and cognitive content, they help students create mental picture in students' minds.

One more benefit of the literature reviewed in this study was that they helped the researcher in deciding the content that students would include in their

thinking maps. A further benefit of the literature reviewed in this study was that it helped the researcher in identifying the stages of free writing and how the researcher and students use thinking maps in writing a composition.In addition, it offered the researcher some guidelines for planning and developing the thinking maps to guide his students to do so while practicing writing.

Hyerle and Alpert (2012, p. 171) mentioned that there are some results of Thinking Maps implementation on student and teacher : As for students' thinking, Thinking Maps make better organization, understand the thought process, can explain their thinking , see relationships , help to create deeper thinking and better products. As for students' writing: Thinking Maps have a starting point, stay on topic, more elaboration, understand how to use words in a meaningful way and improvement in retelling and summarizing. AS for student's behavior: Thinking Maps increase in participation and motivation, students do not feel threatened, and less stress about assignments… As for teacher's instruction: Thinking Maps have better focus, increased chance of goals actualized, confident about his teaching and student- centered learning. As for teacher's planning: Thinking Maps increased clarity, increased purpose, see the flow of the lesson, create awareness of thought process and focus on key points. As for teacher's assessment: Thinking Maps gauge student readiness, check map against writing and know when to move on.

CHAPTER THREE

METHODS AND PROCEDDURES

INTRODUCTION

- RESEARCH DESIGN
- RESEARCH SAMPLE
- RESEARCH HYPOTHESES
- INSTRUMENTATION
- EXPERIMENTATION DURATION

CHAPTER THREE

METHOD AND PROCEDURES

Introduction

In this chapter the researcher deals with five aspects : the research design, research sample, hypotheses , instrumentation, and experimentation.

1.The Research Design

The present study was conducted to investigate the effect of using Thinking Maps on developing some English writing skills of secondary school students . The experiment was carried out at Al-Baramun Secondary School, East Mansura Directorate, Dakahlya Governorate. It was administered to the first year students in an English class. The experiment was carried out through the first term of the academic year 2011.

The study is a quasi-experimental one with one group pretest-posttest design. The study group was trained on the use of Thinking Maps through the suggested study program. The study did not make use of a control group as the study participants were trained to use a number of skills and strategies through a new suggested content that was not introduced to the other students . Thus, it is of no signification to compare those students with their peers who did not receive any similar training.

2. Research Sample

A. Sample description

The sample of the study was drawn randomly from EFL classes of first year secondary school students in Al-Baramun Secondary School, East Mansura Directorate, Dakhlyia Governorate. It was first composed of twenty eight students. Having finished the pre-tests, two male students asked the researcher to be excused because of healthy problems. Besides, three male students were absent. The final number of the sample had become twenty three (six males and seventeen females). The sample (N = 23) formed one pre-post group design.

B. Rationale for sample choice

There were three reasons behind such a sample because of three reasons. First, the students start to write compositions or free writing at this stage, second, launching a Thinking Maps- based program to develop some English writing skills of secondary school students can work better while practicing writing compositions. Third, their thinking ability is high enough to acquire the writing processes in order to reach the ultimate goal.

C. Establishing Rapport with the sample.

Since the program proposed was not compulsory, i.e. was not from the syllabus requirements as a set course in their preparation program, the researcher had to establish some sort of social relationship with the participants of the study. This took place in many ways. The researcher encouraged students to mention

some topics that interest and motivate them to write about. He could provide them with ready made paper maps that can be used as educational aids.

Furthermore, in order to help the participants become responsible, a period of learning how to learn was vital. The researcher held an orientation session beginning with showing the participants how they could benefit from the program throughout the academic year as well as their daily life. They might have to learn how to do using group work as the participants were nearly of homogeneous socio-cultural background and the processes of familiarizing them to new ways of learning seemed easy.

D. Research Hypotheses

The hypotheses to be tested in this research were passed in the directive form as follows :

Hypothesis 1 : There would be a high correlation coefficient between the study group's Thinking Maps awareness and their writing performances

Hypothesis 2:. There would be statistically significant differences at 0.05 between the means of pre-writing performance test and those of post-writing performance test of the study group in favor of the post-writing performance.

Hypothesis 3 : The effect size of writing performance of the study group would be high.

3.Instrumentation

In order for the researcher to test the hypotheses set before, he developed some tools for his study. The tools consisted of difficulties of writing skills questionnaire, thinking maps awareness test and a writing performance test.

A.Difficulties of Writing Skills Questionnaire (DWSQ)

Having reviewed the literature and related studies in the difficulties of writing skills, the researcher prepared a list of difficulties facing students in the writing classes at the secondary stage. It initially consisted of four dimensions , they are as follows: content,(ten items), organization, (five items) , sentence fluency, (five items) and conventions(three items). They were totally 23 items . The questionnaire had five options from which a jury member had to choose : Strongly Agree , Agree , Undecided , Disagree and Strongly disagree.(Appendix A). The aim of this questionnaire was to identify the difficulties of writing skills of secondary school students. In order to validate the difficulties of writing skills questionnaire, it was submitted to some jury members in the field of TEFL. The jury consisted of 11 specialists and one non specialist but he had got high awareness of English language. Only seven responses were judged valid, including David Hyerle's. (Appendix B).

When receiving the questionnaire from the jury members, the researcher made necessary modifications in the light of their views for the purpose of identifying the most common difficulties facing students in writing skills. The

items of the questionnaire were weighted through assigning their percentages as shown in table as follows :

Table 1. Percentages ranked to the most common difficulties items facing students in writing skills

Number of items	Percentages
1.Collecting ideas and writing topic sentences.	36%
2. Using ideas in a sequential way.	21%
3. Describing things, people and actions in a proper way.	15%
4. Expressing causes and effects in a proper way.	15%
5. Comparing things, people and actions .	13%

Taking the jury's comments into consideration, the researcher chose five items representing varied difficulties of writing skills to be the main difficulties facing students in writing classes.

B. Thinking Maps Awareness Test (TMAT)

The Thinking Maps Awareness Test (TMAT) was prepared by the researcher to assess students' awareness of thinking maps and their abilities in using these maps in practicing writing compositions. This test was performed after carrying out or implementing the program inside the writing classes. The test required students to answer the questions which are connected with certain maps. In addition, there were different types of questions, as follows:

In the first question, students were asked to name the thinking process for each map.

In the second question, students were asked to name the key words and for each map.

In the third question, students were asked to state the guiding questions for constructing each thinking map.

In the fourth question, students were asked to state three questions identifying the frame of reference of each map.

In the fifth question, students were given three isolated short texts and students were asked to construct three maps for those texts.

In the sixth question, students were given a passage that had three paragraphs . Students were asked to represent these paragraphs graphically or change these paragraphs into maps. The items of the test represented five thinking maps that the researcher operationally tried to raise the learners' awareness of them.

C. Writing Performance Test (WPT)

The writing performance test was prepared by the researcher to assess students' writing performance before and after applying the Thinking Maps Based Program (TMBP). (Appendix C). The test consists of two categories, under each category, there are two topics from which students had to write a composition on each one. They were asked to write as much as they can within the time allowed (40 minutes).

Validity of the test: The test was submitted to a jury of EFL methodology staff members to establish the validity of the test. There was almost an agreement on the validity of the test in measuring the participants' writing performance.

Reliability of the test: Students' compositions were scored independently by two raters, the researcher and a colleague in the EFL methodology field. Then, the correlation coefficient was obtained from scores of the two raters. It was (0.944), which is considered high.

4. THE THINKING MAPS BASED PROGRAM

Introduction

The review of literature indicated that writing skills can be developed by using Thinking Maps. Besides, it was also clear that students of English as a foreign language are in need of having their thinking skills and cognitive content developed. The researcher developed Thinking Maps-Based Program(TMPB) to be supplementary to the English course in EFL program in secondary schools. Furthermore , the TMBP might be a main part of the English course afterwards.

To put the TMBP into practice the researcher had to define the dimensions of the program, the assumptions on which the TMBP banked, what the samples are expected to know at the end of the TMBP, what is to be thought or learned during the TMBP, i.e. its content how it is to be taught; suggesting procedures, techniques and materials , method of teaching the course, a full description of the TMBP, presentation of its units, when it is to be taught and at what rate of progress taking into consideration. The different levels and stages as

well as the --- constraints of the course, i.e. during of the course and judging the course validity for application.

A. Dimensions of the TMBP

The TMBP had three dimensions: the language content dimension, the process dimension and the product dimension.

1.The language content dimension

The TMBP content had some topics of expository and argumentative nature in different areas of knowledge and met different interests. In addition, the topics reflected some social and cultural features of the target language as well as mother tongue. They challenged the higher level skills of the participants of the study .

2.The process Dimension

The process dimension reflected the organization of the language content, the role of the instructor and the role of the learner. It might have the language skills integrated. The topics of the TMBP were organized in a way that served the sequence of the writing process. The role of the instructor in the TMBP was an illustrator and a facilitator who provided learners with information beyond the topic; as a director who projects an attitude of being interested in each individual learner performance and manage assignments when appropriate and as an evaluator who matched learners' needs with those set out in the TMBP in order to bring the two closer together. It was the instructor's responsibility to lessen any feelings of anxiety learners might have since some topics of the TMBP raise pros and cons in the issues handled.

The role of the learners in the TMBP was to understand what is given to them to the full and use knowledge acquired in developing Thinking Maps and to practice constructing sentences and/or topic in the light of the writing process under research. They had to get involved in discussions and worked individually, in pairs or in groups as directed. Designing thinking maps from topics or write topics from the information shown in thinking maps was the ultimate goal.

3. The product dimension

The anticipated outcome of TMBP was to be knowledge- oriented as well as skill- oriented. This means that mastering the writing processes via using Thinking Maps can develop the writing skills of EFL secondary school students. The effectiveness will be judged in terms of cognition skills and performance skills.

4. OBJECTIVES OF THE TMBP

For the Thinking Maps- Based Programme (TMBP) is a utilitarian – oriented programme (Knowledge -oriented and skill - oriented), its focus must be on utilization of Thinking Maps for good writing performance. This means that the Thinking Maps may effectively develop the English writing skills. On the basis of this broader goal , the expected objectives of the Thinking Maps Based Programme (TMBP) can be specified in three areas:

1. Thinking Skills which include developing defining in context, developing comparison and contrast, developing classification, developing organization and sequence, and developing the cause and effect.

2. Cognition Skills which include identifying the purpose of writing, distinguishing expository writing from argumentative one writing, identifying supporting details, and recognizing information within composition.
3. Performance Skills which include using various pre-writing techniques to generate ideas, stating clearly the topic sentence, stating clear and concise ideas, achieving cohesion and coherence

In actual writing, using mechanics of writing in the writing, writing different drafts, critically reading the different drafts and self-editing them, peer editing the drafts , using the Feedbacks the students received from the teacher as well as their peers to refine and edit their writings, presenting the final drafts of their writings.

5. Content of the TMBP

The TMBP was developed mainly on specific topics and themes chosen by the researcher from different sources. Each topic focused on the brainstorming stage and the process of writing. eliciting the ideas from different students and then filtering them . Thus, students could use these ideas. Students use these ideas in the process of writing in an easy way without facing any difficulties or apprehension during writing.

The researcher's aim was to develop a content that suited the participants, thinking level and their cognitive and intellectual development. The content was associated with their needs or problems in their daily life and that stimulated their

desire to write. Thus, the researcher and students had selected topics as examples of significant issues locally or worldwide.

The criterion of organizing the content of TMBP was the progress of the writing process, not the level of complexity in the topics. They were presented in a variety of ways that helpd master the writing processes under study.

6. Methods of teaching

Devising teaching methods in a study program is important as is blending them appropriately. Also, the methods designed for particular kinds of content can often be adapted successfully for others. In TMBP different methods were used in different situations according to the skills to be developed.

As the researcher designed the TMBP, he took into account the nature and the type of each map. The teacher drew the map, explained difficult words, posed questions, defined social or cultural barriers if there were any, and enhanced the ability of students to acquire information, ideas, skills, values, ways of thinking and means of expressing themselves.

In session one, the instructor gave a theoretical background about the map under focus (e.g. circle map) by asking questions and receiving the answers from different students. In the second session, he used the map in the process of writing by giving an example and exercise to train students how to use the thinking map in the process of writing. He did the same steps but using different techniques to make students produce different products of writing from different maps. Thus, no single method of teaching could work well in all situations in the

process of writing. The achievements of students were measured not only by how well they achieved the specific objectives in the process of writing but also by how well they increased their ability to write compositions.

7.Description of the TMBP

The Thinking Maps- Based Program (TMBP) has two parts, part one presents an introduction showing the importance of such a program in improving the writing performance of EFL secondary school students , developing thinking skills and increasing the cognitive content for learners . Part two presents 15 sessions – the content of the programme . The sessions are representing the aspects of Thinking Maps judged valid.

In all sessions, except for the welcome session.pre-post writing performance test. and thinking awareness test, the following procedure was followed , each session began with the objectives, aids and materials ,procedures, TMs generation with ample explanation and step by step procedures on how the instructor could implement each Thinking Map. Further activities consolidate the thinking processes. Also, there were different exercises to evaluate students.

Since the core of Thinking Maps sessions were to improve writing performance and develop thinking skills. They were gone through one by one as follows:

Session One introduces "Circle Map" for defining in context as a process of thinking and the instructor teaches students how they design the circle map.

Session Two introduces the way of using circle map in the process of writing and the instructor evaluates the students.

Session Three introduces "Bubble Map" for describing the characteristics of things or persons. The instructor teaches students how they design the bubble map.

Session Four introduces the way of using bubble map in the process of writing and the instructor evaluates the students.

Session Five introduces "Double Bubble Map" for comparing and contrasting as a process of thinking. The instructor teaches students how they design the double bubble map.

Session Six introduces the way of using double bubble map in the process of writing and the instructor evaluates the students.

Session Seven introduces "Flow Map" for sequencing and ordering information as a process of thinking. The instructor teaches students how they design the flow map.

Session Eight introduces the way of using flow map in the process of writing. The instructor evaluates the students.

Session Nine introduces "Multi- Flow Map" for showing and analyzing cause and effect relationship. Mastering such a process requires the learner to be able to identify or show the causes and the effect relationship. The instructor teaches students how they design the multi –flow map.

Session Ten introduces the way of using the multi –flow map in the process of writing. The instructor evaluates the students.

8. Presentation of the sessions of the TMBP

The researcher sees that the Thinking Maps- Based Program (TMBP) is a functional program focusing on improving writing skills. Therefore, the sessions of the program were presented in such a way that ensured fulfilling its aim. The two sessions of each map started with the introduction to the design of the maps and how students use these maps in the process of writing. The topics were in expository texts reflecting a related process of thinking. They were dealt with in a specified period of time set for this purpose. Learners were first asked to choose the topic. The instructor raised questions to elicit the ideas and recorded them. At the same time, he explained the difficult vocabularies and filtered all the recorded ideas with his/her students. They began to arrange or sort the information.

As far as the questions used by the teacher for the elicited ideas, these questions were often of two types: factual questions that recall information and facts from students, and thought questions that invoke reflection and thinking. The interaction was instructor-Learner shaped. The instructor initiated questions and the learners responded, each on his own.

During writing , the researcher introduced the process of writing in which the learner used the elicited ideas and began to write the composition following the steps of writing, from using the topic sentence and the supported ideas. The

learner tried to achieve coherence and cohesion in the composition. Also, they tried to use the appropriate words in the suitable situation. At the end of writing, the learners concluded the main ideas in a short way and expressed their opinion.

Revision was one of the important stages in the process of writing to improve what the learners wrote; they can add and drop other ideas.

9.Validity of the Thinking Map Based Program

The content of the Thinking Map Based Programme was submitted to David Hyerle, the creator of Thinking Maps, as a juror,who expressed his approval on the programme saying: "I approve for what and how you are doing" (See Appendix E4). According to Egyptian Jury members suggestions were taken into consideration, all of them judged the program valid for developing some English writing skills of secondary school students.

5. Administering pre-testing

Before administering the pre-testing, the researcher had got a formal permission from Ministry of Education under-secretary of state in Al – Dakahlyia Governorate to apply the experiment to EFL students in Al – Baramun Secondary School during the first term in the scholastic year 2010/2011. The researcher held a welcome session for the sample he had randomly drawn (23 participants). Though the program was not prescribed for their academic or educational preparation, most of them showed interest and were enthusiastic during the TMBP but there were some students who were reluctant to participate, so, they were extrinsically motivated by showing how to get benefit

from the program in their daily life and how to learn by using thinking maps to make them organize and remember their information easily.

On the first day of the experiment, the researcher divided the class into groups and begin to practice or do the test. Also, the researcher made students practice writing individually. These different techniques in writing classes helped students much in the process of writing because they could work alone and with their desk mates. In this way, students felt comfortable and at ease in the writing classes.

The pre-writing performance test had two categories of questions, each category consisted of two topics: Each student chose only one topic from each category and they began to practice writing under the pressure of time. Each had 30 minutes. The total time of writing was one hour.

6. Administering Thinking Maps Awareness Test

Having finished the Thinking Maps- Based program the researcher administered the thinking maps awareness test. It was based on measuring how much students understood from the program in English writing.

7. Teaching the thinking maps- based program

The teaching of the thinking maps based-program (TMBP) was based upon the research sample, the research hypotheses and the tools of the study described at the beginning of this chapter.

As the researcher had shown earlier that a sample of the 23 EFL secondary school students at Al-Baramun secondary school , East Mansura Directorate ,

Dakahlyia Governorate was randomly drawn , some sort of rapport had been established , three hypotheses set and three tools launched in order to test the hypotheses.

The setting of TMBP was in secondary first class (A) situated in the second floor of the school. In group work, three student turned round to face the other students who sat behind, but in the individual work each student sat in his own place . In pair work, each two students worked with each other. The pairs and the groups were not fixed but rotating throughout the program.

Teaching the thinking maps was limited to five maps demonstrating five thinking processes and representing other specific thinking skills. Since each map contains two sessions, the researcher made use of these sessions. In the first session of each map, the instructor taught students how they design each map, explained the key words, key questions and the frame of reference. In the second session, the instructor taught students how they could use the maps in the process of writing. In addition, the instructor was informing and persuading the participants of the new information while they were receptive. He added some different activities to reinforce what students had learned. The instructor evaluated students by giving them opportunities for subjects to write a composition. They were permitted, indeed encouraged, to ask questions of clarifications.

8. Administering post-testing

Having finished the Thinking Maps-Based program, the researcher administered the post test i.e. Writing Performance Test as a tool of study previously employed for pre –tests with the same procedures.

9. Experimentation Duration

The Thinking Maps-Based Program (TMBP) was conducted as a supplementary instructional tool. The administration lasted for 7 weeks and one session in the eight week with a total of 15 sessions and a total of 13 hours. Sometimes, there were three sessions in a week and some other times there was one session. Only did the academic circumstances of both the researcher and the subjects control the number of sessions per week. The distribution of the sessions with their hours as follows:

Welcome session	30 minutes
Pre-writing test	1 hour
TMBP Sessions	
Session 1: design circle map	45 minutes
Session 2: using circle map	45 minutes
Session 3: design bubble map	45 minutes
Session 4: using bubble map	45 minutes
Session 5: design double bubble map	45 minutes
Session 6: using double bubble map	45 minutes
Session 9: design flow map	45 minutes
Session 10: using flow map	45 minutes

Session 11: design multi-flow map	45 minutes
Session 12: using multi-flow map	45 minutes
Wrapping Session	1 hour
Thinking Maps Awareness Test	2 hours
Post Writing Test	1 hour

The duration of TMBP sessions under researcher administration was 8 hours: 45 minutes per-session, each map takes two sessions. So, the total time for each map was 90 minutes except welcome session was: 30 minutes.

Additionally, 1 hour for pre- writing test, 1 hour for post- writing test and 2 hours for Thinking Maps awareness test were added to form the duration of experimentation as follows:

Welcome session	30 minutes
Circle map sessions	90 minutes
Bubble map sessions	90 minutes
Double bubble map sessions	90 minutes
Flow map sessions	90 minutes
Multi-flow map sessions	90 minutes

The timings were the same for the sessions of map, except the welcome session Hence, the duration of experimentation was thus;

Pre-testing	1 hour
Post- testing	1 hour
Thinking maps Awareness Test	2 hours
Wrapping session	1 hour

TMBP sessions	8 hours
Total	13 hours

10. Difficulties faced the researcher when conducting his study

1. The difficulty of getting security acceptances from different authorities (The Central Agency for Mobilization and Statistics, Educational Directorate in Mansura, Educational Zone in Mansura and A-Baramun Secondary School)
2. The students felt that the use of Thinking Maps would be an extra-burden they were not in need of. They were first persuaded by the researcher to keep Thinking Maps but began to like the idea later on after a few entries and discussion with students (A-Baramun Secondary School).
3. It was difficult for the researcher to leave his school and go to the other school in AL-Baramun to apply his tools and the program because of the complex routine administration procedures. But the researcher managed, after many trials, to convince the two directors of the two schools of the gains of his program and how it would help both teachers and students in EFL classes.

CHAPTER FOUR

DATA ANALYSIS, RESULTS & DISCUSSIONS

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter includes the reliability of rater judgments, the statistical analyses performed on the data gathered from pre-and post test as well as the results found by the researcher. In this study. All the data collected were analyzed using the statistical package for the Social Sciences (SPSS). Then, the results are followed by discussion.

A. Reliability of rater judgments

When the scoring of tests involves subjectivity, like the case in the present study, we are concerned with interrater reliability. It refers to the reliability of two (or more) independent raters. Two raters evaluated students' writing performance pretest and posttest -Therefore, interrater reliability was calculated using Pearson's Coefficient of Correlation. It was found that the correlation coefficient between students' scores on the pretest and their scores on the posttest was 0.944 (significant at 0.01 level). Based on this result, it can be said that the writing performance test was reliable.

B. Statistical Analysis for Thinking Maps Awareness Test

Since the Thinking Maps Awareness test was applied only post administering TMBP, the researcher found the "percentages" was the most appropriate way to spot the development of the study participants' thinking maps awareness. It was considered an achievement test by which it is judged how far

the participants of the study achieved progress in building maps from texts and transforming written texts into graphic thinking maps. It was found out that twenty students out of twenty three got more than seventy scores out of one hundred. That number constituted 85.95%. This means that the participants' awareness of thinking maps was fairly high. That result indicates that the TMBP was on the right track and would cause the effect it was planned for. Thus, it can be said that such a result supports the first hypothesis that " "There would be a high correlation coefficient between the study group's Thinking Maps awareness and their writing performances."

C. Statistical Analysis for writing skills Test

In order to test the second hypothesis which stated that "There would be significant statistical differences at 0. 05 between the means of pre-writing performance test and those of post-writing performance of the study group in favor of the post-writing performance", paired sample t-test was used, Table 1 shows the results.

Table 3. Means, Standard Deviation and T–values of the Study Group's pre-post Writing Performance Test

Test	N	Mean	S D	df	t-value	**sig**
Pre	23	30.3696	13.3707	22	-7.298	.000*
Post	23	37.6522	10.7390			

*** Significant at 0. 05 level**

The table above indicates that there existed a significant difference in the study group's mean scores on the pre and post tests of writing skills (t = -7. 298 , $p < 0.05$). Therefore, it was concluded that the TMPB significantly improved the writing skills of the participants of the study.

Departing from the premise that 23 students participating in a quasi-experimental study might be a small sample, the researcher used Wilcoxon Signed Ranks Test for pre-post writing skills test of the study sample. Table 2 below shows the results.

Table 4. Wilcoxon Signed Ranks Test for Pre Post Writing Performance of the Study Group.

Test	No	Sum of Ranks	Mean Ranks	Z- value	**Sig**
Pre	23	.00	.00	- 4. 201	0.000*
Post	23	276.0	12.00		

***Significant at 0.05 level**

As shown in Table 2, Wilcoxon Signed Ranks test revealed that there existed a significance difference in the study group's mean ranks on the pre and post tests of writing skills (z- value = - 4.201, , $p < 0.05$). Therefore, it was concluded that TMBP significantly developed the writing skills of the study group. This means that the second hypothesis of study was verified.

