تأثير الخريطة الذهنية على قدرة متعلمي اللغة الانكليزية كلغة اجنبية في العراق في القراءة الناقدة.

م.م. أسيل حسين عبد الله

وزارة التربية – المديرية العامة لتربية ديالى

aseelhussein1900@gmail.com

الخلاصة

تهدف هذه الدراسة في التحقيق من أثر استخدام الخريطة الذهنية في تطوير مهارة القراءة في السنة الثانية متعلمي اللغة الإنكليزية كلغة اجنبيه في جامعة ديالى كلية التربية الأساسية لتحقيق هدف الدراسة، تبنى الباحث التصميم التجريبي. وتكونت عينيه الدراسة من (٦٩) طالب مقسمين إلى (٣٥) طالب لصالح المجموعة التجريبية و (34) لصالح المجموعة الضابطة والعينة اختيرت عشوائيا من المرحلة الثانية

كما صمم الباحث مجموعة من الأنشطة التي تتعلق بموضوعات القراءة لكي تكون مبنية على الموضوعات التي تتعلق بالخريطة الذهنية والتي استخدمت لتدريس المجموعة التجريبية، بينما تم تدريس المجموعة الضابطة حسب الطريقة القديمة في النصف الأول من السنة الدراسية 2021 – 2022. كما تم عمل اختبار قراءة ليستخدم كاختبار قبلي وبعدي للمجموعتين: البيانات حللت إحصائيا باستخدام الصيغة الرياضية الاختبار الكلي لقياس الاختلاف بين أداء المجموعة التجريبية والضابطة في الاختيار القبلي..

الكلمات المفتاحية: اثرالخريطة الذهنية – متعلمي اللغة الانكليزية كلغة اجنبية في العراق – القراءة الناقدة.

The effect of Mind Mapping Techniques on Iraqi EFL Learners' Ability in Critical Reading

Asst. Lect. Aseel Hussein Abdullah

Ministry of Education – Diyala General Directorate of Education

aseelhussein1900@gmail.com

Abstract:

This study aims at investigating the effects of using mind mapping on developing reading skills of the second-year learners in Diyala University / Collage of Basic Education. To achieve the aim of the study, the researcher adopted the experimental design. The sample of the study consisted of (69) students divided into two groups, (35) students for the experimental group and (34) students for the control one. The sample is randomly chosen from the second stage.

The researcher designed activities related to reading topics, these activities are based over mind mapping activities which are used in teaching the experimental group, while the traditional method is used in teaching the control one in the first term of the academic year 2021-2022. A reading test is designed and validated to be used as pre and post-test for the two groups of the students. The data are analyzed statistically by using t-test formula to measure the difference between the performances of the experimental group in the pre and post-test.

Keywords: Mind Mapping Techniques, Iraqi EFL Learners, Critical Reading.

Theoretical Sketch

1.1 The Statement of the Problem

A mind map is a framework where major categories radiate from a central image, with lesser categories branching off as subtopics. The author illustrates an in-class exercise where small groups of students create a mind map on a specific topic. This technique serves as an active, collaborative learning tool that helps instructors move beyond traditional lecture methods. Mind maps visually represent ideas and facilitate brainstorming and free association, providing a visual approach to organizing information that encourages generation and analysis. "A method of accessing intelligence, allowing, rapid expansion and exploration of an idea in note form" **(Buzan and Buzan,1993, Wycoff,1991).**

Mind maps technique is a powerful graphic technique applicable to various aspects of life, where enhanced learning and clearer thinking can improve performance and effectiveness. It is a non-linear way of organizing information and a technique that allows capture of the natural flows of ideas. **(**Vyas **and Patel, 2009, p. 233).**

Creating a mind map involves collecting all your ideas about a specific concept and arranging them in a way that illustrates the relationships between those ideas. You can order the information into important points, and show problems with their solution and causes with their effects. Mind maps let you see the big picture of a topic as well

as the details that make up the picture. **(Vyas and Patel, 2009, p. 235).**

Mind mapping is one of the simplest yet most powerful tools in a person's creative toolbox. It provides a non-linear method for organizing information and allows you to capture the natural flow of your ideas. **(Clay Pole, 2010, p. 108).**

Mind mapping, also known as "idea mapping," is defined as a visual, non-linear representation of ideas and their relationships. It consists of a network of interconnected and related concepts. **(Biktimirov and Nilson, 2006).**

Norman (2003, p. 13) defines mind mapping as a technique that incorporates pictures, diagrams, symbols, and words, similar to those commonly found in advertising and road signs. It is a system for recording information that begins with a central concept, from which lines radiate outward. Each main idea is represented by a single word, with smaller branches extending from the main branches to include supplementary ideas and examples.