In order to measure the size of the practical effect caused by Thinking Maps –Based Programme on writing skills developed of the study sample, the effect size of the programme was calculated using the following formula:

$$\eta^2 = \frac{T^2}{T^2 + df}$$

η^2 = Eita Square T = the t-value of the TMBP df = degree of freedom

The level of the effect size for the TMBP is shown in the following table:

Table 5. **The level of the Effect Size of the TMBP**

Independent Variable	Dependent variable	t- value	df	η^2	ES Level
TMBP	Writing	- 7.298	22	23	Very large

The table above indicates that the TMBP yielded a very large and substantial effect size = 23 .Therefore, it can be said that third hypothesis was verified.

D. Discussion of study results

Following is the detailed discussion of the results related to the empirical part of this study. Such a discussion relates to the purpose as well as hypotheses of the study.The purpose of the present study was to investigate the effect of thinking maps on EFL secondary school students' writing performance.

The first hypothesis of the present study stated that "There would be a positive correlating coefficient between the study group's Thinking Maps awareness and their writing performances." In order to test this hypothesis, the

study group students' writing performance pretest and posttest mean scores were compared using Wilcoxon Signal Ranks test which revealed statistical significant differences. This finding supports the first hypothesis of the study. Thus, one can say that the students of the study group achieved significant improvements in writing performance. A possible explanation for this result is that those students were instructed in the thinking maps strategy, gained the beneficial effects of Thinking Maps on writing performance explained in the literature review and they practiced drawing and using thinking maps in the process of writing. This means that they applied the following maps:

- The circle map allowed students to record their ideas in a context and this was depending on the depth of knowledge about the subject. The researcher sees that the circle map helped students generate ideas about the topic and they could use these ideas in writing the essay.
- The bubble map was very effective in developing vocabulary because it provided students with descriptive language they needed to create visual images in their writing.
- The double bubble map illustrated the same comparing and contrasting skills and could organize writing for students by listing commonalities, then individual differences.
- The flow Map was used to show sequence, order, time lines, steps and directions. By using this map, students transferred their information in a

logical sequence. Also, students stat with an opening sequence their ideas and then close with a summation.

- The multi flow map was based on cause and effect and would organize any persuasive essay or piece to explain "why".

The second hypothesis of the present study stated that "There would be statistically significant differences at 0.05 level between the means of pre-writing performance test and those of post-writing performance test of the study group in favor of the post-writing performance". In order to test this hypothesis, the study group students' writing performance pretest and posttest mean scores were compared using Wilcoxon Signal Ranks test which revealed a statistical significant difference. A possible explanation of this result is that the use of thinking maps improved writing performance. This agrees with prior research in the field of writing which suggests that the thinking maps strategy increases students' skills and efficiency (Russell, 2011).

Moreover, many assessment experts have noted the variety of benefits provided by the use of thinking maps in composition classes. Those benefits include the notions that in thinking maps, students become aware of the types of thinking they can apply to assignment; students learn ways to organize information, students have control over the way they want to think, and students can easily demonstrate their thinking, Holesman (2004). This may go in parallel with what Hyerle (1996) thinks that thinking maps provide concrete and visual method of learning basic thinking skills, what Spiegel (2000) sees that thinking

maps are providing new pathways for learners to think as higher levels, and what Thinking foundation (2008) asserts that thinking maps promote student-centred and cooperative learning, reflective and creative thinking and a common language for meaningful learning.

A further explanation is that thinking maps might respond to the participants' preference to be evaluated in a non-threatening atmosphere in which they write and get feedback without face to face confrontations and without being exposed to the criticism of their desk mates. This might have encouraged those students to follow the feedback offered by the researcher in order to become better writers.

Moreover, practicing reflection during the thinking maps construction process might have led to a development in those participants, writing performance. This explanation is based on the belief of some educators practicing reflection: reflection leads to better writing. This is asserted by what Lathpalia and Heath (2008) think that reflection helps students get into the habit of probing what lies beneath their writing practices and the written product, putting them well on their way to becoming better writers. Moreover, the results of the study are confirmed by Horning's(1997) belief that reflective statements in Thinking Maps : a) shed important light on the form and content of students' written work, b) help students become aware of their preferred approaches to writing and c) enable them to take risks to try new and more productive strategies on a particular task. When revising, students may examine their reflections on

their earlier processes of writing and consider alternative processes or approaches.

The third hypothesis of the present study stated that" The effect size of writing performance of the study group would be large ". In order to test this hypothesis , the study group students' writing performance pretest and posttest mean scores were compared using Wilcoxon Signal Ranks test them Cohen's formula (1988) which revealed an effect size of (23). d. This indicates that the effect of thinking maps on the writing performance of EFL student had a very large practical significance.

The explanation for this result can be referred to in the outcomes of using thinking maps: increased information and knowledge of students when writing, well organized final products, greater capacity in written communication, heightened meta-cognition which emphasizes not what we learn or teach but how we learn and teach, self-assessment and transfer of thinking processes across disciplines.

A further explanation is that Thinking Maps help to achieve the basic objectives of constructivism in increasing the participation of students in authentic activities and increasing the quality of writing (Smilkstein, 2003). Also, Thinking Maps motivate students to construct new ideas and concepts that were based on present and past knowledge. Bruner (in Hickie, 2006). Moreover, Thinking Maps are tools to develop students' ability to reflect on what they did and how they did it.

Another possible explanation is that Thinking Maps improved teacher awareness of higher level thinking skills, mapped key ideas , and improved note-taking skills (Curtis, 2001).

Chapter 5

Summary, Recommendations and Suggestions for further studies

CHAPTER FIVE

Summary

The purpose of this study was to determine the effectiveness of using Thinking Maps in developing some writing skills of EFL secondary school students. The study was limited to EFL secondary school students at Al-Baramun Secondary School, East Mansura Directorate, Dakahlyia Governorate, five sub-writing skills and five thinking maps.

A random sample of 23 EFL secondary school students was drawn to be pre – post one group. The instruments of the study included one questionnaire (for EFL teachers to identify the difficulties facing students when writing , Pre-post writing performance test to identify the effectiveness of (TMBP) on the performance of students in writing a composition, and a Thinking Maps Awareness Test.

The Thinking Maps Based Program (TMBP) was prepared by the researcher for the purpose of the study. The participants were given the pre post test on writing performance. The researcher and other raters marked these tests. Also, The researcher gave Thinking Maps Awareness (TMA) to test students' comprehension for Thinking Maps and how they drew and use Thinking Maps in the process of writing.

` Having obtained the data, the researcher analyzed them statistically using mean scores, Wilcoxon Rank Sum test , t- test for paired samples and effect size. Results were then reported and interpreted.

The results indicated that writing skills of EFL secondary school students had been developed. In addition, the study revealed using Thinking Maps was effective in developing secondary school students' writing skills.

Recommendations and Suggestions for further studies

In answer to the question "What can research on Thinking Maps contribute to EFL teaching/learning?" Floden and Klinzing (in Al-Hadi, 2001, p. 259) suggest that, " It is inappropriate to turn research results into teaching prescriptions… but research knowledge still can, and should, play a substantive, constructive role in teacher education". The findings of the current research suggest that secondary school students' writing skills can be enhanced by Thinking Maps. And this can provide them with a rich source as well as opportunity for teachers and students to grow together during the teaching experience. The teacher is no longer merely the one who teaches, but one who is himself taught in Thinking Maps with the students, who in turn while being taught also teach. They become jointly responsible a process in which all grow, El-Dib (in Al-Hadi, 2001, p. 259). By recognizing that secondary school students can think about things differently – when their writing skills are developed, their writing is encouraged to be reflective and issues of mutual concern or even student classrooms incidents can be discussed critically. Moreover, improvements in the teaching/learning strategies can make important contribution to developing different language skills in EFL classes.

Recommendations

In the light of the research results, the following suggestions are recommended:

1. It is recommended that a Thinking Maps programme become a component of the prescribed curriculum of English classes in different stages.
2. EFL teachers need to be trained on how to introduce and model Thinking Maps for students in order for this type of learning approach to be successful.
3. EFL secondary school students should be exposed to different types of writing which are to be used as models for using Thinking Maps.
4. Using Thinking Maps, EFL secondary school students can be given different topics or given the chance to generate some on their own with regard to the knowledge and enthusiasm they have about the topics they choose. The success of this strategy requires the instructor to provide a supportive, non-threatening environment.
5. EFL secondary school students can be given the opportunity to select everyday current topics to analyze, interpret and map them**.**
6. Secondary school students are urged to observe good models of writing of their peers and know how those students succeeded in the process of writing by using Thinking Maps.
7. Designing Thinking Maps for teachers on the use of Thinking Maps as a means for developing their abilities.

8. Informing teachers of the importance of Thinking Maps in their professional growth and classroom problem solving.
9. Changing the practice teaching supervision system so as to include Thinking Maps.
10. Training supervisors and senior teachers on the use of Thinking Maps in teachers assessment and students' assessment
11. Encouraging course-designers to design curriculum based on Thinking Maps.

Suggestions for Future Studies

A number of directions for further research are as follows:

1. Further research should be done with the students at other grade levels, using the procedures of this study as a guideline.
2. Further study should be done to determine whether developing expository writing and cause and effect writing enhance writing skills as a whole.
3. Further studies should be done to investigate the effectiveness of using Thinking Maps in developing speaking and listening skills.
4. Additional research is needed to investigate the effectiveness of using Thinking Maps in understanding the grammatical rules.
5. Further research should be done on the effect of teaching by Thinking Maps on problem solving and decision making.
6. Further research should be done to investigate the role of Thinking Maps in developing vocabulary.

7. A study should be done to investigate if Thinking Maps enhance cooperative learning in EFL classes .

8. A study should be done to investigate if Thinking Maps enhance individualized learning in EFL classes.

9. More research is needed to explore the effect of Thinking Maps on questioning skills.

10. Conducting studies to use Thinking Maps for improving reflective learning, accelerating learning and knowledge retention seem necessary.

11. A comparative study is needed to test the impact of Thinking Maps instruction on good writers versus poor/ struggling writers.

12. Situation Analysis in writing classes seems important to explore what types of and how far Thinking Maps are used by teachers as well as by students, when using Thinking Maps as an instructional and learning strategy.

Bibliography

Abdal- Haqq, Esmat (1999). Constructivism in Teacher Education: Considerations for Those Who Would link Practice to Theory, ERIC Digest, ED 426986

Abernethy, J. (2008). Dimensions in the School Curriculum. Arahunga Special School, Poynter Piece, Wanganui.

Abou Zaid, A. E. M. (2009). The Effect of Using the Reflective Approach on the Performance of Student- Teachers and Their Writing Skills, (Unpublished Dissertation). Faculty of Education, Fayoum. University.

Al-Hadi, T. (2009). The Impact of Thinking Maps Instruction On Tourism and Hotels. Students' Reading Comprehension, *Studies in Curriculum and instruction*.No.151, Egyptian Council for Curriculum and Instruction, pp.8-12

Al-Hadi, T. (2001) . The Effectiveness of Using the Argumentation Process in Developing Communication Skills of the Prospective Teachers, (Unpublished Thesis), Menufia University, Shebin El-Kom.

Ali,Magdy M. (2002) The Effect of Using the Writing Workshop Approach on Developing Student Teachers' Composition Skills. In Meeting Challenges of ELT in the Arab World. Zeinb El-Naggar(ED.), Ain Shams University, Cairo, pp. 131- 135

Ali, M. (2011) . The Effectiveness of Some Thinking in Developing the First Grade Secondary School Students' Reading Comprehension Skills, (unpublished Thesis) , Zagazig Univesity

Allen, R. (1996). *Performance Assessment. Issues Series*. May. Retrrieved October 10, 2006, from Weak: Wisconsin Education Association Council . Instruction. Web site: http://www.weace.org/resource/ May96/perform.htm.

Andrews, P.L. and Bos, C. (1986). Semantic Feature Analysis: An Interactive Strategy for Vocabulary Development and Text Comprehension. *JSTOR: Journal of Reading*. Vol.29.No.7.PP: 610-616 Available at: http://www.jestor.org/stabl/10.2307/,on 3/2/2012

Andrews, S. (2002). *Group Work vs. Whole- Class Activities*. Retrieved February 15, 2007, from British Council Teaching English Methodology. Web site: http://www. Teachingenglish.org.uk/think/ Methodology/whole-class.shtml.

Ateia, S. A. E (2006). The Effectiveness of using Cooperative vs. Competitive Learning Strategies in Enhancing the EFL Writing Performance and Self- Esteem of Secondary School Students, (Unpublished Dissertation), Mansura University, Faculty of Education.

Badger, R. G. and White, G. (2000). A process Genre Approach to Teaching Writing . *ELT Journal*, 54(2). 153- 160.

Baker, E. L. ; O'Neill.H. F. and Linn, R. L. (1993). Policy and Validity Prospects for Performance- Based Assessments. *American Psychologist*, 48,1210-1218.

Bedford county Public Schools. (2005). *Making Summative Decisions*. Retrieved November 13, 2007, from Teacher Performance Evaluation Handbook. Web site: http://www.bedford.k12.va.us/teacher/handbook. pdf

Benoit, R. and haugh, B. (2001). Team Teaching Tips for Foreign Language Teachers. *TESL- EJ*, V11(10) from: http://iteslj.org/Techniques/ Benoit-Team Teaching.

Bello, J.Y. (1981). Basic Principles of Teaching. Spectrum Books Limited, New York: John Willey and Sons.

Bigge, M. L. & Shermis, S.S. (1992*). Learning Theories for Teachers* . New York: Harper Collins.

Bello. T. (1997). Writing Topics for Adult ESL Students. Paper Presented at the 31th Annual Teachers of English to Speakers of Other Languages Conventions. Orlando, FL.

Blount, M. (1998). The effect of Thinking Maps on Reading Retention.CatawbaCollege. Available at : http:// www.thinkingfoundation.org/research/ graduate…

Bray,E. & H. K. (1990). Using Reflection/ Review Journals in Japanese Classrooms, Wrkshop, the Japanese Association of Language Teachers Annual Convention,

Brockbank, Anne and McGill I. (1998). *Facilitating Reflective learning Learning Higher Education*, SRIE, USA: Open University Press, (PP: 66- 80).

Brown, D. (2001). *Teaching by Principles*, 2nd ed., Addison Wesley. Longman.

Buckingham, L. (2008). Development of English Academic Writing Competence by Turkish Scholars. *International Journal of Doctoral Studies,* 3.

Burns, A. C. & Gentry, J. W. (1998). Motivating Students to Engage in Experiential Learning : A tension – to – Learn Theory . *Simulations And Gaining* ,29, 133-151.

Buxton, M. (2005). Inet Online Conference Paper: Learning to Learn, How Can Thinking Maps Impact Upon the Learning to Learn Agenda. Available at: http:// www.Djanogly.notts.Sch.uk/CB/ Publications/Document.

Buxon,Mr. M. (2009). Thinking Maps: Using Visual Thinking Skills to Develop Transfer and Metacognition. Available at: http:// www.ssat-inet. .net/resources/olc/thinkingmapsusingvisual.aspx.

Callahan, J. & Clark, L. (1988). *Teaching in the Middle and Secondary Schools: Planning for Competence*. 3rd ed. New York: Macmilian Publishing Company.

Cangelosi, J. S. (2004). *Clasroom Management Strategies: Gaining and Maintaing Students' cooperation*, 5th (ed). USA: John Wiley&Sons.

Capel, S.; Leask, M.; Turner, T. (1999). *Learning to Teach in the Secondary School: A Companion to School Experience* , 2nd edition, Oxford University, London.

Carter, K. (1990). Teachers' Knowledge and Learning to Teach . In W. R. Houston (Ed.) *handbook of Research on Teacher Education: A project of the Association of Teacher Educators* (291- 310). New York: Mac Millan.

Castillao,R. and Hillman,G. (1995). Ten Ideas for Creative Writing In the EFL Classroom. Teaching English Forum, p. 30

Chakraverty,A. and Grautum, K. K (2000). Dynamics of Writing, Teaching English Forum. Vol 38. No 3. Available from : www.exchanges/ state.gov/

Chico Unified School District. (2007). *Teacher Performance Standards: Supporting Rubric* . Retrieved September 17, 2008, from Unified School Web Site http:// www.cused.chico.k12.ca.us/ personnel/cuta%20contract/ Appendix %20F.pdf.

Cooper,P. and Simond,C. (1999). *Communication For the Classroom Teacher*. 6th (ed).Allen and Bacon: Boston.

Costa, A. L. & Kallick, Bend, (2008). Learning and leading with Habits of Mind, in, Thinking Maps: Visual Tools for Activating Habits of Mind , PP: 149-174.Available at: Thinkingfoundation.org.

Cotton, K . (1991). Close Up: Teaching Thinking Skills. Retrieved From: http://www.nwrel.org/scpd/sirs/6/cu//html

Coughlan, A. (2007). Learning to Learn : Reflective Learning: Keeping a Reflective Learning journal, DCU Student Learning Resources, Office of the Vice – President for Learning Innovation and Registrar.

Council of Writing Program Administration. (2005). Beyond Quality control. *Writing program Administration*. 29(1). doi:29n1-2/-Eng.

Cyrs, T. (1997). Visual Thinking: Let Them See What You Are Saying, In New Directions for Teaching and Learning, N 71 (EJ554109). PP: 27-32 .

Danville P. School District (2004) Thinking Maps, Available from: www.web.deps.k12. va-us/deps/instruction/ thinking_ maps.html.

Darling, H. L. (1998). Teachers and Teaching: Testing Policy Hypothesis from the National Commission Report. *Educational Researcher*. 27(1), pp: 5- 15.

Designs for Thinking (2008). Critical Thinking about the 2008 Presidential Elections Using Thinking Maps. Available at : www.mapthmind.com

Dede, C. (2002). Comparative Analysis on the Roles of Message, medium and communicative method in empowering learning. Journal of Computer Learning . 18(4), PP: 498- 501.

El- Bassuoni, J.M (2005). A **Program Based on the Process Approach and Learning Style Preference to Develop EFL Prospective Teachers' Writing Skills, (Unpublished** Thesis**), Mansura** University, Damietta Faculty of Education.

Ellis, D. (2000). *Becoming a Master Student: Tools, techniques, hints, ideas, illustrations, examples, methods, procedures, skills,resourced and suggestions, for success*,9th (Ed). Boston: Houghton Mifflin Company.

El Naggar, Z; Fadel,R.; Hanaa, R.; McCloskey, M. and Thornton, B. (2002). Speer: *Spotlight on Primary English Education Resources*, (Guest eds). Kamal El- Fouly and Linda New Leavine. Developed by, The Integrated English Language Program 11(IELP. 11).

Eppler, M. J. (2006). A Comparison Between Concept Maps, Mind Maps, Conceptual Diagrams, and Visual Metaphors as Complementary Tools for Knowledge Construction and Sharing. Retrieved 2, May,2009,from,http://www.palgrave-journals.com/ivs/journal/vs/ n3/ full/9500131a.htm

Eyraud, Kevin et.al (2000). The World Wall Approach. Teaching English Forum. Vol38. No. 3, p. 5

Farahat, E.M.A (2006). The Effectiveness of Reflective Writing Program in Developing English Department Student' Writing Skills and Metacognitive Strategy Use in Faculties of Education, (Unpublished Thesis), Mansura university, Damietta Faculty of Education.

Frequencies Asked Questions about Thinking Maps(2009). Available at: http:/ www.tangischools.org/schools/kes/

Gay, G. (1991). *Developing Dimension of Written Language* . Retrieved November 25, 2006,from Articoli. LDRC: Learning Disabilities ResourceCommunity . Adaptive Technology Resource Centre Web Site : http://www.1drc.ca./contents/view_article/kinds_of_1d/153/? Language=it

Ghaith,G (2004). "Spontaneous Writing": American University of Beirut. Available from: http:// ghaith. Tsx.org

Gough, D . (1991). Thinking About Thinking. Alexandria, VA: National Association of Elementary School Principles. ERIC Document Reproduction Service No. ED 327980

Glasswell, K; parr, J. and Aikman,M. (2001). Development of the as TTle Writing Assessment Rubrics for Scoring Extended Writing Tasks .*Technical Report* 6. University of Auckland. March.

Graham, S. and Perin, D. (2007). Writing Next: Effective Strategies to improve Writing of Adolescents in Middle and High Schools. Retrieved November 18, 2008, from the Carneige Corporation of New York.

Alliance for Excellent Education web Site: http:www.gtce.org.uk /research/romtopics/rom _curriculum/writing_ skills_fb08/

Gronlund, N. E. (2000). *How to Write and Use Instructional Objectives*, 6th ed., Ohio: Merrill of Printice Hall.

Herrell, A. L. (2000). *Fifty Strategies fot Teaching English Language Learners*, California State University , Fresno: Merrill of Printice Hall.

Hess, N. (undated). *Teaching Large Multilevel Classes*. Cambridge Handbooks for Language Teachers, (Editor). Scott Thornbury.

Hickie, K. . M. (2006). An Examination of Students Performance in Reading / Language and Materials After Two Years of Thinking Maps Implementation in Three Tennessee State university, (unpublished, phd). PP: 28- 52

Holcomb. E. (2001). *Asking the Right Questions: Techniques for Collaboration and School Change*, Corwin Press, INC. A Sage Publications Company, Thousand Oaks, California.

Holesman,S.(2004). Aiming High: Thinking Maps, 13 Annual Administrator Conference " Closing the Achievement Gap for EL Students", The Sonoma Country Office of Education, Carol Lingman (ed) Available from : Sholzman@ Ibusd. K 12.ca.us.

Holiday,L.(2006). Thinking Map, Holly Tree Elementary School, Available From : www. Nhcs. K 12. us/Three/curriculum/ thinking maps ,html. Writing Workshop, Available at: http://en.wikipedia.org/wiki/writing_Workshop 26/1/2011

Holmes, N. (2006). *The Use of A process- Oriented Approach to Facilitate The Planning and Production Stages of Writing for Adult Students of English As A foreign or Second Language*. Retrieved November 25, 2006 from Developing Teachers Web Site : http://www.developingteachers.Com/articles_tchtraining/processw2 _nicola.htm

Hoover, W. (1998). Cooperative Learning Classroom Compass, 1(2). SEDL: Southwest Educational Development Laboratory.

Hopkins, G. (1999*). Journal Writing Every Day*: *Teachers Say It really Works*! Retrieved july 6, 2003, from , Education World Web Site: http://www.education_world.com/boards/showpost.pl?

How to make a Thinking Maps(2009). Available at: http:// www.ehow.com/ How 4885428_thinking-Maps.

Hung W. (2008). Enhancing Systems – Thinking Skills with Modelling, British Journal of Educational Technology, Vol. 39, NO. 6, PP: 1099- 1112.

Hyerle, D. (2000) . *Thinking Maps for Reading Minds . A field Guide to Using Visual Tools* , Alexandria , VA: AScD.

Hyerle, D& Williams,K (2010). Bifocal Assessment in the Cognitive Age: Thinking Maps for assessing Content Learning and Cognitive Processes. Available at: thinkingfoundation.org/david/books/ TMops. Assessjournal.pdf.

Hyerle, D. (2004). *Thinking Maps as a Transformational Language for Learning. In Students Success with Thinking Maps* . David Hyerle (ed), Corwin Press, Thousand Oaks, California.

Hyerle, D.(2004). Designs for Thinking Represents Thinking Maps,Inc, Available from: www.thinking maps.com

Hyerle, D. (1996). *Visual Tools For Constructing Knowledge*, Association For Supervision and Curriculum Development, (ASCD) press, Alexandria, Virginia.

Hyerle, D. (2004). *Thinking Maps as a Transformational Language for Learning*, Corwin Press.

Thinking Maps as Tools for Multiple Modes of Understanding, Doctor of Education, University of California, Berkrly, USA.

Hyerle, D. (2010). Thinking Maps: Visual Tools for Activating Habits of Mind Retrieved From WWW. Thinkingfoundation.com.

Hyerle, D.& Williams, Kimberly (2010). Bifocal Assessment in the Cognitive Age: Thinking Maps for Assessing Content Learning andCognitive processes, Retrieved From : www.Thinkingmaps .org/ david/ books/ TMaps Assessjournal. Pdf, 5-4- 2010

Ibrahim, S. A. E (2004). The Effectiveness of using Indirect Learning Strategies In Developing writing Skills in the English Language Among Commercial School Students, (Unpublished Thesis), Mansura University, Faculty of Education.

Innovative Learning Group (2001). Thinking Maps, Available from: www.innovativedlearninggroup.Inc.

Irvin, L. And Baake, K. (2005). *Refection's Place in the Writing Process*. Retrieved November 16, 2008 from Alamo Community Colleges Web Site: http://www.accd.edu/sac/english/livin/TTech/5363LLIpaper.htm.

Burley, J. E; Brown, B. G and Saunders, B. L. (19885). Metacognition: Theory And Application for College Readers, Paper presented at the International Reading Association, 30th Annual Convention, New Orleans, Louisiana. ED266428.

Jensen, E. (1996). *Brain- Based Learning*. Del Mar, CA: Turning Point.

Joice, B.; Weil, M.; and Calhoun, E. (2004). *Models of Teaching*, 7th (ed). USA: Boston.

Kabka,D. and Oberman,Dina **A**.(2001). Improving Student Writing Skill Through The Modelling of the writing Process, Field- Based Master's Program, Chicago, Illonois. Langan, John (2001) . English Skills , Boston , America.

Kasper, L. F. (20000). New Technologies, new Illiteracies: Focus Discipline Research and ESL. Learning communities .Language Learning and Technology. 4 (2). 105- 128.

Kawryga, J. M. (2001). Integrating Thinking Maps into the Fourth Grade Curriculum. Availabe at: http:// www.thinkingfoundation.org

Lam , T. C. M . (1995). Fairness in Performance Assessment . *ERIC Digest*. December, 4. (ERIC Clearinghouse on Counseling and Student Services Greensboro NC. ED 391982). Retrieved from http://www.ericdigests.org/ 1996-4/fairness.htm.

Lee, I. (2002). Helping Students Develop Coherence in Writing. Teaching English Forum, Vol 40. No 3. P. 34

Leung, C. (2004). Developing Writing Skills in EAL. Retrieved November 25, 2006, from Language and Literacy Development, NALDIC: National Association for Language Development in the Curriculum, UK. Web site: http://www. Naldic.org.uk/ITSEAL.2/ teaching/ Writing. cfm.

Liu, D. (2000). Writing Cohesion: Using Context Lexical Ties in ESOL.Available From: http : // eca. Gov/ forum/ vols/ vol 35/no 4/ p22.htm

Madiri , S. (2009). A study on the Perceptions and Attitudes of Teachers and Pupils to Thinking Maps.

Manning, C. (2003). Improving Reading Comprehensive Visual Tools. Research Project, Eastern Nazarere College, Division of Graduate Studies, Division of Teacher Education, Available From: www. Thinking Foundation.org.

Marzano, R. J. (1992). *A Different Kind of Classroom*: *Teaching with Dimensions of Learning*. USA: ASCD.

Matusov, E. (1999). *Seating Arrangements*. Retrieved on: February 16,2007, from University of Delware. Web site: http://www.ematusov.soe.udel. edu/ EDUC190.99F.

Mayer, R. E. (1999). *The Promise of Educational Psychology: Learning in the Content Areas*, University of California, Santo Barbara, Prentice-Hall International.

Mogahd,M. (2004) The effectiveness of Using the Process Writing Approach in Developing the EFL Writing Skills of Al-Azhar Secondary Stage Students and Their Attitudes Towards it. Unpublished M.Ed., Faculty of Education, University of Mansoura.

Mohammed, S. (2010) Using Electronic Portfolios to develop EFL Student Teacher' Writing Performance and Reflective Thinking and Reduce their Writing Apprehension, (unpublished Thesis) , Suez Canal University, Suez Branch.

Mohan,B.(1997). Understanding Cause –Effect: Learning Through Language. Available from: http//: eca.state.gov./ forum/vols/ v35/No 4/p22.httm.

Moore, D. (2010). Writers Workshop: An Introduction, Literacy Leader, Hamilton Elementary School, Westland, M1 48186

Moore,K. D. (1998). Classroom Teaching Skills. (4th ed). East central University, Boston. McGraw- Hill.

Murphy, R. A. (1997). *From Practice to Performance: A Manual of Teache Training Workshop Activities*, Vol, 2 English Language Programs Divisions.United States Information Agency.

Myles, J. (2002). Second Language Writing and Research: the Writing process and Error Analysis in Student Texts. *TESL-EJ*. Teaching English as a Second or Foreign Language – *Electronic Journal* . 6(2).

Noushad, PP. (2008) Cognitions about Cognitions: Theory of Metaconition. Online Submission (ED 502151).

Nunan, D. and Lamb, C. (1996). *The Self-Directed Teacher: Managing the Learning process*. Cambridge: Cambridge University Press.

Nunan, D. (1992). *Research Methods in Language Learning*. Cambridge University Press.

Novak,J.D. and Canflas, A.J. (2008). The Theory Underlying Concept Maps and How to construct and use Them. Technical Report IHMC. Camp Tools 2006-01 Rev 01- 2008, Florida Institute for Human

and Machine cognition (IHMC). Available at : http://Cmap.ihmc.us/publications/Research Papers/ Theory Underlying Concepts.pdf

Orlich, D. C. ; Harder,Robert J. ; Callahan,Richard C. & Gibson Harry W. (1998).

Paul, R. and Elder, L. (2005). The Miniature Guide to the Art of Asking Essential Questions . US: The Foundation of Critical Thinking.

Pollard, A. (1997). *Reflective Teaching in the Primary School*, 3rd ed. London: Cassell. Teaching Students: A Guide to Better Instruction (5ed). Houghton Mifflin Company.

Phillips,D. (2002).Semantic Feature Analysis. Available at: http://novelinks.org/ Uploads/Novels/Nightjohn/Semantic%20Feature.pdf

Randall, M., and thornton, B. (2001*). Advising and Supporting Teachers*. United Kingdom:Cambridge University Press.

Research and Resources (2012). Semantic Feature Analysis. Available at: http:// Kms.sdcoe.net/getvocal/93.htm

Richard, J. C. & Lockhart , Charles (1995). *Reflective Teaching in Second Language Classrooms,* Cambridge University Press, United States of America, PP: 53- 77.

Schultz,R. (2005). What Happens to Reading Comprehension When Visual Thinking Maps are used in Reading Instruction? Wellstone International high School.

Singer, B. (2004). *Leveling the Playing Field for All Students*, U.S. Corwin Press.

South S., learning community (2009). Available at: http:// www.suffolkschools.net/ Learning/maps

Smilkstein , R. (2003) . *We're Born to Learn: Using the Brain's natural Learning Process to Create Today's Curriculum*. Thousand Oaks, CA: Corwin.

Spiegel,J..M(2010).The Metacognitive School:Creating a Community Where Children and Adults Reflect on Their Work, The New Hampshire Journal of Education, Plymouth State College ,Vol. II

Stoodt, B. D. (1988). Teaching Language Arts. New York: Happer& Row. Publishers:.

St Hida's Collegiate School (2004). Thinking Maps Report.

Swain, M. (2001). Integrating Language and Content Teaching Through Collaborative Tasks. *Canadian Modern Language Review*. 58(1),44-63.

Thinking Foundation (2008). What are Thinking Maps ? Available From: www.Thinkingfoundation.org.

Thinking Maps(2009). Available at: http://www.ask.wednet/education/sctemp/12345/

Thomas, A.R. and Lee, R. R. (1998). *An Inquiry into Groups Reflection* Retrieved March 8, 2005, from the Reflective Practitioner Conference : Dedicated Donald Schon on Actlist. Web Site: http://www. Iupinworks.com/ar/schon/paper7.html.

Thornbury, S. ( ) An A- Z of ELT. Macmillan Books for Teachers.

Thorton, B. ; Peltier,G.; Perreault, G. (2004). Systems thinking: A Skill to Improve Student Achievement, Clearing House , Vol. 77,NO. 5 (ED 704108) ERIC, PP: 222-227

Tompkins, G. E. (1994). Teaching Writing: Balancing Process and Product (2nd ed). Upper Saddle River, NJ. Merrill/Prentice Hall.

Tutunis, B. (2000). Content Based Academic Writing. *The Internet TESL Journal* . 6 (7).

University of Colorado. (1998). Consensus Building. Retrieved February 23, 2006, from the Conflict Research Consortium. University of Colorado Web Site: www.colorado.edu./conflict/peace/treatment /consens.htm.

Vandermay,R.; Meyer, V.; Rys, J.V.; and Kemper. D (2007). The College Writer: A Guide to Thinking, Writing, and Researching, 2nd (ed.) Boston, Houghton Mifflin Company.

Vieira, F. and Marques, I. (2oo2). Supervising Reflective Teacher Development Practices. English Language Teacher Education and Development. 6(1) 1-18

Visual Thinking, Available at: www.idonresources.com/visualthinking.htm L, PP: 1-4

Wang, Q.; Woo, Huoy L; &Zhao , Jianhua(2009).Investigating Critical Thinking and Knowledge Construction in an Interactive Learning Environment, In, Interactive Learning Environments, Vol.17, NO. 1, PP: 95- 104

Ward, N. B. (2009). The Influence of a Metacognitive Learning Systems on the Writing Achievement of Elementary School Students, Doctor of K-12 Administration Program Section Hall University.

Wallace, M. J. (1991). *Training Foreign Language Teachers: A Reflective Approach,* New York: Cambridge University Press, Cambridge,

Wiggins, G. (1989). A true Test: Towards More Authentic and Equitable Assessment . Phi Delta kappa. 70(9). 703- 713.

Wiggins, G. (1990). The case for Authentic Assessment ERIC Digest. (ED328611). Retrieved from http://www.ericdigest.org/pre-9281/ Case.htm.

Wilipedia(2010).Mind Maps. Retrieved from: http://en.wikipedia.org/wiki/ Mind/ _Mapping

Woodwart, T. (1991). *Models and Metaphors in Language Teacher Training: Loop Input and Other Strategies*. Cambridge: Cambridge University Press.

Yan, G. (2005). A Process Genre Model for Teaching Writing . *English Teaching Forum Online*. 43 (3). 18- 37.

Zaid, M. A. (1995). Semantic Mapping: In Communicative Language Teaching.Available at: http:// eca.state.gov/forum/vols/ vol33/no3/ p6.htm

- خالد صلاح علي الباز(٢٠٠٧) فعالية إستخدام خرائط التفكير في تدريس الإتزان الكيمائي علي تحصيل طلاب الصف الثاني الثانوي وزكاءتهم المتعددة. المؤتمر العلمي الحادي عشر.المجلد:الحادي عشر. الجمعية المصرية للتربية العلمية.
- مندور عبد السلام فتح الله، (٢٠٠٨) أثر إستراتيجية خرائط التفكير علي الدمج في تنمية التحصيل في مادة العلوم والتفكير الناقد والإتجاه نحو العمل التعاوني لدي تلاميذ المرحلة المتوسطة في المملكة العربية السعودية،مجلة التربية العلمية، المجلد:الحادي عشر. الجمعية المصرية للتربية العلمية.
- منير موسي صادق (٢٠٠٨) التفاعل بين خرائط التفكير والنمو العقلي في تحصيل العلوم والتفكير الإبتكارى وإتخاز القرار لتلاميذ الصف الثالث الإعدادي، مجلة التربية العلمية،المجلد الحادي عشر،العدد الثاني، الجمعية المصرية للتربية العلمية.
- طاهر محمد الهادي و ، أحمد محمد سيد احمد.(٢٠٠٧). في مبادئ و مهارات و إستراتيجيات التدريس، شبين الكوم بمصر: دار الحسين للطباعة و النشر.
- ممدوح عبد المنعم الكناني (٢٠٠٢) الإحصاء الوصفي و الإستدلالي في العلوم السلوكية و الإجتماعية، الطبعة الثانية، القاهرة: دار النشر للجامعا ت.
- حمدي أبو الفتوح عطيفة (٢٠٠٩). دليل الباحث إلي الإقتباس و التوثيق من الإنترنت. القاهرة: دار النشر للجامعا ت.
- نوال عبد الفتاح فهمي خليل (٢٠٠٨). أثر إستخدام خرائط التفكير في تنمية التحصيل و الفهم العميق ودافعية الإنجاز لدي تلاميذ الصف الخامس الإبتدائي في مادة العلوم.مجلة التربية العملية، المجلد الحادي عشر، العدد الرابع.

APPENDICES

APPENDIX A

Suez Canal University
Faculty of Education, Ismailia
Curriculum and Instruction Dept.

Difficulties of Writing Skills Questionnaire

Dear Jury Member,Dr

The researcher is conducting a study for M.Ed degree (TEFL), entitled "Using Thinking Maps for Developing Some English Writing Skills of Secondary School Students". One of the study aims is to identify the difficulties of writing skills of secondary school students. This helps the researcher to design "Thinking Maps-Based Program" to solve the difficulties discovered.

You are kindly requested to read the enclosed questionnaire and validate it in order to be submitted to secondary school EFL teachers to pinpoint writing difficulties.

Name:……

Occupation:……..

Institution:……..

Your comments and suggestions are highly appreciated.

Thank you very much for your time, effort and cooperation.

The Researcher

Rashad Fathallah Abdel-Gawwad Al-Alfi

Difficulties of Writing Skills Questionnaire

Statements	**strongly Agree**	**Agree**	**undecided**	**disagree**	**Strongly disagree**
The Secondary School EFL Students can…					
Content					
1. collect the main ideas.					
2. organize the main ideas					
3.write topic sentences.					
4.present the main ideas clearly					
5.give examples to each main idea					
6. use well chosen details to support the main ideas					
7. give the reader relevant, coherent and important information in line with the topic					
8. describe people, things/actions properly					
9. express causes and effects in a proper way					
10. express compare and contrast					
organization					
1. write strong topic sentence that gives clues about what is coming					
2.use logical effective sequence.					
3. use smooth transitions to help the ideas flow together					
4. write suitable conclusion					
5. write their opinions in a conclusion					
Sentence Fluency					
1. complete sentences without fragments					
2. use different lengths					
3. use different types of sentence beginnings					
4.use different sentence structures					
5. choose words appropriately and differently.					
Conventions					
1. use correct grammar					
2. use correct punctuations					
3. use correct spelling					

Please specifying others

APPENDIX B

Suez Canal University
Faculty of Education, Ismailia
Curriculum and Instruction Dept.

Thinking Maps Awareness Test

Dear Jury Member,Dr…….

The researcher is conducting a study for M.Ed degree (TEFL), entitled **"Using Thinking Maps for Developing Some English Writing Skills of Secondary School Students"**. One of the study tools is Thinking Maps Awareness Test which will be administered to the sample of the study post teaching the proposed Thinking Maps - based- program.

You are kindly requested to judge the test attached for its validity to be applied.

Nam:…….

Occupation:……

Institution:……..

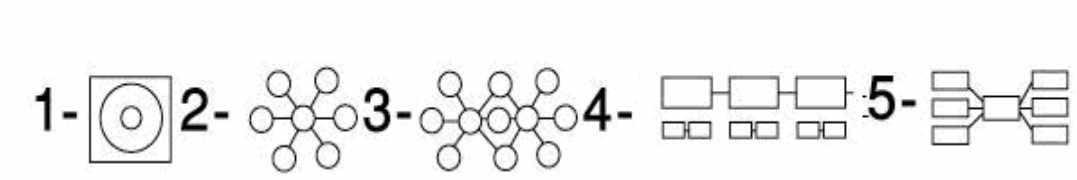
Thank you very much for your time, effort and cooperation.

The Researcher:

Rashad Fathallah Abdel-Gawwad Al-Alfi

Thinking Maps Awareness Test

1. Name the thinking process for each map.



2. **Name the key words or phrases for each map.**

3. State three guiding questions for constructing each thinking map below.

4. State three questions identifying the frame of reference of the following thinking maps.

5. Read the following sentences carefully, and then represent them graphically (construct three maps)

a. Omran is from New Delhi in India. He is interested in the history of Middle East.

b. Cairo is hotter than Alexandria. They are two cities.

c. Pollution is dirty. So, people can not breathe fresh air.

5. Read the following text carefully, then represent them graphically.

. Note: more than one thinking map might be represented for one text.

Abu- Heif was one of the best Egyptian athletes ever. In 2001, he won a prize as the best swimmer of the 20th century.

Abu-Heif was born in 1929 in the Anfoushi area of Alexandria. His father was a primary school teacher and Abu-Heif was the tenth of twelve sons in the family. As a boy, he spent a lot of his time swimming in the sea. At the age of ten, he won the Egyptian primary school swimming championship. After this, he moved to Cairo and trained at al- Ahli Club.

In 1951, Abu-Heif became internationally famous when he swam across the English Channel.In 1953, he crossed the channel again. This time he broke the record by crossing in 13hours and 45 minutes. When he returned to Egypt, the people welcomed him as a national hero.After this, he moved to Cairo and worked with a professional trainer at al-Ahli Club.

APPENDIX C

Suez Canal University
Faculty of Education, Ismailia
Curriculum and Instruction Dept.

Writing Performance Test

Dear Dr:

The researcher is conducting a study for M.Ed degree (TEFL), entitled **"Using Thinking Maps for Developing Some English Writing Skills of Secondary School Students"**. One of the study tools is "Writing Performance Test" which will be administered to the sample of the study pre - post teaching the proposed Thinking Maps - based program.

You are kindly requested to judge the test attached for its validity to be applied in the light of the rubric attached.

Name: ……

Occupation: …….

Institution: ……

Thank you very much for your time, effort and cooperation.

The Researcher

Rashad Fathallah Abdel-Gawwad Al-Alfi

Writing Performance Test

Student's name: …….
Time:…1 hour….
Date: ……

School: ……..
Class: ……..
Pre/ Post

Write a composition of three paragraphs in about 100 words on only ONE topic from each category:

Category A

1. The picnic you had last Friday
2. The market day in your village or town

Directives
Directions for writing:

Remember you must describe People, places, things, processes, features, facts,/opinions, comparison/contrast and problems/solutions in an informative way.

Category B

1. The case of large families in Egypt
2. Pollution as a world problem

Directives
Directions for writing:

Remember you must argue in such a convincing manner that others will agree with you. Give reasons to support your point of view. Look at the opposing opinion and include some answers for possible counter-arguments from the reader.

APPENDIX (D)

The Jury of Evaluating the Instruments of the Study

NO	Title & Name	Position	Institution
1	Dr. Daivd Hyerle	Dircotor of thinking Foundation	Thinking Foundation Organization
2	DR. Eman.M. Abdel-Al-Haq	Prof.of TEFL	FOE, Benha University
3	Dr.Fatma Sadek	Prof.of TEFL	FOE, Benha University
4	Dr.Mostafa Badr	Prof.Emeritus of TEFL	Faculty of Education,Tanta University
5	Dr. Roshudy. A. Toeimeh	Prof.Emeritus. of Arabic Literature	FOE,Mansura universitu
6	Dr.Sirvart Sahakian	Prof.Emeritus of TEFL	FOE.Mansura university
7	Dr. Magdy M. Amin	Assist.prof of TEFL	FOE, Benha University

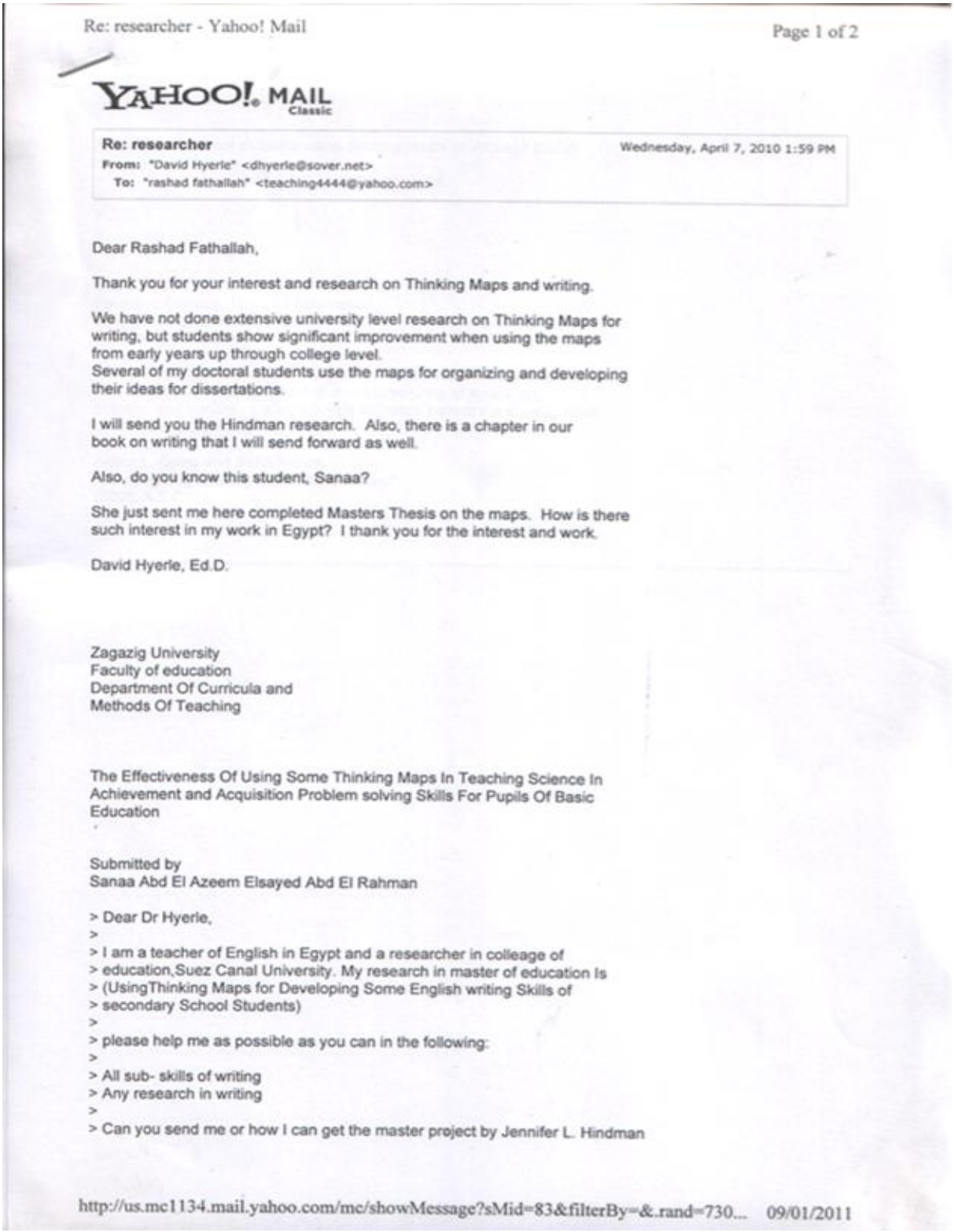
Appendix E

Rubric for Evaluating Writing Performance

CRITERIA		S T A N D A R D S		
		Advanced	**Intermediate**	**Weak**
Content *Logical development of ideas. *Main ideas, supporting ideas and examples. *Use descriptive language	**I N D I C A T O R S**	*Students have one main topic that is clear , developed logically and supported by ideas and examples. *able to use descriptive language Effectively	* Students have one main topic that is clear and less developed ,but lacks supporting by ideas and examples. *less able to use descriptive language Effectively	* students' writing includes include main clear but it does not achieve communication unable to use descriptive language Effectively
Organization *The effective sequence and smooth transition. *Use of cohesive devices *Cause and effect relationship Expressing comparison		* The writing has effective sequence and smooth transition . * Students are able to use cohesive devices *Students are able to deduce the relationship between cause and effect. * Students are able to express comparisons	* The writing has less effective sequence and smooth transition . * Students are less able to use cohesive devices * Students are less able to deduce the relationship between cause and effect. * Students are less able to express comparisons	* The writing has no effective sequence and smooth transition . * Students are unable to use cohesive devices * Students are unable to deduce the relationship between cause and effect. * Students are unable to express comparisons
Language Fluency *Length of the essay. Sentence length		*All the paragraphs have sentences that vary in length	*Most of the paragraphs have sentences that vary in length	*No sentences vary in length
Conventions *Included spelling, punctuation, grammar and paragraphing		*Correct grammar, spelling, and punctuation are used	*Few errors in grammar, spelling, and punctuation	*No control over spelling, grammar and punctuation

Appendix F 1

Personal e-mails from David Hyerle



YAHOO! MAIL Classic

Re: researcher Wednesday, April 7, 2010 1:59 PM

From: "David Hyerle" <dhyerle@sover.net>
To: "rashad fathallah" <teaching4444@yahoo.com>

Dear Rashad Fathallah,

Thank you for your interest and research on Thinking Maps and writing.