1.2 Aim of the study

This study aims at:

1- Investigating the effect of mind mapping on EFL learners' ability to read critically.

2- Improving students understanding of critical reading.

1.3 Hypotheses of the study

The aims of the study will be met by testing the following hypothesis:

There is a significant difference in the main scores of students who are taught critical reading using mind mapping compared to those who are taught through traditional method.

1.4 The Value

The value of the study stems from the significance learning of critical reading as an essential aspect of the process of teaching EFL. Reading is very important to be mastered by EFL learners. This study may also be valuable for teachers, trainers, educators, supervisors, and EFL learners.

1.5 Limits

This study is limited to second year students learning class at the Department of English, College of Basic Education University of Diyala during the academic year 2021-2022.

1.6 The Procedure

To achieve the aim of the present study the following procedures are adopted:

1- Selecting a sample of EFL students from second year college students.
2. Randomly dividing the selected sample into two groups: an experimental group and a control group.
3. Designing a critical reading test and verifying its validity and reliability.
4. Conducting a pre-test for the entire selected sample to measure their initial reading performance levels.
5. Using mind mapping technique to teach the experimental group and traditional methods to teach the control group.
6. Post-testing both groups in reading at the end of the experiment.

1.7 Definition of the basic terms

1.7.1 Effect

Good (1973, p. 195) defines it as the effect of the experimental factors under controlled conditions on the control variables.

1.7.2 Mind Mapping

It is defined as visual, non-linear representations of ideas and their relationships they comprise a network of connected and related concepts.

1.7.3 Critical Reading

Patching et al., (1983, p. 408) view critical reading as "asset of processors that occur when readers correctly identify valid instances of arguments reasoning or presentation of evidence material".

Practical Sketch

2.1Mind Mapping Process

Tony Buzan **(Buzan and Buzan, 2000, p. 122)** first introduced mind mapping as a technique for rapid creative thinking. To create a mind map, a user starts by writing down the main idea, such as "house." From there, related thoughts emerge, prompting the user to jot down aspects of the house, such as "roof," "kitchen," and "bedroom." As each new keyword is added, the range of possible ideas expands, and this iterative process continues.

The ideas developed in a mind map are presented in a radial manner, aiming to engage both the creative and logical sides of the brain. This stimulation of the entire cortex enhances the generation of ideas. **(Vidal, 2008, p. 28).**

Tony Buzan **(Buzan and Buzan, 2000)** commented that linear note taking "ideas that come before or after it and the idea growth of the user becomes like a student. A mind map however, is the opposite as it maintains on open structure that encourages the user to insert more ideas. The four main reasons of mind-map are as follows:

1- Each mind map has a starting location, the center node that contains the main theme or idea.
2- The idea of the mind-map "radiates" from the central node that contains with sub nodes connected to each other in parent-child relationships.
3- 3-the final structure of the mind-map becomes a hierarchy of linked nodes.
4- Each connector / branch has keywords or an image associated with it

2.1 Steps of Mind Mapping Process

Guerrero and Ramos (2015, p. 19) believe that "**the** process for creating a mind map can be described in eight steps to mind map the learners as stated herewith:

Step 1-Centre first.

"Mind Mapping begins with a word or an image placed in the middle of the page which symbolizes what you want to think about.

Step 2- Lighten up

Begin with an open and creative mindset, letting go of the need to solve the entire problem or write a report that pleases everyone. This is simply a brainstorming process designed to stimulate new ideas and connections.

Step 3- Free associate

Record all ideas without judgment or evaluation. As ideas arise, write down one- or two-word descriptions on lines branching from the central focus. Let these ideas expand outward into branches and sub-branches. Connect the lines starting from the central image, ensuring that the central lines are thicker, organic, and flowing, becoming thinner as they radiate outward.

Step 4- Think fast

Your brain functions optimally with five to seven ideas at a time, so it is important to capture thoughts in quick bursts. Record ideas rapidly using key words, symbols, and images, which serve as mental shorthand to facilitate swift notation.