We have not done extensive university level research on Thinking Maps for writing, but students show significant improvement when using the maps from early years up through college level.
Several of my doctoral students use the maps for organizing and developing their ideas for dissertations.

I will send you the Hindman research. Also, there is a chapter in our book on writing that I will send forward as well.

Also, do you know this student, Sanaa?

She just sent me here completed Masters Thesis on the maps. How is there such interest in my work in Egypt? I thank you for the interest and work.

David Hyerle, Ed.D.

Zagazig University
Faculty of education
Department Of Curricula and
Methods Of Teaching

The Effectiveness Of Using Some Thinking Maps In Teaching Science In Achievement and Acquisition Problem solving Skills For Pupils Of Basic Education

Submitted by
Sanaa Abd El Azeem Elsayed Abd El Rahman

> Dear Dr Hyerle,
>
> I am a teacher of English in Egypt and a researcher in colleage of
> education,Suez Canal University. My research in master of education Is
> (UsingThinking Maps for Developing Some English writing Skills of
> secondary School Students)
>
> please help me as possible as you can in the following:
>
> All sub- skills of writing
> Any research in writing
>
> Can you send me or how I can get the master project by Jennifer L. Hindman

Appendix F2

YAHOO! MAIL Classic

Re: Researcher, Egypt Tuesday, November 16, 2010 2:05 PM

From: "David Hyerle" <dhyerle@sover.net>
To: "rashad fathallah" <teaching4444@yahoo.com>

Dear Rashad,

I would very much enjoy reviewing your work and research. Thank you very much!

David

> Dear Dr Hyerle,
>
> I hope to be well and happy. I have finished from the tools of the
> research, entitled(Using Thinking Maps for Developing Some English
> Writing Skills of Secondary School Students).
>
> May I send you the tools of the research to govern them (jury) ?
>
>
>

David Hyerle, Ed.D.
Founding Director, Thinking Foundation
www.thinkingfoundation.org
www.mapthemind.com

"The changing conception of intelligence is one of the most powerful, liberating forces ever to influence the restructuring of education, schools, and society. It also is a vital influence behind the development of the Habits of Mind... "

Arthur L. Costa and Bena Kallick
"Learning and Leading with Habits of Mind"
(2008, A.S.C.D.)

Appendix F 3

YAHOO! MAIL Classic

Re: Rashad, Egypt, urgent Saturday, December 11, 2010 1:37 AM

From: "David Hyerle" <dhyerle@sover.net>

To: "rashad fathallah" <teaching4444@yahoo.com>

Rashad, I am back to work after vacation. Tell me how much feedback you want. What are the purposes of these assessments and how do they fit into your study? Do you need my feedback in order to apply for studies? This fine, just let me know.

David

> Dear Dr Hyerle,
>
> What about the tools of the study " Usin Thinking Maps for Developing Some
> English Writing Skills of Secondary School Students"
>
> I sent you the following tools:
>
> 1. Writing Performance test
> 2. Thinking Maps Awareness Test
> 3. Difficulties of Writing Skills Questionnaire
>
> I am waiting your judgement for these tools to apply the research.
>
> Thanks a lot
>
>
>

David Hyerle, Ed.D.
Founding Director, Thinking Foundation
www.thinkingfoundation.org
www.mapthemind.com

"The changing conception of intelligence is one of the most powerful, liberating forces ever to influence the restructuring of education, schools, and society. It also is a vital influence behind the development of the Habits of Mind... "

Arthur L. Costa and Bena Kallick
"Learning and Leading with Habits of Mind"
(2008, A.S.C.D.)

AppendixF 4

YAHOO! MAIL Classic

Re: program,thinking maps, Egypt,Rashad Wednesday, December 22, 2010 3:55 PM

From: "David Hyerle" <dhyerle@sover.net>
To: "rashad fathallah" <teaching4444@yahoo.com>
1 File (119KB)

TMapsAs...

Hello Rashad,

I believe you are on the right track with this work. Please access my newest article with Kim Williams on assessment with Thinking Maps and this will give you additional support.

go to www.thinkingfoundation.org/david

As you show in your assessment, it is key to measure the degree to which students are fluent with Thinking Maps. I am enclosing a PDF assessment document for your use. Obviously, it is in English and you will need to translate passages or create simple paragraphs that reflect students' abilities to read a short paragraph, identify the thinking pattern and map that best fits the passage, and map out the information. When students are able to complete this assessment easily you know that they have mastered the basic use of Thinking Maps. Of course, you can do this for writing prompts as well, or any subject.

So I approve what and how you are doing your research.

Please stay in touch.

David

> Dear Dr. Hyerle,
> Would you please validate the tools of my study. In the light of these
> tools, I am going to develop a thinking maps-based-program to develop some
> English writing skills of secondary school students..
> You- as a pioneer of thinking maps worldwide- as well as the specialist in
> EFL, will be kindly required to judge the program proposed to decide
> whether or not it fits the sample of the study in the present days.
> I don't have the intention to apply for studies but when I get my M.Ed.
> (TEFL) I might search for accepatance in one of the American universities
> and apply for a grant for a P.hd
>
> Thank you for your time, cooperation,effort and interest.
> Note: One of study supervisors, Dr, Taher Al-Hadi who is an assistant prof
> (TEFL) told me me that he thinks of compiling and translating your work on
> thinking maps and introducing it to Arab teachers and learners in
> different stages. (taher.alhadi@yahoo.com)
>

Appendix G

Suez Canal University
Faculty of Education, Ismailia
Curriculum & Instruction Dept.

Thinking Maps- Based Program

(TMBP)

For

EFL Secondary School Students

By

Rashad Fathallah Abdel-Gawwad Al-Alfi

2012

Thinking Maps- Based Program (TMBP)

Contents

Part One: An Introduction to TMBP

The thinking Maps-Based program (TMBP) is a training one that aims at improving the writing performance. The program blends the first two stages (pre- writing and while- writing) of the process writing approach with the main features of thinking maps in order to teach writing to EFL secondary school students. The proposed program (TMBP) includes the following items:

Importance of TMBP

Description of TMBP

Instructions for the Instructor

Instructions for the Learner

1. Importance of TMBP

TMBP seems important for the following reasons:

1. Improving the writing performance of EFL secondary school students
2. Developing thinking skills.
3. Increasing the cognitive content for learners.
4. Reducing the problems of writing.
5. Motivating students to have a tendency for writing.

2. Description of TMBP

TMBP is designed for EFL secondary school students. It includes 17 training sessions which involves pre- writing and while- writing stages. These stages will be implemented via the use of thinking maps in class, hopefully discussions improve the writing performance. The TMBP takes eight weeks, two sessions per-week. The program goes according to the following sequence:

A welcome session:

In this session, the trainer welcomes all trainees, encourages and motivates them to work hard to enhance their performance in writing skills through using thinking maps. As a result, they will achieve better when handling a piece of writing.

Significance of Thinking Maps for students in writing

1. Preparing students psychologically to the process of writing.
2. Retrieving information relevant to the writing skill.
3. Selecting the most useful information.
4. Structuring the information into a writing plan.
5. Organizing the information.
6. Involving students in the process of writing.
7. Helping them work individually in pairs and in groups.
8. Making students think carefully and practice reflection.

Week 1: Session One

1. Writing Performance Test

Session Two

1. Introduction to the design of circle map

Week 2: Session One

1. Using circle map in the process of writing
2. Evaluation

Session Two

1. Introduction to the design of bubble map

Week 3 Session One:

1. Using bubble map in the process of writing
2. Evaluation

Session Two:

1. Introduction to the design of double bubble map

Week 4: Session One

1. Using double bubble map in the process of writing
2. Evaluation

Session 2

1. Introduction to the design of flow map

Week 5: Session One

1. Using flow map in the process of writing

Session Two

1. Introduction to the design of multi-flow map

Week6: Session 1

1. Using multi-flow map in the process of writing
2. Evaluation

Week7:Session 1

1. Wrapping session
2. Thinking maps awareness test

Week 8: Session 1

1. post writing performance test

Instructions for instructor

1. Explaining the importance of thinking maps to the learners
2. Explaining that each map represents certain thinking skill
3. using keywords or phrases for each map
4. using guiding questions for each map
5. using frame of reference for each map
6. Drawing the maps and making sure that the learners know how to draw these maps.
7. Asking questions
8. Eliciting the answers from different students
9. Eliciting the ideas from different students

Instructions for the learner

1. Writing different essays from different maps
2. Constructing different maps from different texts
3. Answering the questions
4. Asking questions

Thinking maps are a common visual language for learning. They are a set of tools for showing relationships and patterns in information. Students need to think strategically and plan their thinking. Thinking Maps provide a framework in order to better facilities. By using Thinking Maps students will be better able to plan answers in assessments, visualize their learning an identify critical areas in information. David Hyerl's Thinking Maps are our first whole school thinking initiative.

Why thinking maps?

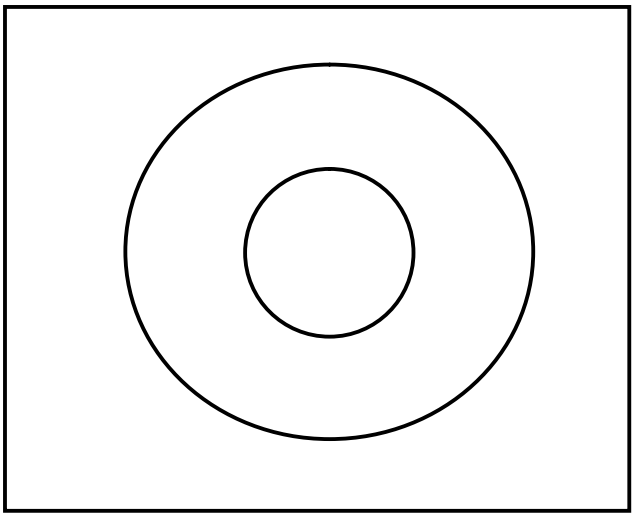
For teachers:

- For assessing students' prior knowledge
- For teaching content knowledge and facilitating thinking
- For assessing **what** and **how** students have learned
- For enabling the teacher spend less time explaining terms and concepts. Hyerle (1996,p.32)
- For enabling the teacher quickly assess students' pattern of thinking about content…
- For providing teachers with a picture of student thinking. Hyerle (1996, p.32)

For students:

- For constructing knowledge by forming patterns of information
- For transferring thinking processes to content learning
- For creating final products and promoting meta cognition
- For enabling students to do more, independent, and meaningful work.
- For enabling students express their thinking in … group setting
- For providing a safe haven for every student. Hyerle (1996, p.32)

Session One: Circle Map



I. Objectives

At the end of the session, students will be able to…

- draw a circle map
- use the map in its suitable time and place
- use this map in writing the elicited ideas inside the lager circle
- use the main topic inside the small one

II. **Aids and Materials**

- Handouts with short and long sentences, and short texts
- Transparencies of circle maps
- Poster of a circle map
- Data show (displaying varied text structures and their map)

III. Duration

45 minute

IV. Procedures:

a. **Warm up (**Asking comprehension questions related to defining some things surrounding students**)**

1, What is a **pen**?

2. What are glasses?

4. How would you define **sparrow**?
5. What information would you include in your brainstorming or defining of this or that word?

To accept answers focusing on the fluency of defining things and encouring students to give full definition in simple and/or compound sentences.

B. Presentation

To tell students that the circle map is a map that consists of two circles, the small one is for the main topic, while the large one is for the eliciting ideas. Such a map is functioned for defining in context and as a drawing point to collect ideas in prewriting stage. the common Key words or phrases used for constructing the circle map are: *context, list, define, brainstorming, identify, generate, tell everything you know*. The frame of reference of the circle map can be recognized via these questions:

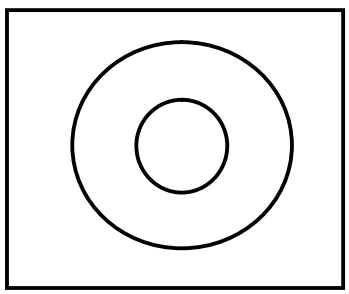
How would you know this definition?

Where are you getting your information?

What sources did you reference to gather your information?

On an OHP transparency, the instructor shows how to design the circle map saying:

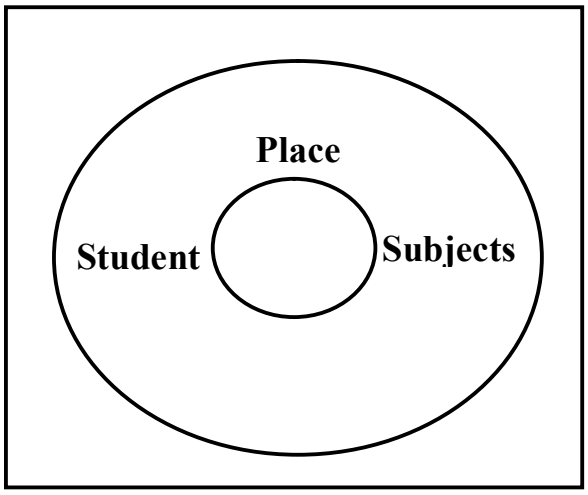
The topic is in the middle, smaller circle, everything you know about the topic is in the larger circle. A box that may be included, around the entire map is a “frame of reference” that is used to answer the question “How did I learn this? “(The frame of reference can be used around any of the maps.)



C. Generation:

1. Modelling: (by the teacher)

The trainer gives an example and explains it to students how they use the circle map in the process of writing.



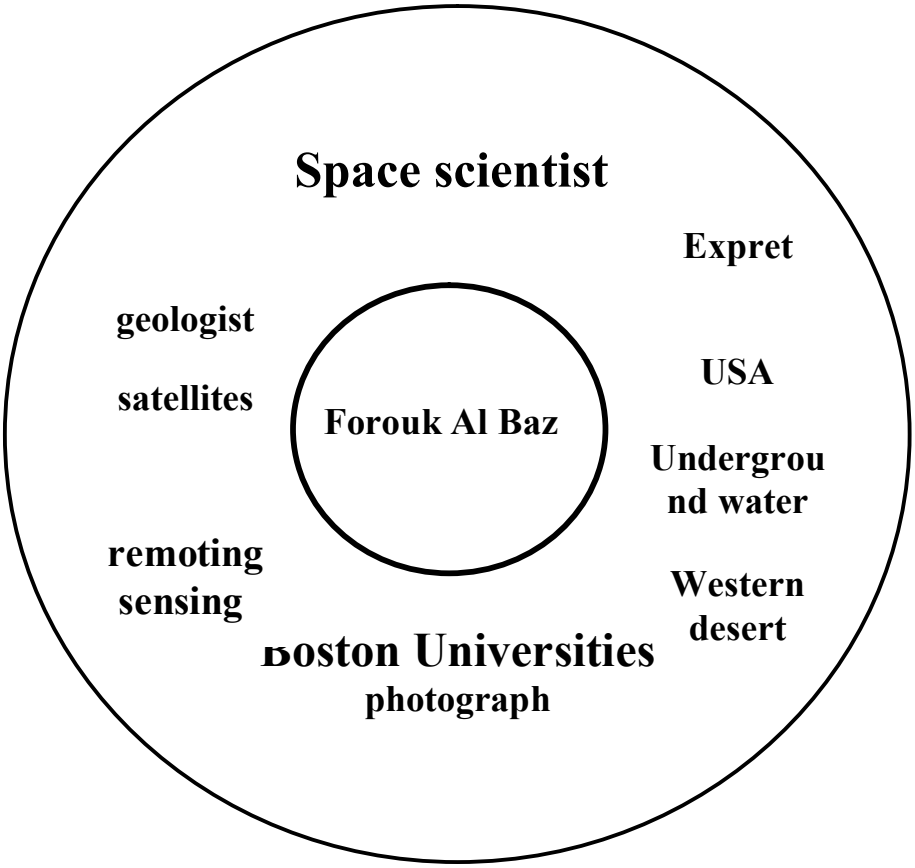
Class: Is defined as a place where students study different subjects.

2. Starter: (by teacher and students)

The trainer motivates the trainers to use circle map in the process of writing by asking them different questions and eliciting the answers from different students.

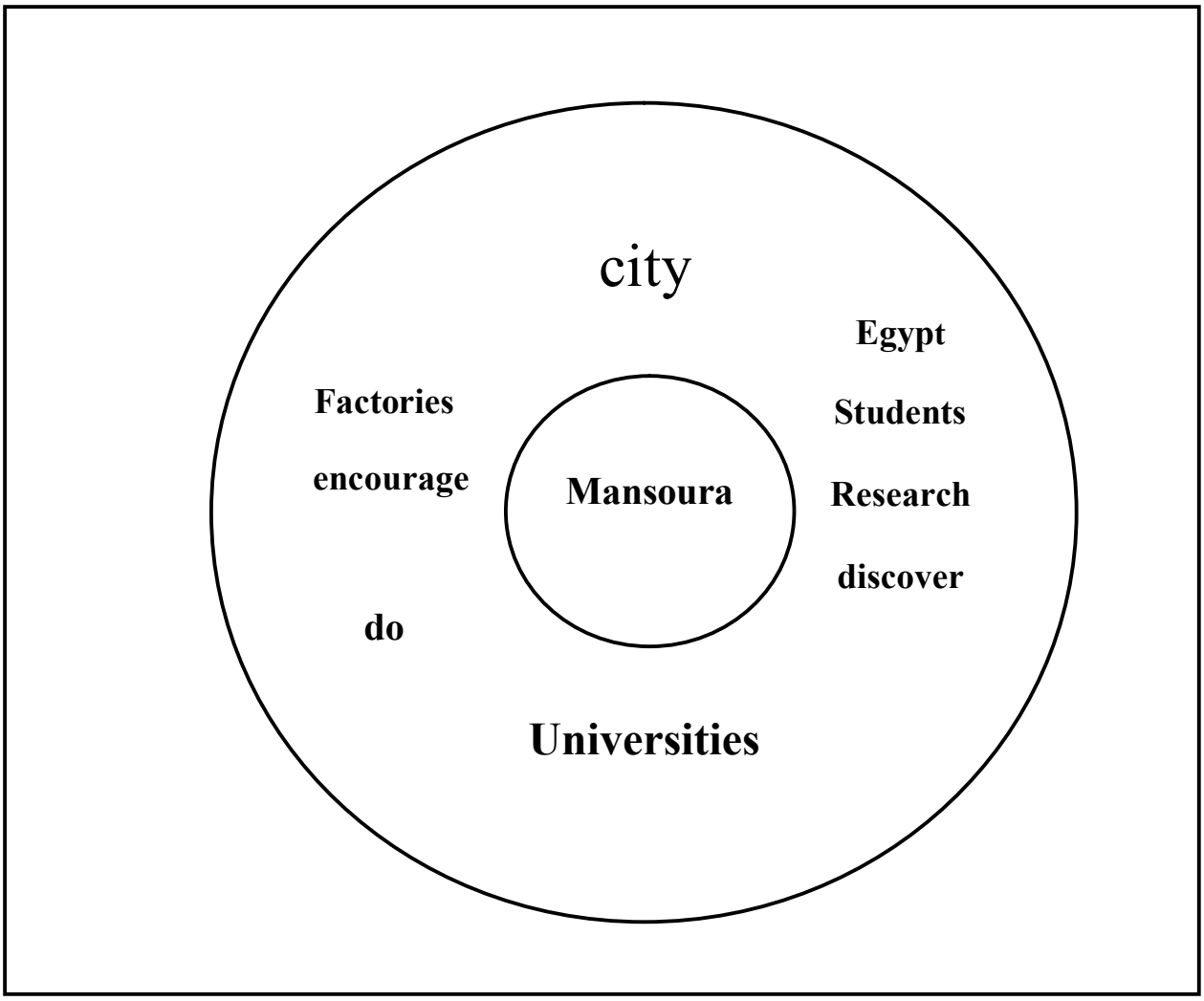
3. Activities: (individuals/ pairs and groups)

The trainer provides students with ample activities to construct texts from different maps.



Dr. Faruk Al-Baz is a space scientist and a geologist and the director of remote sensing at Boston University. He is the world's greatest expert in remote sensing. The use of satellite to find water under deserts. Underground water was found in the Western Desert and in Sinai thanks to photographs .

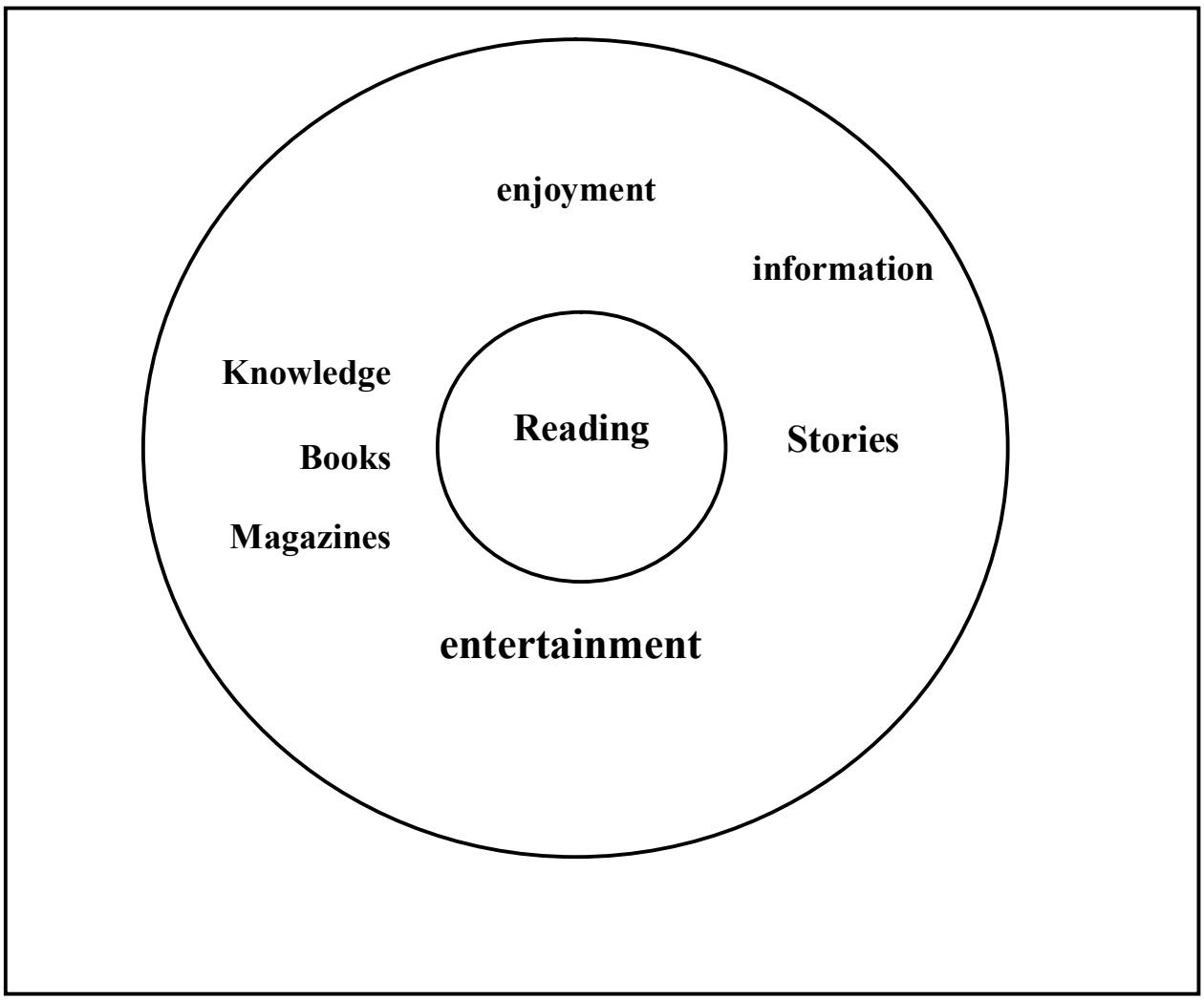
2- Long structure (short paragraph)

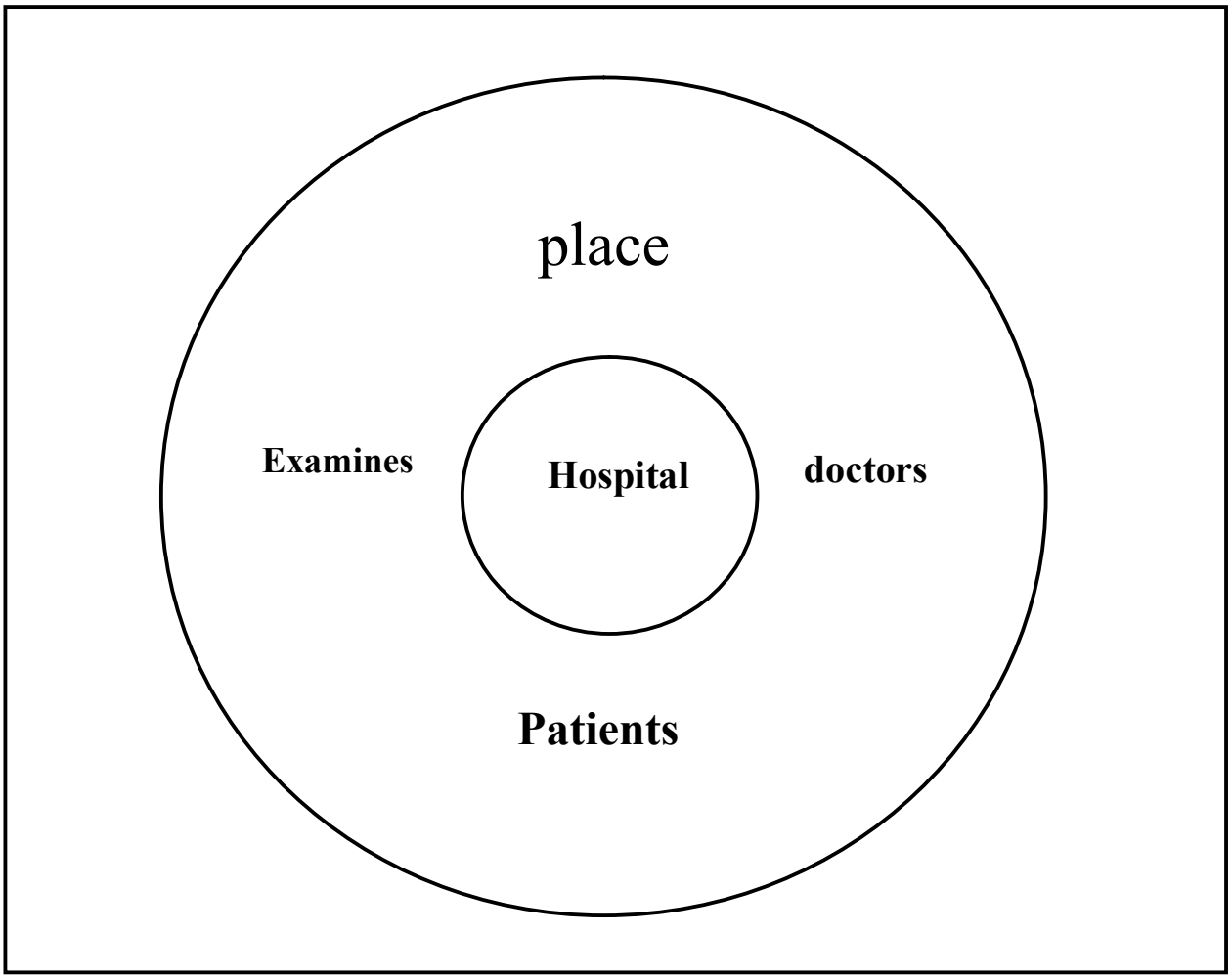


Mansoura is a large city in Egypt. There are many factories where people work and get money. Also, there are a number of universities which encourage students to do researches for the sake of discovering something new.

Long Activity:

C. Evaluation: Look at these circles, then make full sentences.





A. Read the following sentences and construct the maps required. Then answer the questions;

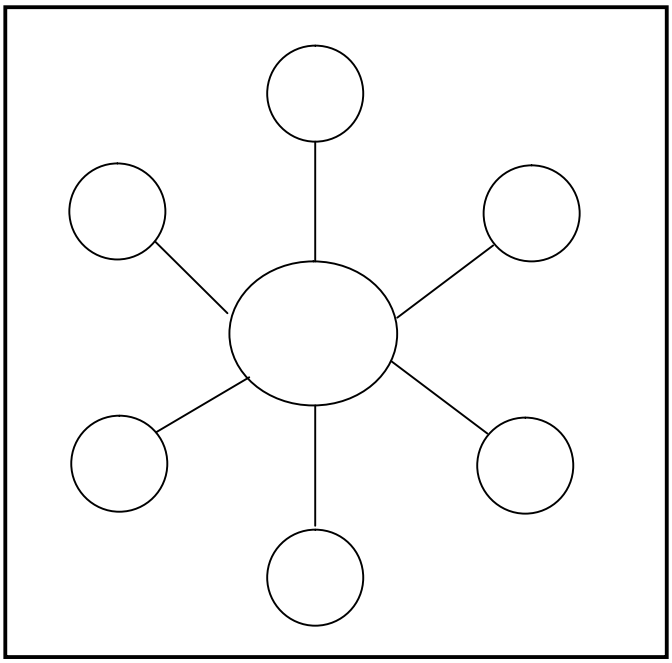
From 1967 to 1973, Dr El- Baz worked on the American A pollo Space Projects, which landed men on the moon. He gave advice on where the astronauts should land and them to collect rocks and soil on the moon. Dr El-Baz was born in Zagazig in 1938 and was educated at Ain Shams University.

- What thinking skill are you doing here?
- What thinking map are you going to use here? Why?

B. State 3 key words or phrases for the circle map.

C. State 3 guiding questions for the circle map.

Session Two: Bubble Map



Objectives

At the end of the session, students will be able to…

1. draw a bubble map
2. use the bubble map in its suitable time and place
3. use the map in writing the attributes or the characteristics of place, thing or person

Aids and Materials

1. Handouts with short and long sentences, and short texts
2. Transparencies of bubble map
3. Poster of a bubble map
4. Data show (displaying varied text structure and their maps)

Duration

45 minutes

Procedures:

a. **Warm Up**: (asking comprehension questions related to describing qualities of some things or persons)

1. How would you describe this person, place, and thing?
2. What characteristics can be used to describe this person?
3. What are the attributes of this person?

To accept answers focusing on the fluency of describing things or persons and give full description simple and / or compound sentences

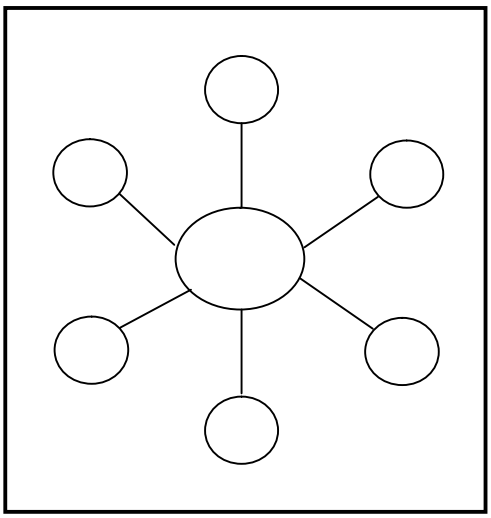
b.Presentation

To tell students that the bubble map is a map that consists of a bubble in the centre for the topic and the other bubbles for adjectives describing the topic. Such a map is functioned for describing qualities and as a starting point to collect ideas in prewriting stages. The common key words and phrases used for constructing the bubble map are, *describe feeling, identifying qualities, and observe using the five senses*. The frame of reference of the bubble map can be recognized via these questions:

What evidence can you give to support your descriptor?

What have you learned from this description?

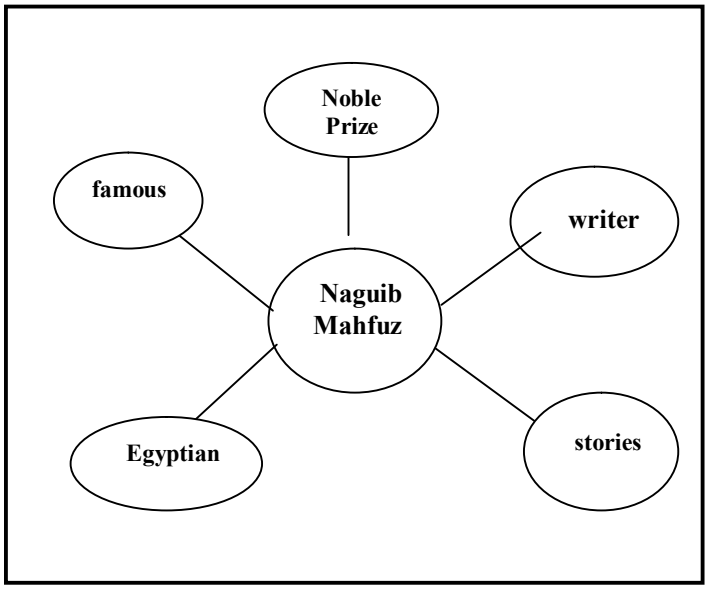
On an OHP transparency, the instructor shows how to design the bubble map saying : The topic being described is in the center bubble. The outer bubbles contain adjectives and adjective phrases describing the topic.



Generation:

1. Modelling: (by the teacher)

The trainer gives an example and explains it to students how they use the bubble map in the process of writing.



Naguib Mahfuz is an Egyptian writer. He wrote many stories about the Egyptian people. He becomes famous in the world until he gets Noble prize.

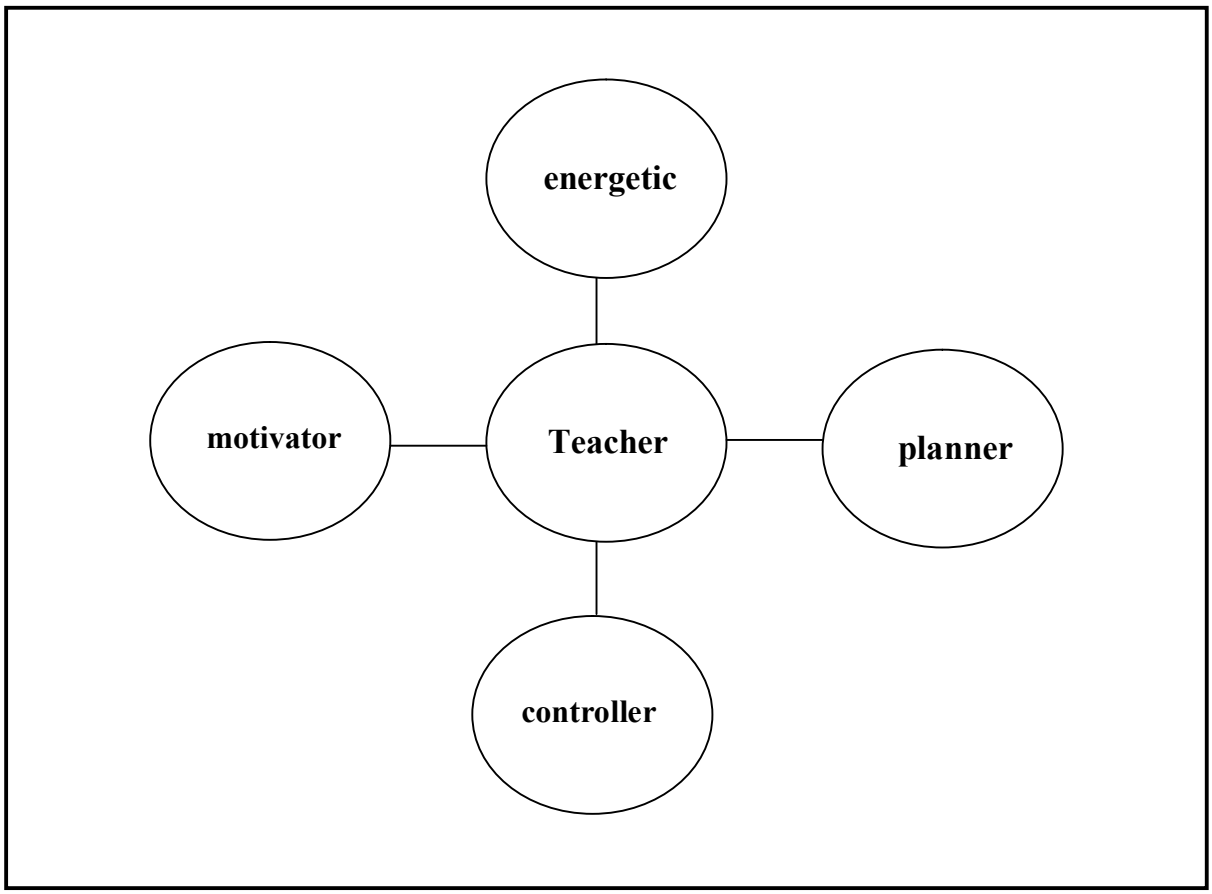
2.Starter: (by teacher and students)

The trainer motivates the trainees to use the bubble map in the process of writing, by asking them different questions and eliciting the answers from different students.

3. **Activities:** (individuals, pairs and groups)

The trainer provides the trainees with ample activities to use them in constructing different texts from different maps. Students work individually, in pairs and in group

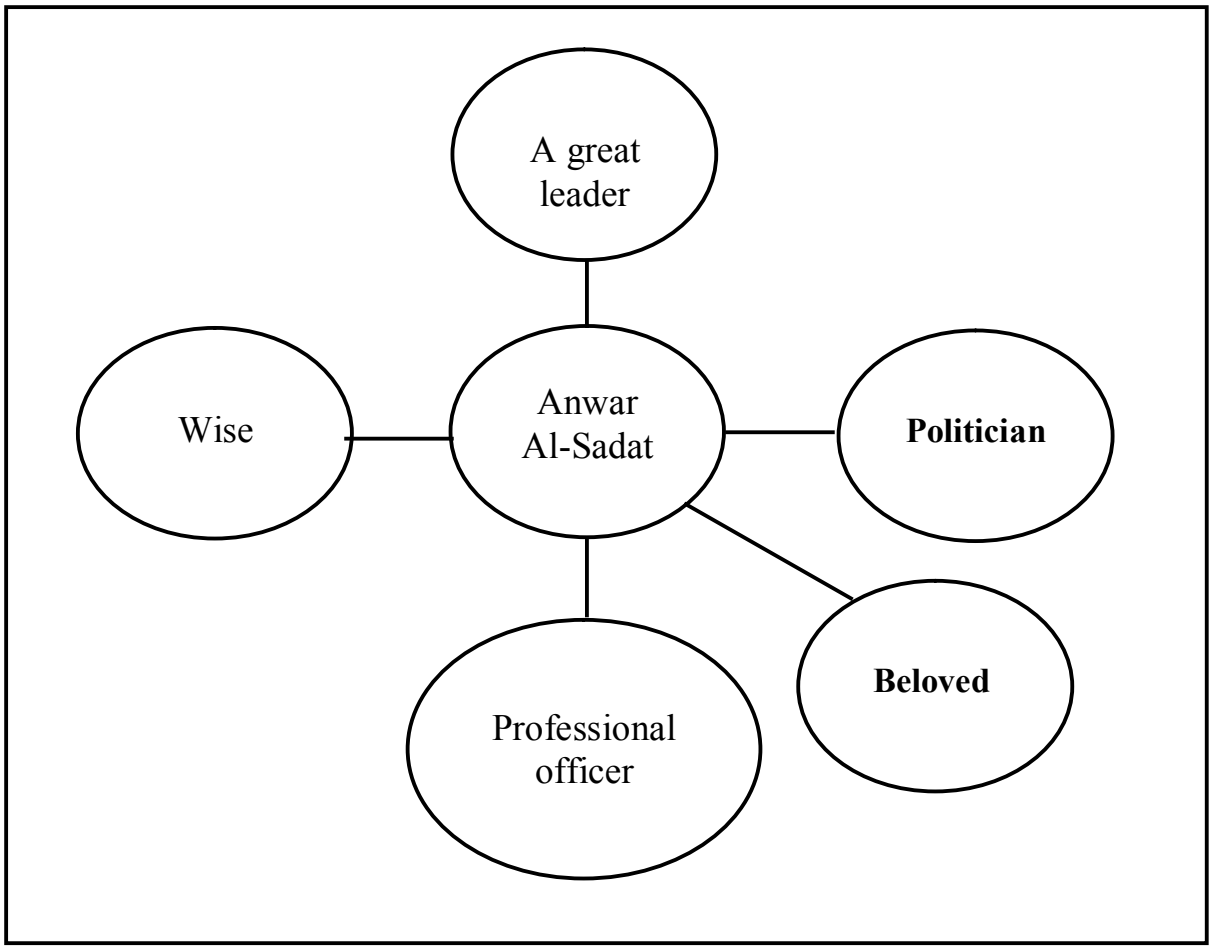
simple structure



A teacher is a person who has different roles inside the classrooms. He is energetic, motivator, planner and controller.

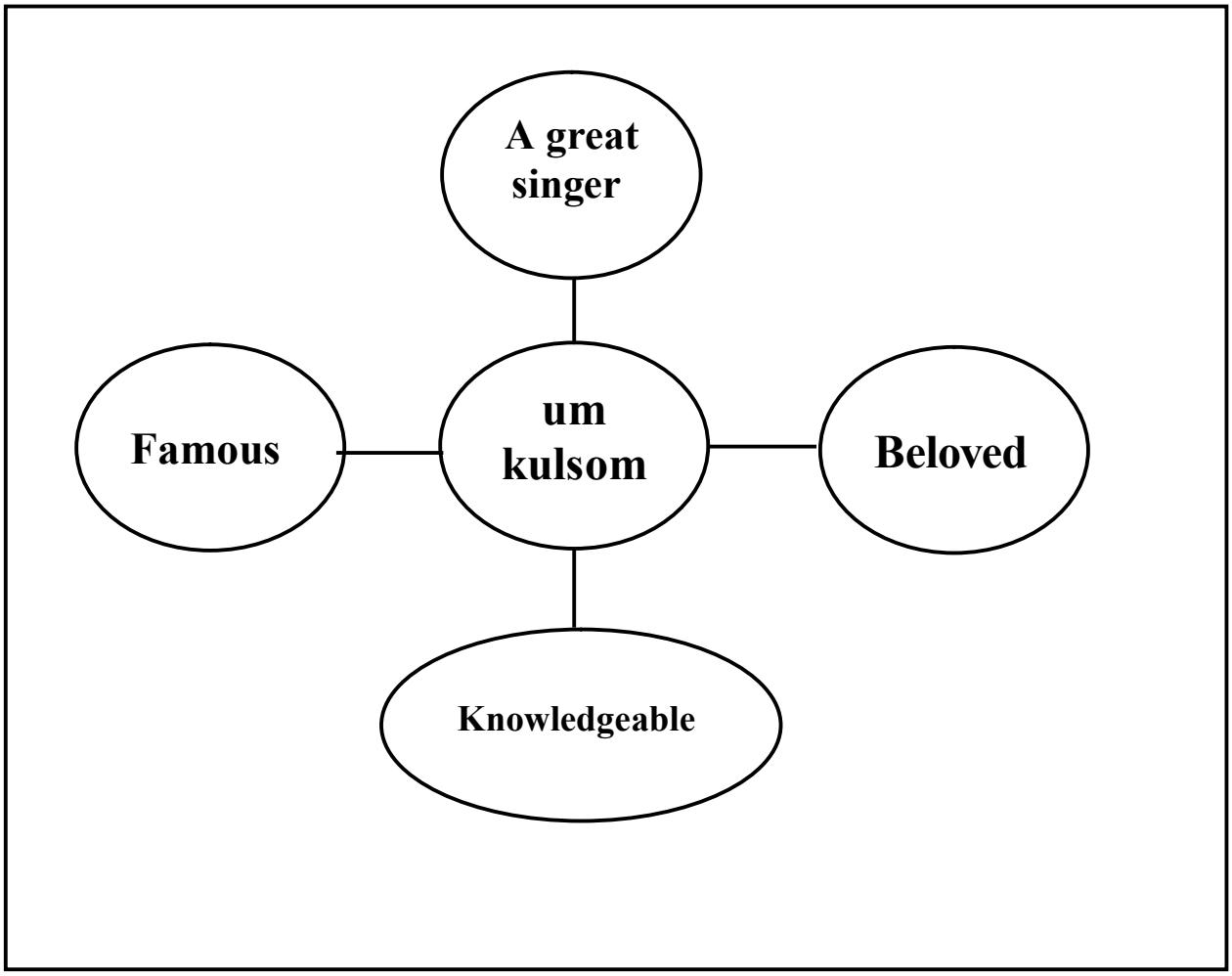
Note: students can extend their writings

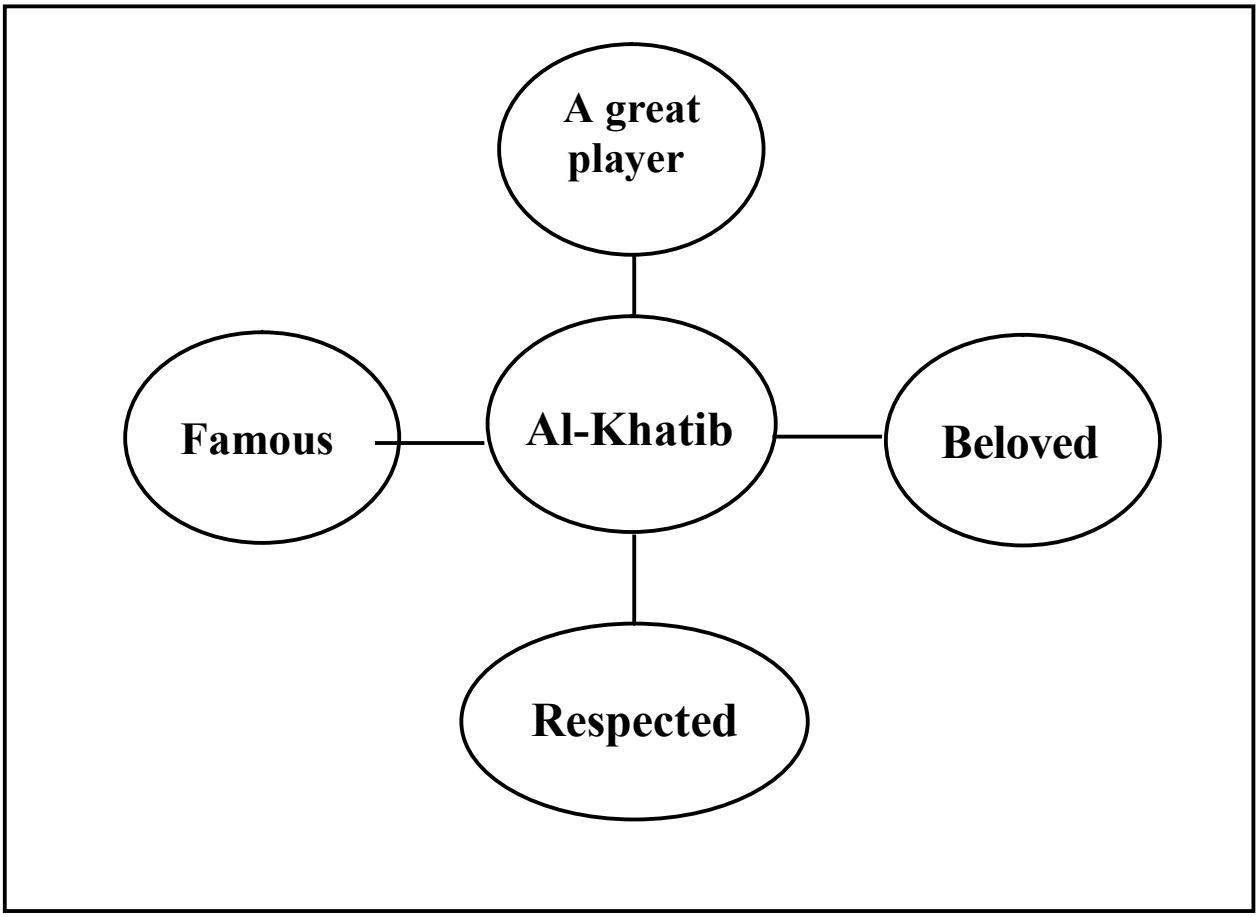
Long structure



Anwar Al-Sadat is a great leader, politician, wise and professional officer. He knows how to deal with other countries. He is always interested in the affairs of his people. So, he was beloved by a large number of people in his country

Evaluation: Look at these maps, then make full sentences



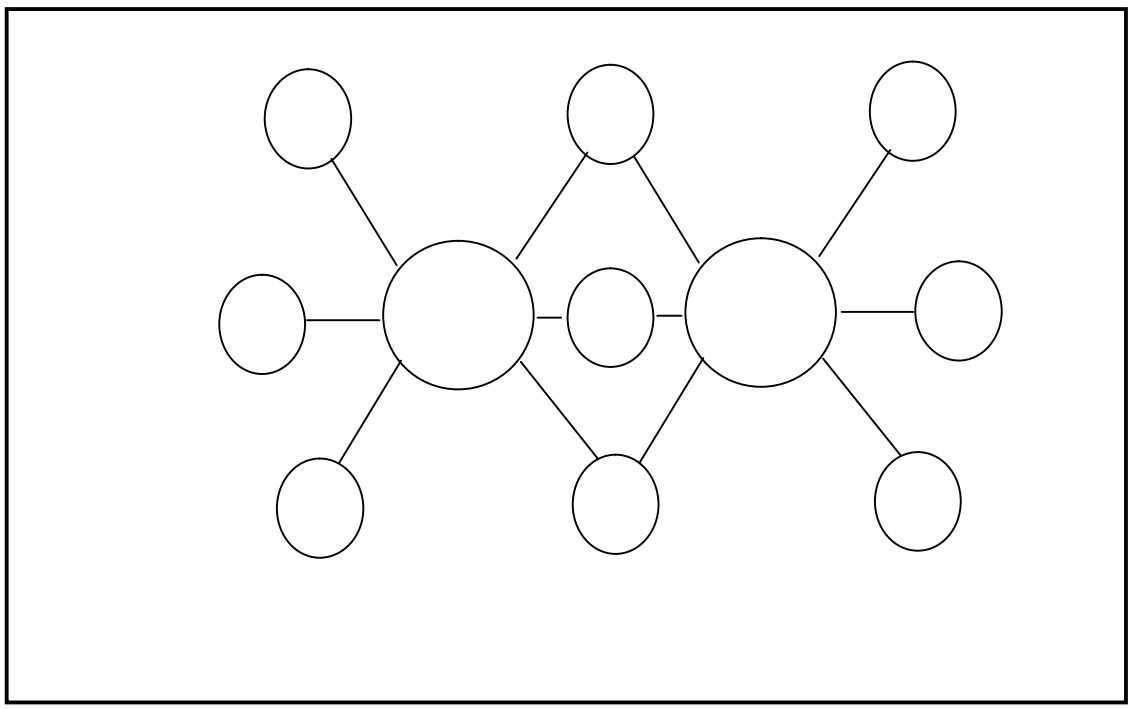


A.Read the following sentences/text and construct the map required. Then answer these questions.