Step 5- Break boundaries

The bigger the paper, the more ideas you have. Use different colors and styles.

Step 6- Don't judge

Write down everything that comes to mind, even if it seems completely unrelated.

Step 7-keep moving

Keep your hand moving. If your ideas start to slow down, draw empty lines and observe how your brain will automatically generate ideas to fill them.

Step 8- Allow organization.

Sometimes, you may immediately see relationships and connections, allowing you to add sub-branches to a main idea. Other times, you may not, so simply connect those ideas to the central focus. Organization can come later; the primary goal is to get the ideas out of your head and onto the paper**.". Guerrero and Ramos (2015, p. 19).**

2.2. Implications of Mind Mapping Techniques

"1. Planning: Use detailed mind maps as tools for organizing and planning assignments.

2. Visual Records: Create more involved mind maps, complete with diagrams and colors, as permanent records of topics or courses.

3. Learning and Revising: Sketch quick mind maps to aid in revising material from your last class or lecture.

4. Note Taking: Utilize mind maps for note-taking during lectures or while reading.

5. Facilitating Recall: Mind maps enhance recall because the association of ideas reflects how the brain functions.

6. Problem Solving: Help learners solve problems by focusing on potential solutions**." (Buzan and Buzan, 2000; Vidal 2004).**

2.3 The Role of the Teacher

Green berg (2000. p. 142) states that: "to mind map the learners, the teachers, should:

- Help the learners to transfer the Subject matter, Knowledge.
- Ask them about their goals to create Personal learning Plan.
- Help the learners to connect the school. learning with real world Problem.
- Help the learners to arrange, analyze and express his ideas.
- Guide the learners in the process of creating new ideas and employing new own thoughts in the Solution for a given Problem.
- Provide them with the feedback to reinforce them and motivate them."

2.4. The Role of the Learner

Best etal (2071-231) argue that: "learners should:

- Concentrate on the Problem: Focus your attention on the issue at hand.
- Place the Main Idea in the Center: Position the main idea at the center and branch out intermediate solutions from it.
- Generate New Ideas: Create new ideas to solve the problem or to add

relevant information about a specific subject.

- Collaborate: Work together to engage actively and foster an enjoyable environment."

2-5 Why Critical Reading Important!

Critical reading has been widely advocated in the literature on reading instruction for several reasons. **Kay (1946: 380)** argues that critical reading enables readers to assess whether information is true, a complete fabrication, or slightly biased to align with certain editorial policies. **Derine (1962, p. 361)** connects critical reading to critical thinking, emphasizing that the ultimate goal of education is to develop critical thinking skills, which can only be fostered through various strategies of critical reading. Therefore, critical reading is essential for cultivating critical thinking. **Olsen and Ames (1972, p. 65)** offer a comprehensive overview of the reasons for teaching critical reading.

They argue that critical reading is essential for students to navigate editorial reporting in television, radio, or print media. Students must recognize that what is reported or written is often influenced by the writer's or editor's interpretation, which is shaped by their experiences, mood, perspectives, and outlooks. In today's world, where mass communication and propaganda are prevalent, facts can be interpreted in various ways, often colored by interests, politics, or prejudice. Techniques like card stacking, bandwagon appeals and red herrings can dominate the discourse. Therefore, critical reading is crucial for distinguishing these discrepancies. Despite its importance, teaching critical reading faces several obstacles, which **Olson and Ames (ibid: 66-68)** summarize as follows:

The challenges include reliance on a single textbook, the "halo effect" associated with the printed word, teachers' reluctance to address controversial subjects, an emphasis on conformity, and the influence of emotions and prejudices. These obstacles should be addressed at the university level, where the focus should shift to engaging with controversial issues, assessing the reliability of the information, and detecting the biases and prejudices that color facts and opinions.

The Procedures

3. Experiment

The design of the experiment involved randomly selecting two groups. Both groups underwent a pre-test and a post-test. The experimental group was taught reading using the mind mapping technique, while the control group received instruction through traditional methods. The scores of both groups were then compared to

determine if there were any significant differences between the two.