New York is the biggest city in the USA, but it is not the capital of the country. That is Washington. But New York is one of the world's most important business centres and a busy report. The statue of liberty, which is at the entrance of the harbour, is a symbol of freedom and welcomes visitors from other countries. New York has more skyscrapers than any other city in the world. There are 47 buildings taller than 200 metres and three taller than 300 metres! Two of the most famous ones are the Empire State Building and the Chrystal Building.

- What thinking skill are you doing here?
- What thinking map will you use here? Why?
- State 3 key words or phrases for the bubble map.
- State 3 guiding questions for the bubble map.

Session Three: Double Bubble Map



Objectives:

At the end of the session, students will be able …

1. to draw a double bubble map
2. to use the map in its suitable time and place
3. to write the similarities in the middle bubbles and the differences in the outer bubbles.

Aids and Materials:

1. Handouts with short and long sentences , and short texts (defining ,function , key questions and key words)
2. Transparencies of double bubble map)
3. Poster of a double bubble map)
4. Data Show (displaying varied structures and their maps)

Duration

45 minutes

Procedures:

a. **Warm UP:**

(Asking comprehensions related to the similarities and the differences between things or persons surrounding students)

1. What are the similarities between teacher and learner?
2. What are the differences between teacher and learner?

To accept answers focusing on the fluency of identifying the similarities and the differences between things and/or persons and encouraging students to give full similarities and differences in simple and/or compound sentences.

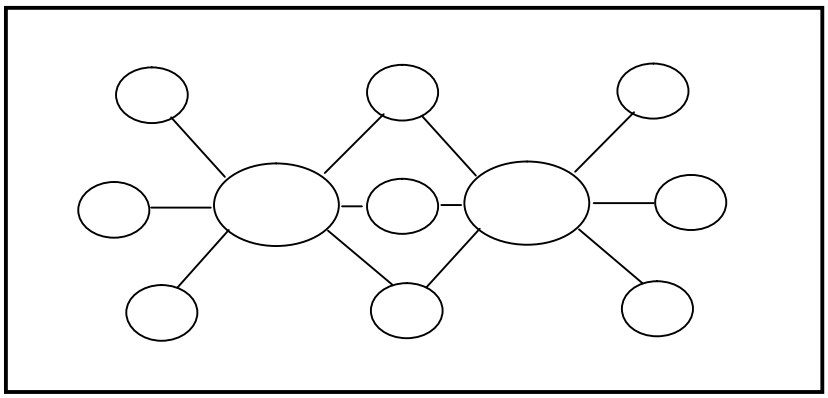
b. **Presentation :**

To tell students that the double bubble map is the map that consists of two centres circles for two things or two persons being compared, in the middle bubbles use terms to show similarities, in the outside bubbles, describe the differences. Such a map is used for comparing and contrasting and as a starting point to collect ideas in pre-writing stage The common Key words and phrases used for constructing the double bubble map**,** they are: Compare / contrast, discuss similarities and differences, distinguish between, differentiate. The Frame of Reference of the double bubble map can be recognized via these questions:

How do you know these similarities and differences?
Why are these similarities and differencing so important?

On an OHP transparency, the instructor shows how to design the multi-flow map saying:
In the center circles are the words for the two things being compared are contrasted. In the middle bubbles, use terms to show similarities. In the outside bubbles, describe the differences. If there are too many similarities or differences, students should prioritize and keep only the most important.

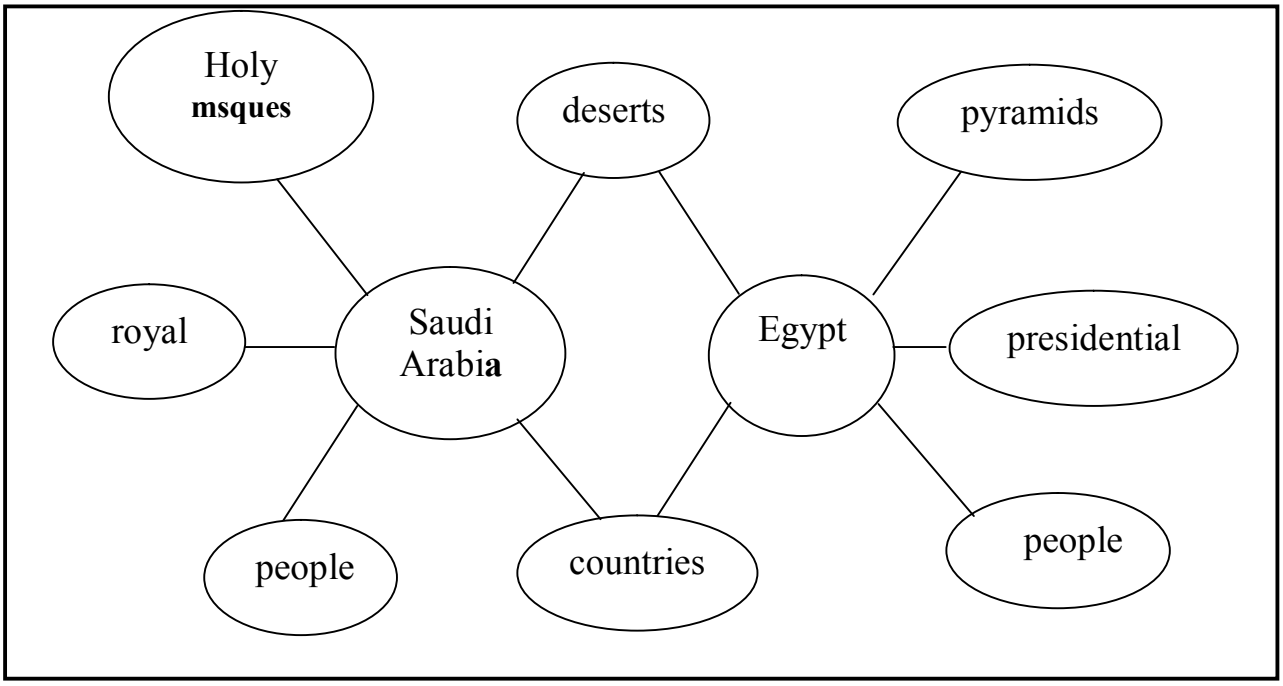
Double Bubble Map



Generation:

1.Modelling (by the teacher)

The trainer gives an example and explains it to students how they use the double bubble map in the process of writing.



Egypt and Saudi Arabia are two great countries. They have deserts in their lands. In Egypt, there are a large number of people while Saudi Arabia has a small number of people. In Saudi Arabia, there is a royal rule but in Egypt, there is a presidential rule. There are two Holy Mosques in Saudi Arabia but in Egypt, there are pyramids.

2. Starter (teacher and student)

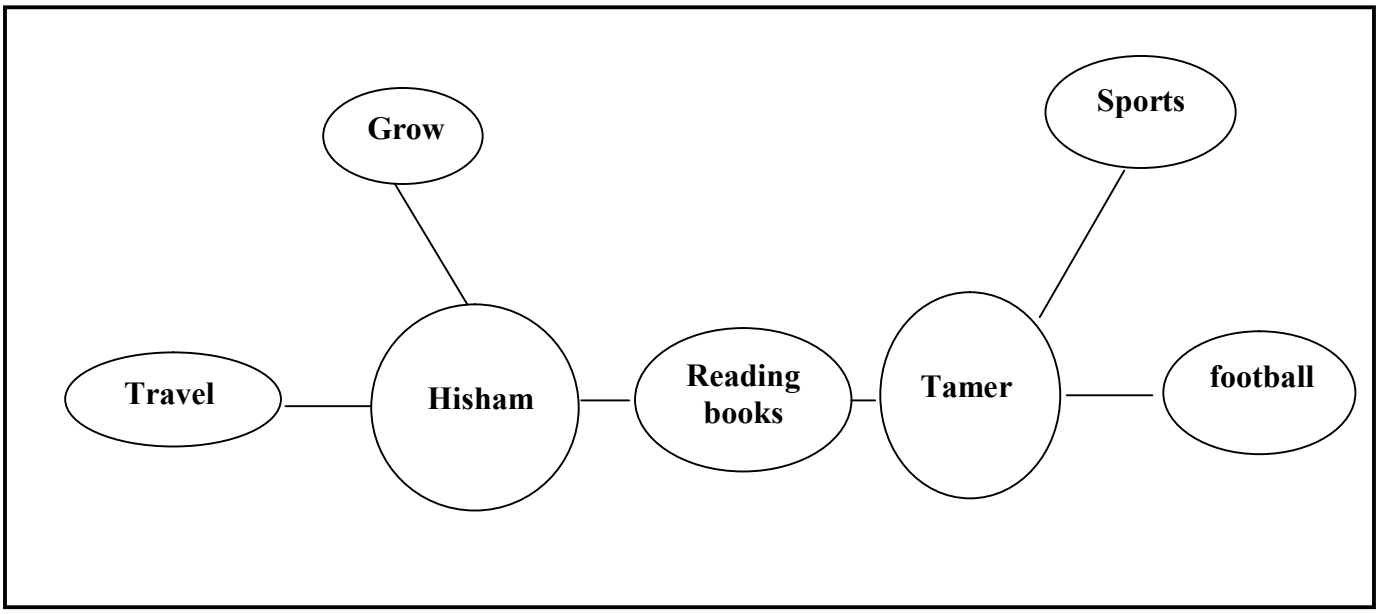
The trainer motivates the trainees to use the double bubble map in the process of writing by asking them different questions and eliciting the answers from different students.

3. **Activities** (Individuals/ pairs and groups)

   The trainer provides trainees with ample activities to use them in constructing different texts from different maps

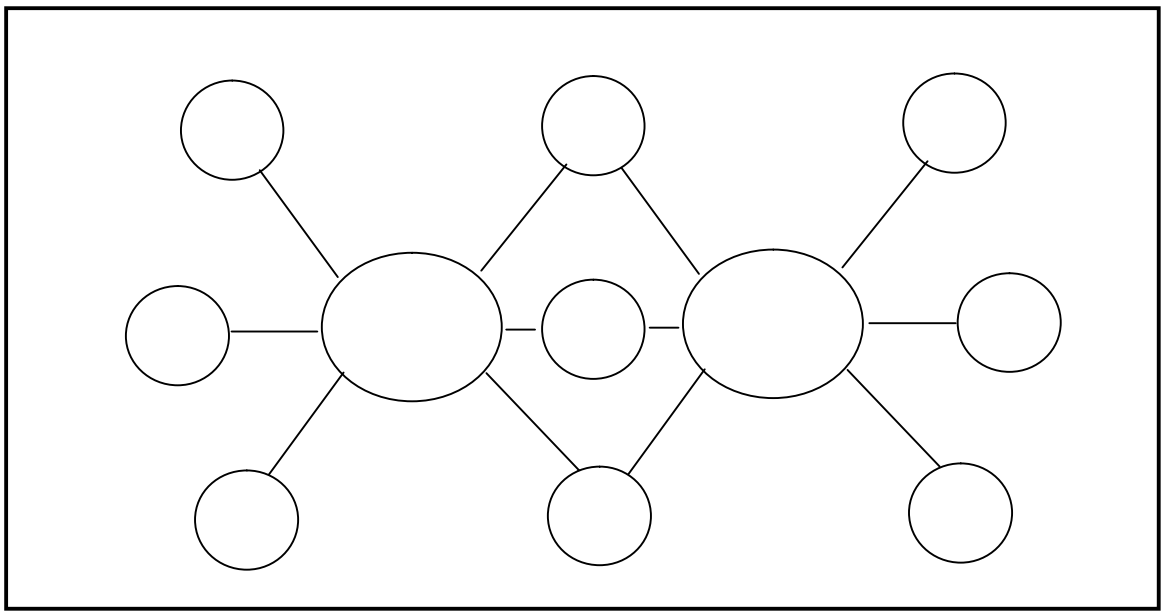
Activities

Simple structure



Tamer enjoys sports and watching football while Hisham enjoys growing plants and traveling abroad. Hisham and Tamer like reading books.

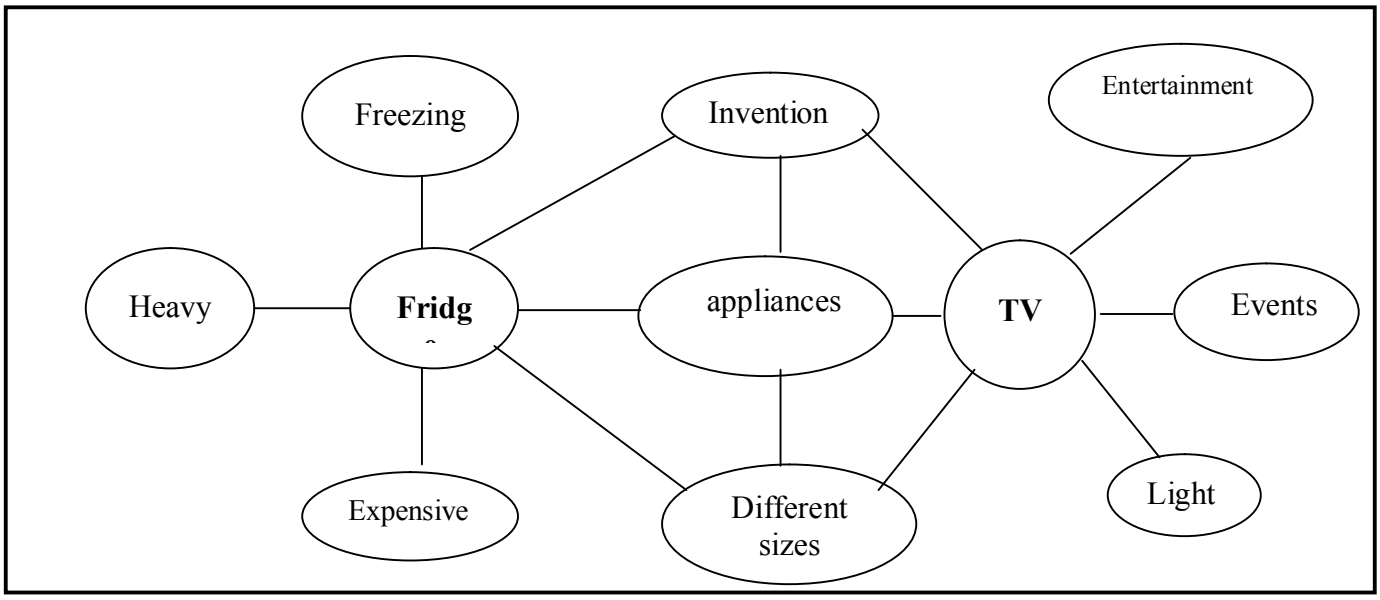
Long structure



Students tries to fill the bubbles by writing the differences and the similarities between two persons , things , or animals.

Evaluation:

Look at these double bubble map, then make full sentences



Evaluation: The trainees are asked to create an essay from a map and create maps from long text.

Read the following passage sentences/text and construct the map required and then answer the following questions:

You really have to make an effort to make an effort to make friends. I think I made friends with Marcus mostly because we both like riding bikes. We like to talk about where we would travel if our bikes were airplanes! We also are both pretty, shy people, we would rather be together than hanging out in a large group. Some people think it is strange that we are friends because we are also different in many ways. I am very tall and Marcus is very short. I would rather talk than write down ideas. I also really love to play sports. Marcus enjoys writing much more than playing sports. I guess that is because Marcus can be a bit clumsy! But not with his hands! He is always making some sort of invention. I can't seem to make anything, but I can make a friend!

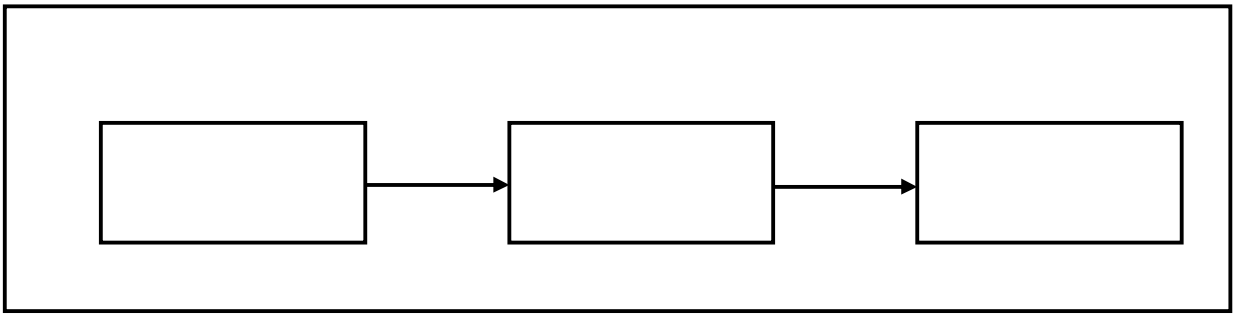
a. what thinking skill are you going to do?

b. What thinking map are you going do here? Why?

c. Name 3 key words or phrases for the double bubble map.

d. Name 3 guiding questions for the double bubble map.

Session Four: Flow Map



Objectives:

At the end of the session, students will be able to…

1. draw a flow map.
2. use the flow map in its suitable time and place.
3. use the flow map in writing the ideas elicited in the squares.
4. create an essay from this map.

Aids and Materials:

1. Handouts with short and long sentences ,and short texts .
2. Transparencies of flow maps
3. Poster of a flow map
4. Data show (displaying varied text structures and their map).

Duration:

45 minutes

Procedures:

a. **Warm- Up (** Asking comprehension questions related to
The sequence of events or things surrounding students)

1. What happened in the accident on the road of your village?
2. What sequences of events in your story?

To accept answers focusing on the fluency of describing the sequence of Events or things and give full simple description or compound sentences.

b. Presentation

To tell students the flow map is the map that consists of a number of Rectangles, the larger for the main stage and the small ones for the Sub-stages. Such a map is functioned for sequencing and as a starting point to collect ideas.Key Questions **:** What happened? What is the sequence of event? What are the sub stages? The common key words and phrases : sequence, put in order, order, recount, retell, what happens next, cycles, patterns, describe processes, describe change, solve multi-step problems. The Frame of Reference of the flow map can be recognized via these questions:

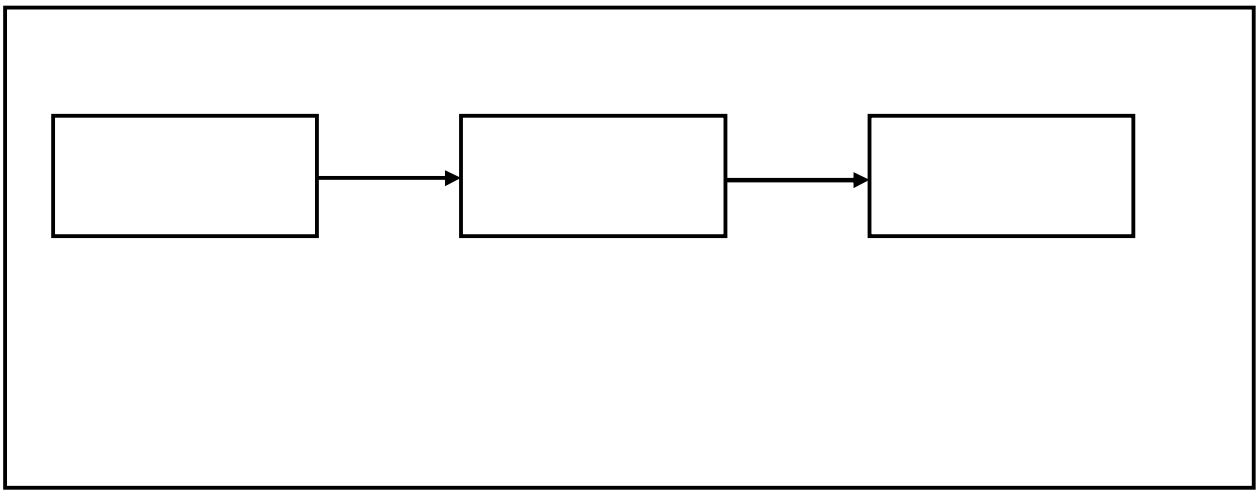
How do know what you know about this sequence?

Where did you get your information?

What source(s) did you use to identify the stages and sub stages?

On an OHP transparency, the instructor shows how to design the flow map : **saying :**

Each stage of the event is in the larger rectangles. The sub stages are in smaller rectangles below the larger ones. Not all flow maps will have sub stages. It can be used to plot a story, show historical events in sequence, steps in problem solving in math, identifying stages of a life cycle, and much more.