3-1 Population and the Sample

The population of the present study consists of second year morning class students in the Department of English Language at the College of Basic Education, Diyala University, during the academic year 2021-2022. A random sample was selected, dividing the students into two sections. The control group, referred to as Section A, includes 34 students, while the experimental group consists of 35 students. See herewith

Table 1. of the random sample

No	Section	Groups
35	A	EG
34	B	CG
69		Total

3.2 Equivalence of the Sample.

There are several variables that the researcher aimed to control, including students' age, parental education, and the students' scores on the pre-test. The differences were tested at the 0.05 level of significance using the t-test formula for two independent samples and the chi-square formula. It was found that the subjects in the experimental and control groups were matched on these variables, as there were no statistically significant differences between the two groups.

3.2.1 The level of fathers

The chi-square formula is used for two independent samples to determine whether there are significant differences between the two groups regarding the level of fathers' education. The educational qualifications are classified as follows:

3.3. The Students' Scores on the pre-test.

To ensure that both samples were equivalent in their previous English language test scores before the start of the experiment, the results were recorded and statistically analyzed using the t-test. Table 2 displays the mean and standard deviation for each group regarding their previous English learning outcomes. The analysis indicates that there are no statistically significant differences between the experimental and control groups at the 0.05 level.

Table 2. of the pre-test

Tabulated	Calculated	DF	SD	M	NO.	Group
1.99	0.67	67	3.974	14.514	35	EG
			4.195	14.235	34	CG

3.4. The validity

The validity of a test is one of the most crucial factors to consider when selecting an assessment tool. It refers to the degree to which the instrument accurately measures what it is intended to measure, ensuring it meets the identified educational needs of the teacher **(Lado, 1964, p. 50**). Validity encompasses the extent to which a test meets the expectations of all parties involved in its use, including teachers, candidates, and test score users **(McNamara, 2000, p. 133).**

3.5 The Pilot Study of the Test

A pilot study of the test was conducted with a sample of 69 students randomly selected from the second year of the English department at the College of Basic Education. Several factors were considered, including the time assigned for students to complete the test, the discrimination power of the test items, the time required for test-takers to respond to tasks, the security of the test items, and the overall viability of the test.

3.6 Reliability of the test the test

According to **Harmer (2001, p. 322),** a good test should yield consistent results. In practice, the viability of a test is improved by ensuring that the instructions are absolutely clear, limiting the scope for variation in responses, and maintaining constant test conditions.

3.7. Instructional Material and lesson Plan

The instructional materials for this study included the passages "Mary Had a Little Lamb" and "The Greatest Bridge," which were sourced from L.G. Alexander's textbook, “Developing Skills”.

3.8-Behavioral objectives

These objectives can be shown as follows:

1- To enable students, determine the important ideas from a reading passage while discussing and developing ideas.
2- To encourage equal participation of each and every class member, including the shy and fearful students to participate.
3- To help students monitor their own learning and thinking.

The Results, Conclusions, Recommendation and Suggestions.

4. The results of the post-test

The results of the students' Performance on the Post-test reveal that the average score of the (EG) is (19.271) with a standard deviation (SD) of (4.820) which is higher than that of the Control (14.202) with an SD group which is of (4.820). The difference

between the tabulated t-value is (1.99) at the p>0.05 and df of (67) while the calculated value is (5-289). This indicates that there is a clear (CG). Table (3) below shows the detailed descriptions of the results for both groups. Table (3) reflects The Pupils' Results of the Post test.

Table 3 of the post-test results

Tabulated	Calculated	DF	SD	Mean	NO.	Group
1.99	5.289	67	4.526	14.971	35	EG
			4.820	14.205	34	CG

4.1. Conclusions

The following points are made on the basis on the findings.

1. Mind mapping techniques prove to be effective for developing and enhancing students' critical reading abilities.

2. The results indicate that mind mapping techniques have assisted weaker students in improving their reading skills.

3. Mind mapping encourage students to engage their minds and promote more extensive thinking by incorporating multiple ideas.

4. Mind mapping techniques can significantly positively impact the acceptance of new ideas.

4-2-Recommendations

It is recommended as follows:

1. Instructors are advised to encourage students' mind-mapping their activities because it helps to enhance their cognitive development.
2. Instructors are advised to select critical reading text according to students' back-ground Knowledge and also their needs and interest.
3. Ensure Students to be more aware of the fact that Mind-mapping is an interactive Process.