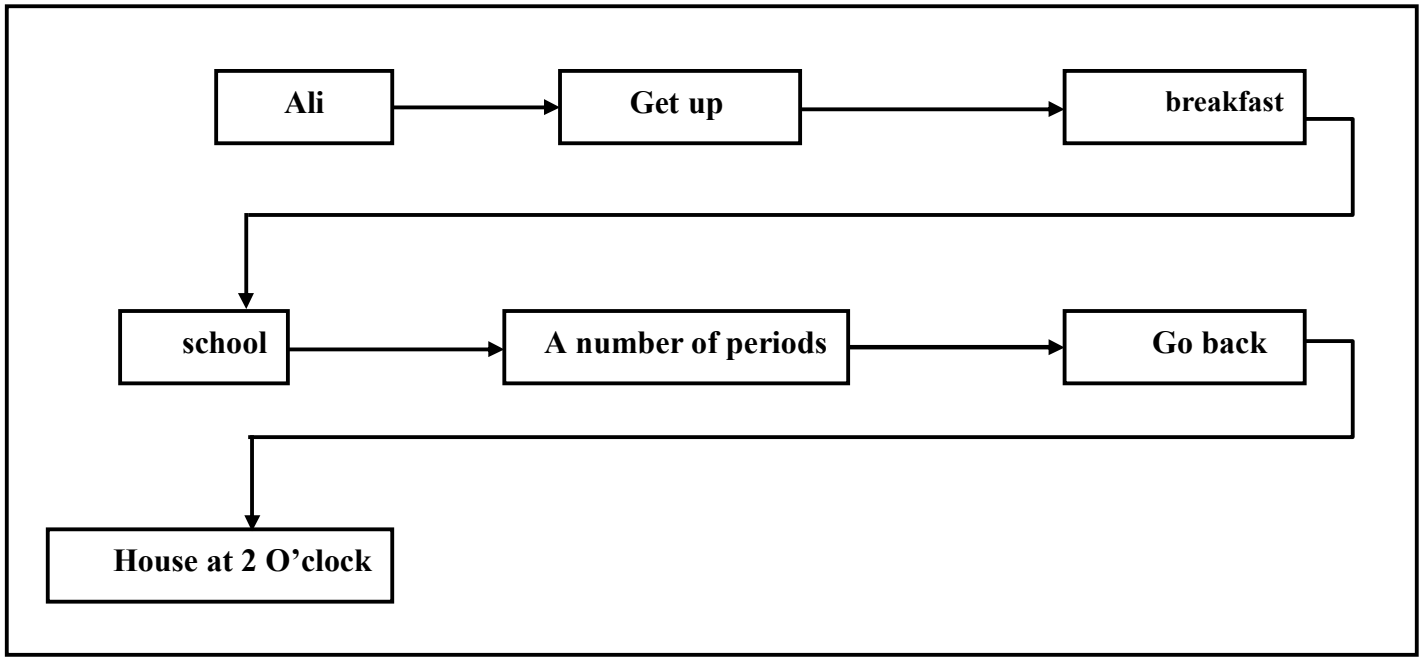


Generation:

1.**modeling** (by the teacher)

The trainer gives an example and explains it to students how they the flow map in the process of writing.

Ali's day



Ali gets up at 6 O'clock. He takes a shower. He has breakfast. He Went to school and attended a number of periods. He goes back to his house at 2 O'clock.

2.starter (teacher and student)

The trainer motivates the trainees to use the flow map in the process of writing , by asking them different questions and eliciting the answers from different trainees.

3. **Activities** (individuals ,pairs and groups)

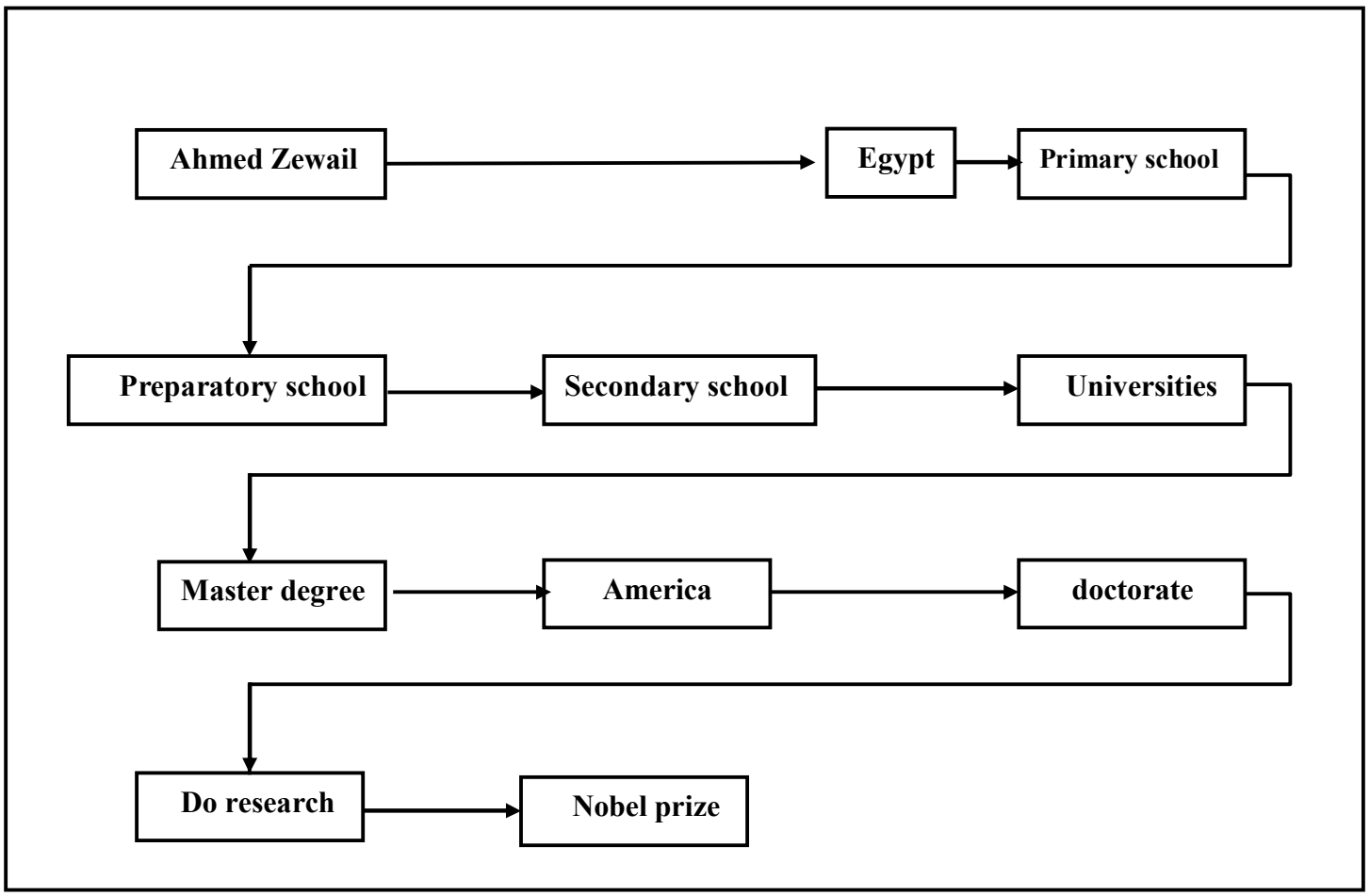
   The trainer provides trainees with ample activities to use them in constructing different texts from different maps.

Activities :

Flow maps

1- Long structure

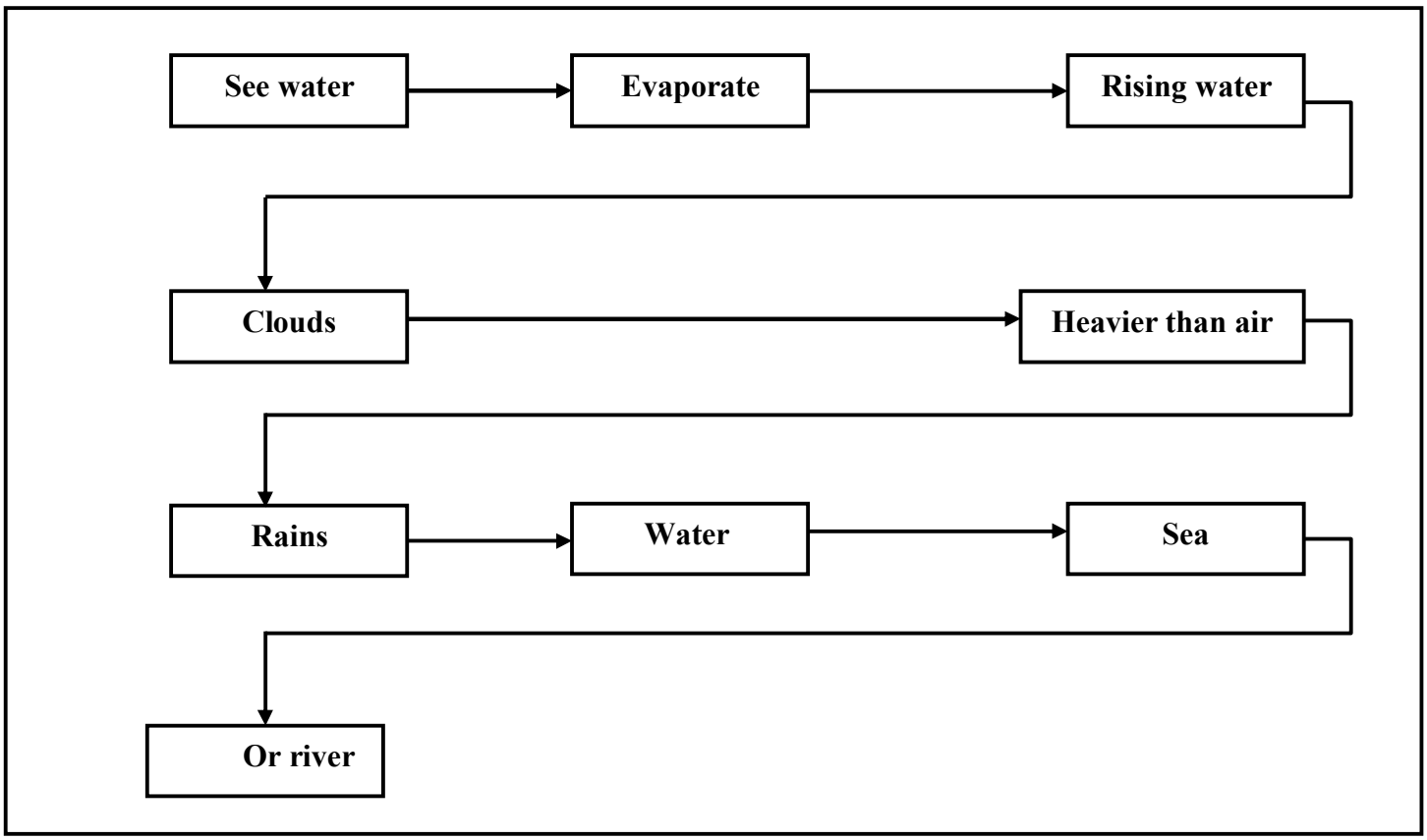
Ahmed Zewail



Ahmed zewail is a great scientist, he began his education in Egypt where he completed the educational stages in primary school, preparatory and secondary school he went to university in Alexandria where he got master degree in chemics. After that, he travels to America where he got a doctorate degree. He continued in doing research until he got the noble prize.

Evaluation:

Water cycle



Evaluation:

The trainees are asked to create different maps from a long text.

a. Read the following sentences/texts and construct the maps required. Then answer these two questions:

Ramy Ashour is a famous squash player. He won an important championship in Canada. Ramy was born in Cairo in September 1987. At the age of 16, he became the youngest player to win the Men's world Junior Squash Championship, he was second. He lost to another Egyptian, Amr Shabana. Ramy's older brother, Hisham Ashour, is also an expert squash player.

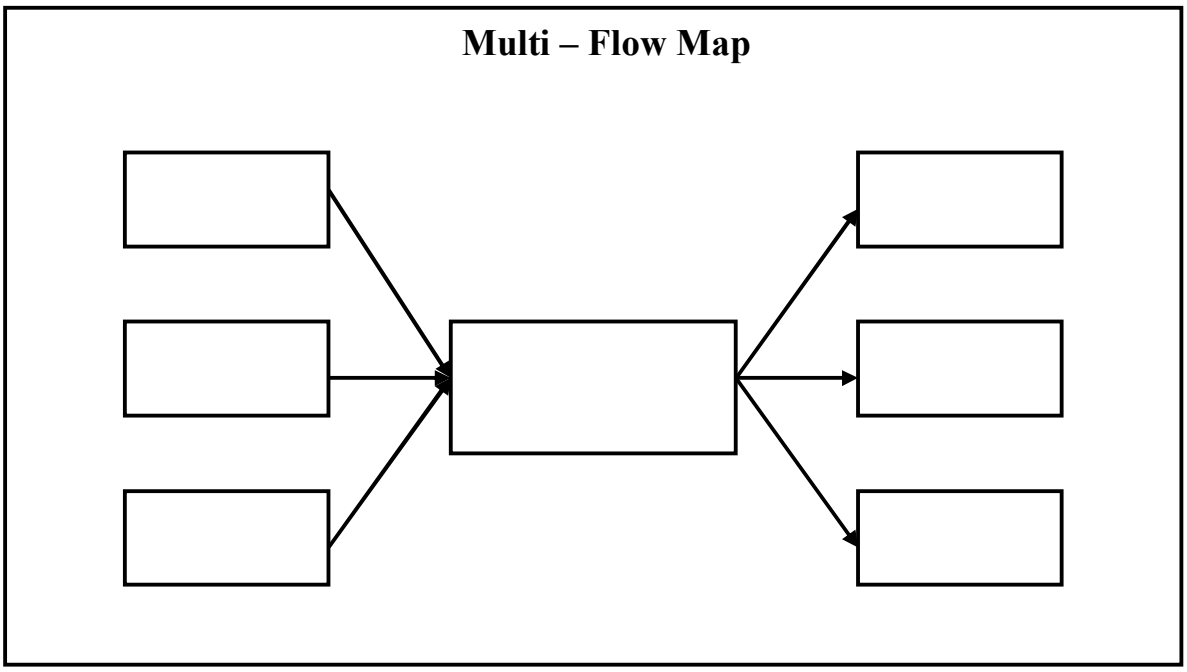
c. What thinking skill are you going to do here?

d. What thinking map will you do here? Why?

e. Name 3 key words or phrases for the flow map.

f. Name 3 guiding questions for the flow map.

Session Five: Multi- Flow Map



Objectives:

At the end of the session, students will be able to…

1. draw a multi- flow map
2. use the map in its suitable time and place
3. use the multi- flow map in writing the causes and the effects of an event.
4. create an essay from multi-flow map

Aids and Materials:

1. Handouts with short and long sentences and short text.
2. Transparencies of double flow map
3. Poster of a double flow map
4. Data show (displaying varied text structures and their map)

Duration:

45 minutes

Presentation:

a.Warm Up: (Asking comprehension questions related to causes and effects of things or events or problems surrounding students)

1. What are the causes of noise in your class?
2. What are the results of this noise in the class?

To accept answers focusing on the fluency of describing the causes and the Effects of events or problems and giving full simple description or compound sentences.

b. **Presentation**

To tell students the Multi flow map is the map that consists of the centre rectangle in which students write the event or the thing,the causes are on the left rectangle and the results are on the right rectangle. Such a map is functioned for mentioning the causes and the effects of events .Key Question: What are the causes and Effects of the event? What might happen next? The common Key words and phrases are: *causes and effects, discuss consequences. What would happen if, predict describe change, identify motives, and discuss strategies*. The frame of reference to a multi-flow map can be recognized via these questions:

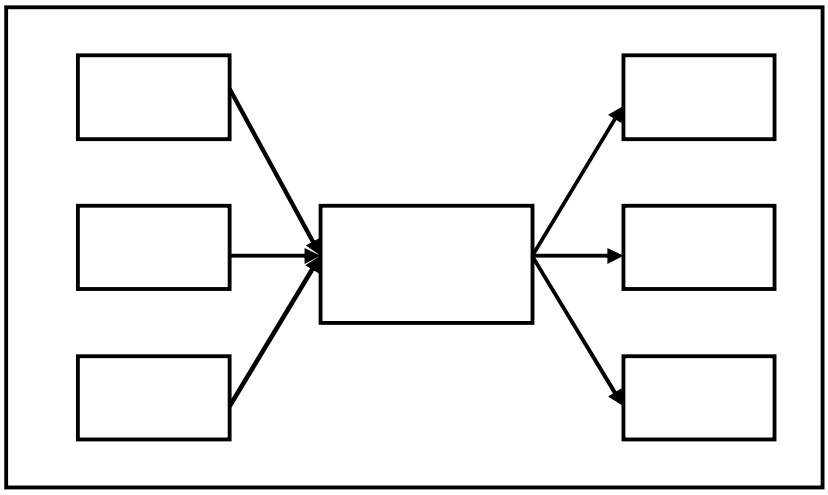
How do you know what you know about causes and effects of this event?

Where did you get your information?

What source(s) did you use to identify the causes and effects?

On an OHP transparency, the instructor shows how to design the multi-flow map saying :

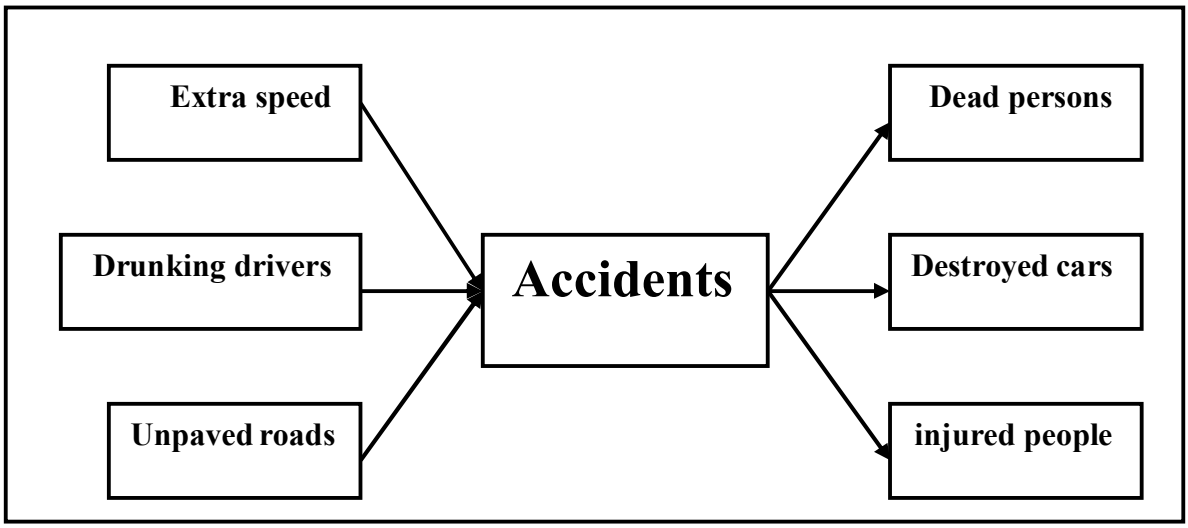
The event is in the center rectangle. On the left side, write causes of the event. On the right side, write effects of the event. It can be used to show and analyze cause and effect relationships. It can also be used with only part of the map showing, such as for predicting outcomes.



Generation :

1. **Modelling: (** by the teacher)

   The trainer gives an example and explains it to the trainees how they use the multi-flow map in the process of writing.



Accidents happen for many reasons, extra speed, dunking drivers and unpaved roads. The results of these accidents are dead person, destroyed cars, and injured people.

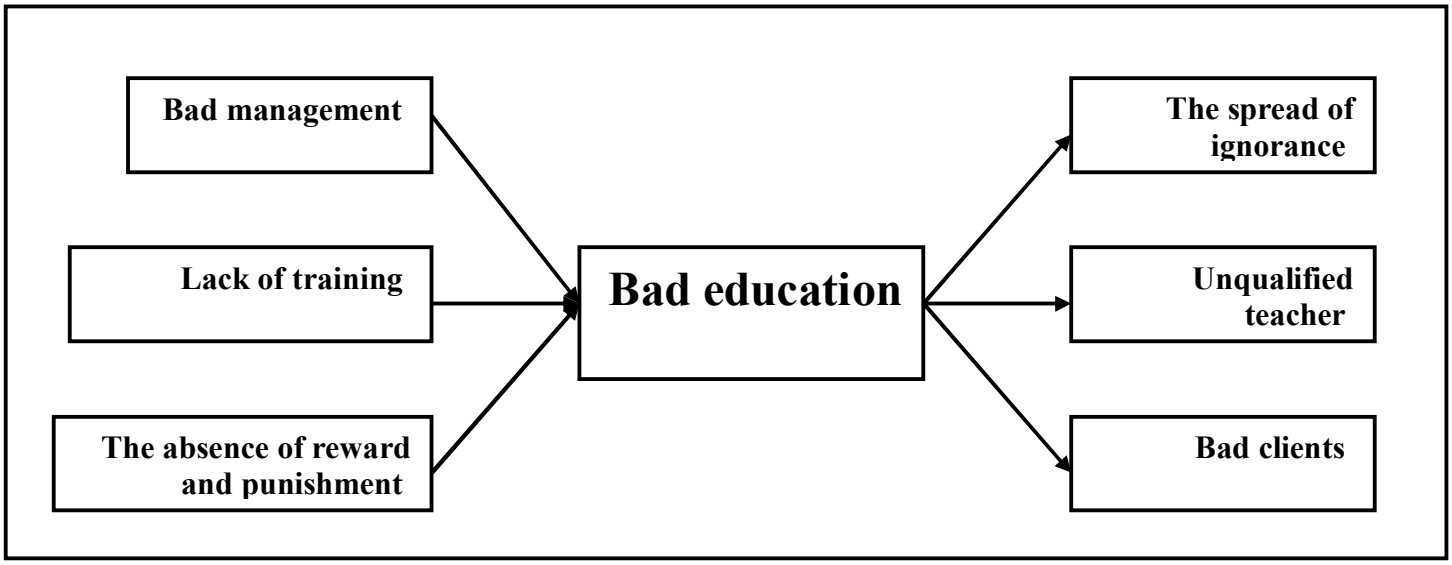
2. **Starter: (** by the teacher and student)

   The trainer motivates the trainees to use the multi-flow map in the process of writing, by asking them different questions and eliciting the answers from different trainees.

3. **Activities**: (individually, in pairs and in groups)

   The trainer provides trainees with ample activities to use them in constructing different texts from different maps.

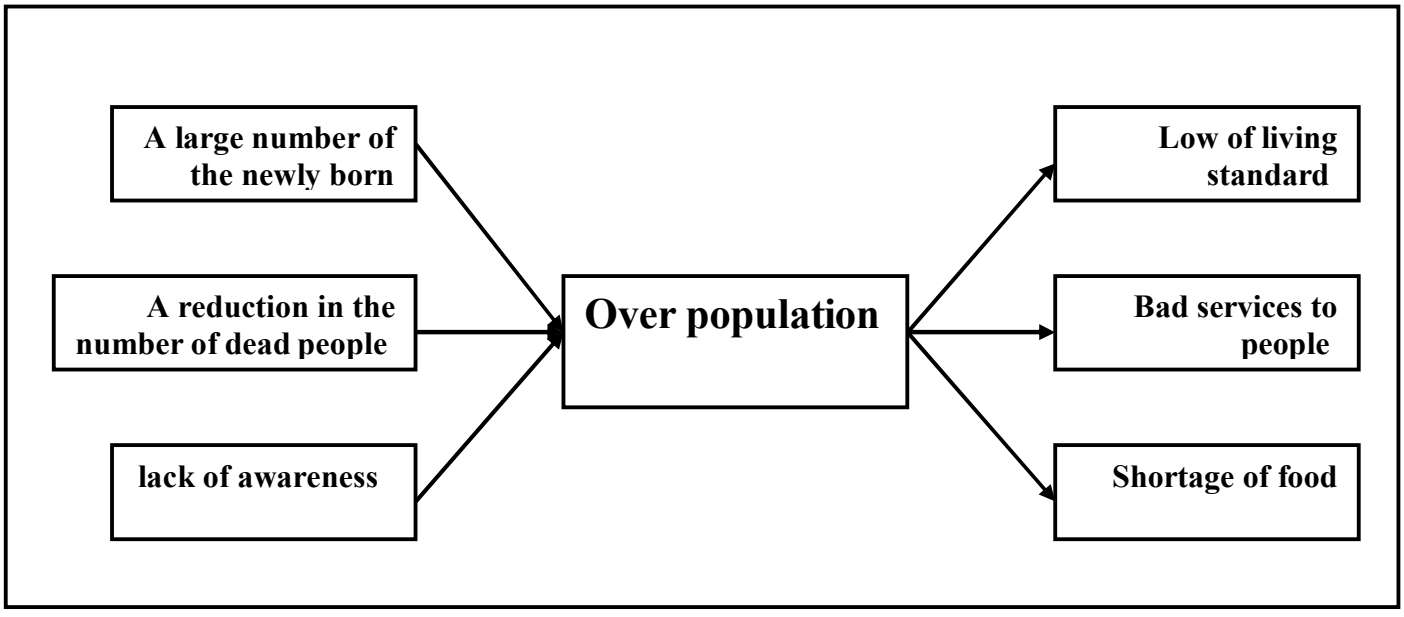
Simple structure

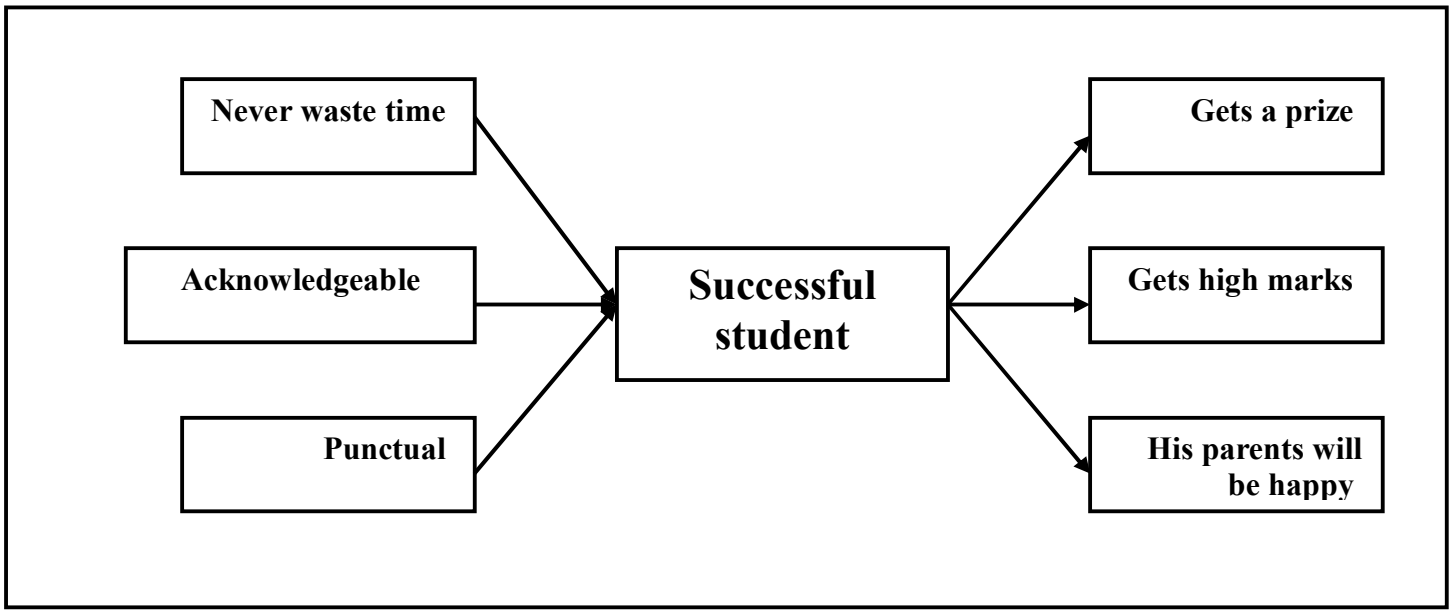


The caused of bad education are bad management, lack of training for teacher and the absence of reward and punishment. As a result of that there will be ignorance, unqualified teacher and bad clients.

Evaluation

Students are asked to create texts from the following maps:





Evaluation:

The trainees are asked to create different maps from a long text.

a. Read the following sentences/texts and construct the map required. Then answer these two questions:

Marcus and I became best friends when I helped him with a big problem. He is not very good at sports, but his Dad is always watching sports on TV not Marcus. One day our teacher told us that soccer team tryouts were coming up. At recess, two boys started teasing Marcus saying, " Hey,Marcus, why don't you try out for the team. Ha! You couldn't make it as the water boy!" Marcus was mad! After school he told the soccer coach, " Put my name on the list for the tryouts." I saw Marcus the next day and he looked very upset! He told me he was thinking about what made him sign up and about what might happen at the tryouts. I asked, " Do you really want to be on the soccer team?" after a few days he returned to the coach saying," Please take my name off of the list. I was going to tryout for the team for other people, like my dad, and not for myself."

a. What thinking map are you going to do?
b. What thinking skill will you do here? Why?
c. Name 3 key words or phrases for the double flow map.
d. Name 3 guiding questions for the multi-flow map?

APPENDIX (H)

Sample of Student's work

Ahmad Sami Gomah

~~Pretest~~ [Pre-test]

Category (A)

[1]. The picnic you had last Friday.

We goto the picine in The last Friday. we go to the Alexand kangaros are wild animalls which are found only Australia. The are marsupials, whic means that thier babies growing a Pouch a kind of bag at the front of ther mother's body. There are seventeen different kinds of kangaroos. The largest, the red kangaroo, can grow up the bast of the growen.

Category (B)

(1) the case of large families in Egypt

Remember your must argue in such a convincing manner that oferes will agree with you. Cive resasons st. we see in The Zebrain The Zoo arguments from the reader.

Ahmad Ibrahim
Meawadh

(Pre. test)

"The picnic you had last Friday."

Last Friday I went to ALeX in picnic. I went with my friend. we went by bus. we go to Beach. we swam in the sea. we played on the beach. Then we went to ALexandria library. we saw there many diffrent kinds of Books. we stayed there short time and we read some Books there. ~~in the evening we returned to our home~~ we were very happy after we went to Alex library, we had gone to ALexandria zoo. we saw there lots of animals. and we took many photoes to it.

at the end we went and bought some presents and went back to our houses

---

"pollution as a world problem"

It's known That pollution is one of the most important dangers which threaten The mans life.

There are many kinds of pollution like air pollution and water pollution. It's caused because of carelessness. now we see lots of people don't look after the environment.

we should all protect our self from pollution because It makes us sill and it caused lots of diseases.

How to protect our self from Pollution. we sould look after the environment. we sould grow trees in the street To protect us from cars fumes. we sould take factories away in the desert far from houses.

at the end we sould keep the environment clean because The sound mind in the sound body.

Israa Hassan Kamel (Pre-test)

The picnic you had last friday.

Last frieday I wend on atrip with my friends. we visited many places like as the pyramids, the zoo, and ancient museume. we saw many temps in the pyramids. we went to zoo and we saw many animals there we saw lion, elephants, girrafe and different kinds of birds. we enjoy our selves there. At the museum we saw lots of photos of pharans and kings we saw things which they had use in the past. we had a funny day. At the night we took the bus and went to our home.

Esraa Hassan Kamel Pre-test ..

pollution as a world problem.

These days we face a serious problem It is pollution. There are many kinds of pollution in the invironment. pollution fair cause with cars fumes and factoris and smoke. pollution hear cause from people who sell food in the street and machin which make voice very big. water pollution which will kill all fishes in the water and cause from factoris that through their fumes in the water. pollution cause disease to people and the invironment. the goverment should make programms for people and factories to keep of the cleanilness of the invironment.

Name: AL-Shymaa Roshdy
AL-shribiny

Pre-test

"The picnic you had last friday"

. I have my weekend every week. my father decided to visit diffirent places every week. This week we hade a picnic on friday. the first we went to park. we saw alot of things such as animals, birds and lots of trees. I and my brother played football.
therin the after noon we had lunch and drink drinks. After we had had our lunch my grandfather told us about the story of his life.
finally. in the evening we returned to hom and we were very happy.

" pollution as a world problem "

pollution is very bad for our life. we should know alot about it to know How protect us from it. every where there is pollution so we should examine this problem. Industy and cars cause pollution air. there are alot of kinds of pollution such as air pollution.... air pollution is very bad for people. If person sits in traffic jam his lungs will fill with exhausts from cars, lorry---- scientists try to discover a new car or new feul that doesn't cause pollution. they succeeded in discovering new feuls such as electricity, natural gas, vegetable oil and oxgen and Hydrogen.
finally. pollution alot of diseases so we should protect us from it.

Name: Alaa Samir Ahmed

Pre-test

"The picnic I had last friday"

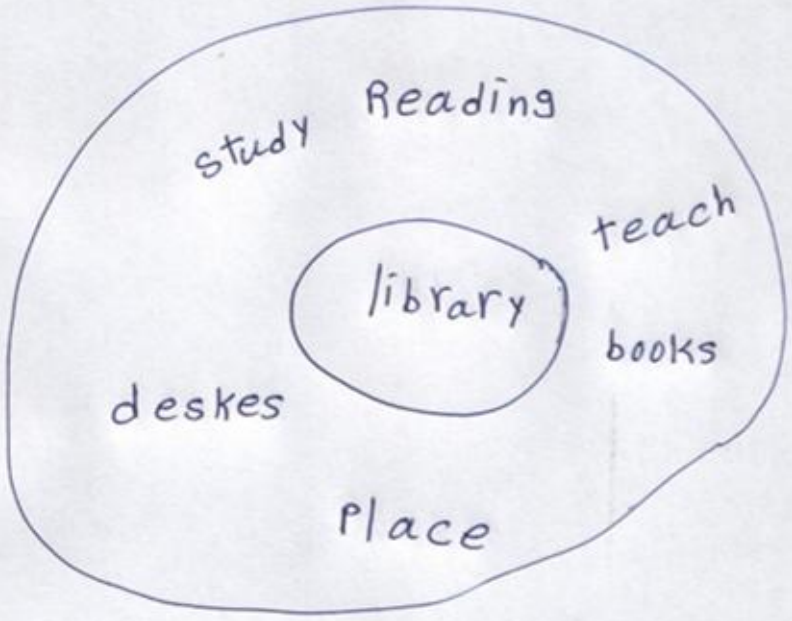
last friday, I had apicnic with my family. In the morning we went to Giza. We saw the pyramids and alot of tourists came to see it. Second we went to the zoo. we saw alot of animals. we ate and played there. Then we went to the cinema. we saw anew film. we were happy.

"Pollution as aworld problem"

The whole world face adifficult problem. It is pollution. There are alot kinds of pollution for example, air pollution and water pollution. The state should discreases this pollution because every member in society has aright in breathing clean air and drinking clean water. So we should keep to cleanliness. It protects us from illness. Alot of cantries suffer from pollution. It helps to break out of the diseas.

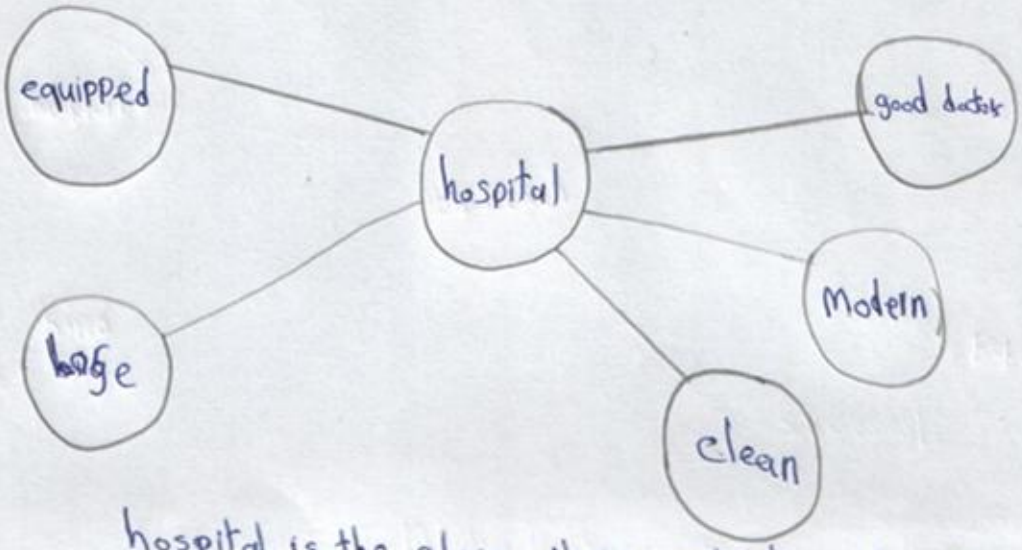
Name: Ahmed Raged Al-Metwli

الاسم: أحمد رجب المتولى



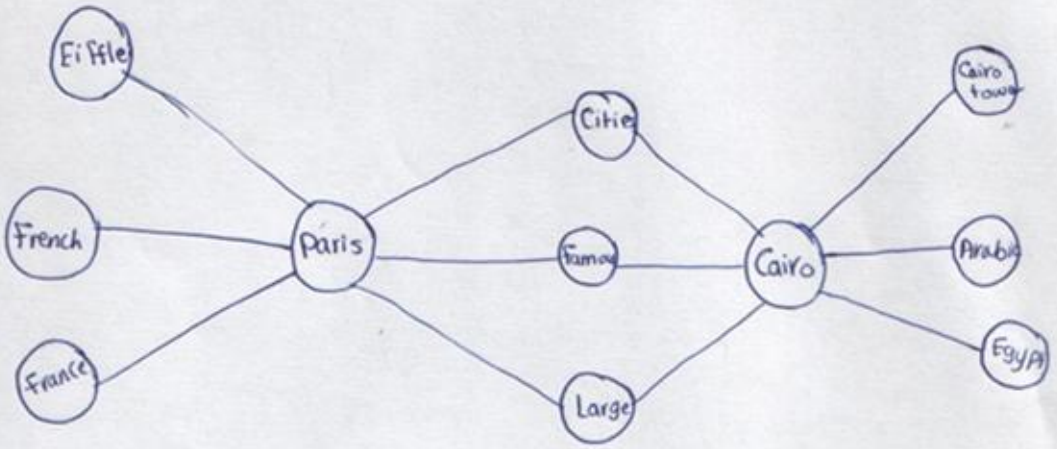
library is a place where we can study books. There are many books and deskes. we borrow books For reading and enjoymant. The teacher can teach For studnts.

Ahmed Ibrahim meawad



hospital is the place where patient go to ekamin. Itis equipped. It has got good doctors who help patient to recover It's large. It consists of lots of room, and doctors and nurses It's clean. There is abig park on it for patients. It's equipped with modern Items which help the patients.

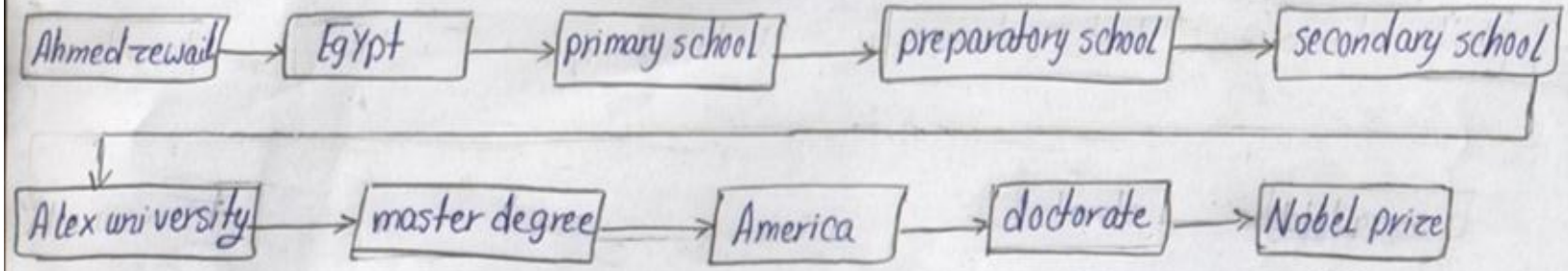
Alaa Mohamed Ebrahim Elshamy. 8/12/2010



Cairo is a city. it is large and famous all over the world. there is Cairo tower. people in Cairo speaks Arabic. Cairo is the Capital of Egypt.

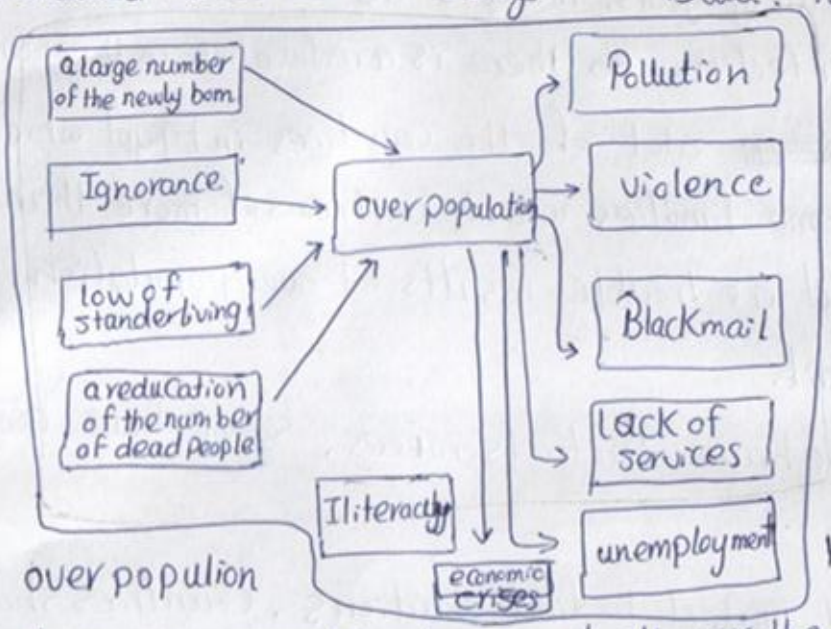
Pairs similars Cairo in it is a city. itis large and famous all over the world. but the difference between pairs and Cairo - Paris people in Paris speaks french. there is Eiffle tower. Paris is the Capital of France.

Name : Amal Esmail El-Shahaat Siam Diwim * class : 1/1 * date : 15 /12/2010



Dr Ahmed zewail is very great scientists. He was born in Egypt. He went to primary school. when he finished primary school he joined preparatory school. He joined secondary school.. his parents were writing apaper on his room on the door said « Dr Ahmed zewail » . they do that to encourage him to be successful in his life . when he was young . he liked doing experiments. He was going to America to study at caleforniа statue . He take amaster degree. he was very successful in his life because He was working hard. He discovered femto second. he became very known after that he was known for all over the world. I like him very much. I'd like to be successful as him in the future.

Name : Esraa Abd El-fttah Mohamed Mohamed El-shenawy. Date : 16/12/2010



Needless to say that over poplion have a trouble effect in the developing countries, developed countries and all over the world..

Due to this problem bad effects, we should gave it due care. All countries should united to try to solve this problem. we should face it firmly.

There are some resons of the over population. a large number of the newly bom is one of the Influencial resons.. This reason is a result of Iliteracy and Ignorance ... So we found over population in Egypt because of careless of education

The picnic you had last Friday

Post. test

Ahmad sami
Gomah

I' what too tead you a picinic me had last Friday. u are meeteng next to schode be thwen the School and the hospetal. the teachays tell me about what we should in the the picnic? the first place me are going to it's cairo were see the pyiramids and the shaims and we know le Aeag. abake now cahthe pyiramid cahtuil iday. in the afterenon we are going to the pus to can go to Alexandria. in the way go to the Alexandria the trepin the aniamel. progast you teem.

Polution as a world problem

Air pollution is a big proplem for pepole and the enviroment. If you sit in a fraffic Jam in cairo, your lungs will fill with the exhaust fumes from cars, buses and lorries. Air which is polluted by exhaust fumes can damage your health as the envioronment. scientists are working on the problem of exhaust pollution. Now, all cars burn petral more efficiently than in the past. scientises have also designed engines which use naturalgas, and many buses in cairo an other cites use these engines.

Ahmad Ibrahim
Meawadh

Post-test

"A picnic you had last Friday."

I'm going to write about picnic that I have Last Friday. firstly what is a picnic. It's a trip or a journy to any place with you family or your friends in holidays. In my picnic I went to Alexandria with my family. we started our picnic at 7 a.m. The first place That we visit we went to the beach. we spend our time playing on the beach and swimming in the See. Then we went to Alexandria Zoo where we can saw lots of animals in different kinds wild animals and domestic animals. we stayed at the zoo until we had our lunch. then we left the Zoo and went to visit Alexandria library. we saw on it lots of fantastic books which are written by great writters. we read some books on it and we saw lots of tourists there.

at Last in the evening we went to buy some present fol my friends and we went on boat trip Then we returned to take our car.

finally. my father drove his car and we went back to our home. every one in my family was happy. and It was a wonderful day.

"Pollution as a world problem."

It's known that pollution is one of the dangers which threaten the humanlif. Firstly I'm going to write about the causes. There are many causes to this problem I'll write some of them. used many car, lots of factories, Progress in industry and rubbish in the street etc. The first cause is used too many cars and cars fumes damage our health and the environ met. If you sit in traffic Jam you lungs will fill with fumes from car. the second cause is outbreak of factories and the smoking from factories.

secondly the results. Lots of People get ill. hospitals will fill with patients. bad services to people. increase of death rate because of this Pollution which damage our health.

Esraa Hassan Kamel

Post.test

The picnic you had last frieday.

Last week I went with my friends to Cairo. we visited many places like phyramids, museums, temples and The Zoo. we took many photos with tourists there. we help them to know about our civilization. we saw many statues To kings and queens. we enjoyed our selves there. we went to the zoo. we saw many kinds of animals and birds there. we saw lion, wolf, girrafe, Monkies and Zebra. we saw birds which attracks us with their coulures. at the night we went to Funny place. we played games. At 12 o'clock we go into our bus To go home and we sing songs and dance.

Pollution as aworld proplem.

Pollution is dangerous proplem we face these days. There are many kinds of pollution. first air pollution. cars and bries exhaust Fumes cause this. it polluted the air and it make ahole in ouson role. seconed water pollution. factoris through their lettres in the sea or the river. these lettre killed fish and any thing in the water. Third hear pollution. people who sell their foods in the street and machiene which make voice bigger cause this. Everyone should clean The place he is in. The government should go on TV and make programes about Cleanilness. we should use things don't pollut environment. like electric cars, wind energy And sun.

Name; Al-Shymaa Roshdy-Al-Shribiny

Post test

1- The picnic you had last friday

I have apicnic every week with my family. every we visit diffe ent place. In the morning last friday we went to the park. We had breakfast. I and my brother played football. my sister and my cousi played basketball. After we had finished playing, my grand father tol us about the story of his life. It was very exciting. We learnt alot of i ings from it. In the afternoon my father suggested visiting louxor. It was very good idea. we were very happy. When we had arrived in l xor. We saw alot of ancient monuments such as tombs, temples ... etc and I saw my favouriteplace. It is Pyramids. In the evening we retu to home and we were very happy. we decided to visit louxor again.

2- Pollution as aworld problem.

Pollution is something which changed into bad things. It is very important problem for people and environment. If you eat or sme bad thing which is polluted, you will be ill. So pollution can dam ged our health as well as environment. Exaust fumes, industry and te hnology cause this pollution. There are alot of people in the world inf cted because of pollution so that it is aworld problem. There are of kinds of pollution such as Air pollution, water pollution ... et Air pollution is very bad for our health. Scientists work on this proble They discovered engines which use natural gas, electricity, vegetable and battries which use hydrogen and oxegin in the future. We should solve problem.

Name: Alaa Samir Ahmed

Post-test

"The picnic you had last Friday"

I had apicnic last friday. I went with my family. In the morning, we were ready to go. we went to the zoo. we saw lots of animals for example "monkey, elephant, birds, lion and zebra". we had anice time in the zoo. we played and ate our breakfast. In the afternoon, we went to the pyramids. we saw alot of touristes. we took some photos with them. we rode ahorse. we were very happy. we went to the resturant to have our lunch and drink. we went to the cinema. we saw anew film. It was exciting. In the evening we went home. we had our dinner. we were very happy.

"Pollution as aworld problem"

The world face adangerous problem. It is pollution. There are alot of cases of this problem. for example, industry and exhaust fumes. There are alot of kind of pollution. for example air pollution. It cases of break out factories. There are alot of vehicles in the cities. The second kind is water pollution. It cases of throw rubbish in the water. It makes water dirty. There are alot of results of this problem. It helps to break out diseases. It makes our life impossible. So we should solve this problem. we should biuld factories out of population area. we should clean the water. we should dicrease of using cars.