4-3 Suggestions for further Studies

For future studies in the area of language teaching and learning, it is suggested to: -

1- Conduct other studies based on other types of reading.
2- Conduct other studies in Primary and Preparatory stages.
3- Conduct a similar study for other skills such as (listening, speaking and writing).

References

[1] Ahlberg, M. (1993). Concept maps, vee diagrams, and Rhetorical Argumentation (RA) analysis: Three

educational theory-based tools meaningful learning. Paper presented at the Third International Seminar on Misconceptions in Science and Mathematics, Cornell University.

[2] Benjamins, Differentiated Ammy (2003) Instruction: A Guide for Elementary School Teachers, NY:EyeOn Educatio, Inc.

[3] Beitz, J. M. (1998). Concept mapping: Navigating the learning process. Nurse Educator, 23(5), 35-41.

[4] Biktimirov, E. N., & Nilson, L. B. (2006). Show Them the money: Using mind mapping in the introductory finance course. Journal of Financial Education, 32(Fall), 72-86.

[5] Buzan, T., and Buzan, B. (2000). The mind map book. London: BBC Books.

[6] Buzan, T., and B. Buzan. 1993. The Mind Map book: How to use radiant thinking to maximize your brain's untapped potential. New York: Plume.

[7] Best, Brin. Sophie Craven. Gill O Donell (2011) The learning To Learn L2: Toolkit, London: Optimus Education ltd.

[8] Blockhead series (2014) Mind Mapping: Step by Step Beginner's Guide, Miami: Greate Space.

[9] Claypole, Maurice (2010) The Fractal Teaching English as foreign language, Nordertedt: LinguaBooks.

[10] Craik, F. I. M., & Lockhart, R. S. (1972). Levels of processing: A framework for memory research. Journal of Verbal Learning and Verbal Behaviour,11, 671-684.

[11] Daley, B. J. (2004). Using concept maps in qualitative research. Paper presented at the First International Conference on Concept Mapping, Pamploma, Spain.

[12] Driscoll, M. P. 2000. Psychology of learning for instruction, 2nd ed. Boston: Allyn and Bacon.

[13] Eppler, M. J. (2006). A comparison between concept maps, mind maps, conceptual diagrams, and visual metaphors as complementary tools for knowledge construction and sharing. Information Visualization, 5, 202-210.

[14] Greenberg, Katherine H. (2000) The Cognitive Enrichment Advantage: Teacher Handbook, NY: KCD Harris and Associates Press.

[15] Guerrero, Jose M. and Ramos, Pilter (2015) Introduction to the Applications of Mind Mapping, NY: Create Space Independent Publishing Platform.

[16] Jackson, K., & Trochim, W. (2002). Concept mapping as an

alternative approach for the analysis of open-ended survey responses. Organizational Research Methods, 5(4), 307-336. 615.

[17] Kinchin, I. (2001). If concept mapping is so helpful to learning biology why aren't we all doing it? International Journal of Science Education, 12,1257-1269.

[18] Maas, J., and Leauby, B. A. (2005). Concept mapping: Exploring its value as a meaningful learning tool in accounting education. Global Perspectives of Accounting Education, 2, 75-98.

[19] Novak, J. D., and Can as, A. J. (2006). The theory underlying concept maps and how to construct them.

[20] Technical Report IHMC Cmap Tools 2006-01 Retrieved 21/6/07, Florida Institute for Human and Machine Cognition, from http://cmap.ihmcus/Publications/ResearchPapers/TheoryUnderlyingConceptMaps.pdf.

[21] Norman, Susan (2003) Transforming Learning: Including SEAL Approaches, London: SEAL.

[22] Sarasin, L. C. 1999. Learning styles: Impact in the classroom. Madison, WI: Atwood Publishing.

[23] Slotte, V., and Lonka, K. (1999). spontaneous concept maps aiding the understanding of scientific of Science International Journal Concepts Education, 21(5), 515–531.

[24] Trochim, W. (1989). An introduction to concept mapping for planning and evaluation. Evaluation and Program Planning, 12, 1-16.

[25] Vyas, Manish A and Patel, Yogesh L (2009) Teaching English as a Second Language: A New Pedagogy for New Century, New Delhi: PHI Learning Private Ltd.

[26] Wycoff, J. 1991. Mind mapping: Your personal guide to exploring creativity and problem solving. New York: Berkeley Books.