

## Investigating EFL Teachers' Perspective of the Effectiveness of the Mind-Mapping Technique in Reading Comprehension

استطلاع وجهة نظر أساتذة اللغة الإنجليزية كلغة أجنبية في فعالية تقنية رسم الخرائط الذهنية في فهم القراءة

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### Abstract

This paper aims to examine English as a foreign language (EFL) teachers' perspective on the efficacy of the mind-mapping technique as a reading comprehension mechanism. The present study investigates the status-quo of teaching reading comprehension to EFL students at the English department of Badji Mokhtar - Annaba University and questions EFL university teachers' awareness of the efficacy of using the mind-mapping technique as a tool to enhance their students' reading comprehension ability. A questionnaire was conducted with thirty four (34) teachers from the department of the English language at the University of Badji Mokhtar – Annaba, Algeria. Findings of the present study show that although EFL teachers are aware of the importance of reading comprehension in learning EFL. They, rarely, involve their students in reading comprehension tasks. Moreover, despite their awareness of their students' positive attitudes towards mind-mapping, the study shows that EFL teachers tend to refrain from implementing this technique with their students.

**Keywords:** Mind-mapping; Reading Comprehension Instruction; Reading Comprehension Mechanism; Visual Learning Development; Study Skills.

### ملخص:

إن الهدف من هذه المقالة هو استكشاف وجهة نظر أساتذة اللغة الإنجليزية كلغة أجنبية في مدى فعالية تقنية رسم الخرائط الذهنية كآلية لفهم القراءة. كما تسعى هذه الدراسة لفحص الوضع الراهن لتدريس الفهم القرائي لطلاب اللغة الإنجليزية كلغة أجنبية في قسم اللغة الإنجليزية بجامعة باجي مختار عنابة وتتساءل عن مدى إدراك أساتذة هذه اللغة كلغة أجنبية في الجامعة لنجاعة استخدام تقنية رسم الخرائط الذهنية في تنمية قدرة طلابهم في فهم القراءة. وقد تم إنجاز استبيان بمشاركة 34 أستاذا من قسم اللغة الإنجليزية بجامعة باجي مختار عنابة – الجزائر. تظهر نتائج الدراسة الحالية أنه برغم كون أساتذة اللغة الإنجليزية كلغة أجنبية على دراية بأهمية فهم القراءة في تعلم اللغة الإنجليزية كلغة أجنبية، إلا أنهم نادرا ما يشركون طلابهم في مهام فهم القراءة. وبرغم معرفتهم بالمواقف الإيجابية لطلابهم تجاه رسم الخرائط الذهنية، فإن هذه الدراسة تظهر أنّ أساتذة اللغة الإنجليزية كلغة أجنبية يميلون إلى الامتناع عن تطبيق هذه التقنية مع طلابهم.

**كلمات مفتاحية:** خرائط ذهنية، تدريس فهم القراءة، آلية فهم القراءة، تطوير التعلم المرئي، مهارات الدراسة.

## **1. Introduction**

It is evident that reading is vital to learn any language especially when the latter is a foreign one to the learner. However, literature shows that most of EFL learners do not fancy and practice reading because they find it difficult. The difficulty of understanding and remembering what is read adds to the complexity and dullness of the reading task. EFL learners face reading comprehension problems due to the fact that the slight proportion of the texts they read is teacher recommended, long, and detailed scripts that contain information in a particular field of study. Furthermore, most of language teachers try to motivate their students to improve their reading habits without enlightening them about the various reading comprehension strategies and techniques.

One of the most crucial reading techniques that have been reported to be beneficial among language learners is mind-mapping. Mind-mapping is a non-linear note-taking technique that has been proved to be an effective reading comprehension tool. In English as a foreign language (EFL), teachers can use the mind-mapping technique with their students to make the reading comprehension task more effective.

The main aim of this article, then, is to explore EFL teachers' perspective on the efficacy of the mind-mapping technique as a reading comprehension mechanism. The present article seeks to find answers to two questions: 1) what is the status-quo of teaching reading comprehension to EFL students at the English department of Badji Mokhtar - Annaba University? and 2) to what extent are EFL university teachers aware of the efficacy of using the mind-mapping technique as a tool to enhance their students' reading comprehension ability? To answer them, a questionnaire was designed and administrated with thirty four (34) teachers from the department of the English language at the University of Badji Mokhtar - Annaba, Algeria.

### **1.1 Literature Review**

#### **1.1.1 Mind-Mapping**

Tony Buzan first used mind-mapping, also called visual mapping, in 1971. The originator of the concept views the human brain as more powerful than computer and visualized the brains operating manual. Buzan and Harrison (2011) see that mind-maps have a brain-like way of working. They argue that mind-maps use lines, symbols, words, colors, and pictures, which are similar to the operating system in which the brain processes information.

Mind-mapping is a non-linear note-taking technique that proved to be beneficial to language learners. Cook and Mayer (1983) see note-taking as "A reader-initiated strategy," which is influential at enhancing students' learning level, in general, and their reading comprehension performance in, particular"(qtd in Chang and KU 2015, p. 278). Chang and KU (2015) mention that students, who take notes, outperform those who do not as far as reading comprehension is concerned. The authors (2015)

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relate such superiority to the fact that note-taking helps “learners retain retention and make connections among pieces of information in the text” (p. 279). Thereby, the importance of mind-mapping as a cognitive note-taking process lies in the fact that it promotes students’ construction, organization and incorporation of data while reading.

### **1.1.2 Mind-Mapping and Translation**

The mind-mapping technique has been reported to be an effective tool in translation classes. It can be used by students to analyze, organize and understand the text to be translated. In this context, Stepanova (2015) proclaims that the mind mapping technique “helps to understand the source text better and generate new ideas of how to translate it in the best way possible” (p.271). The author goes further to stress the importance of the mind-mapping technique in teaching the theory and practice of translation by reflecting students’ perspective on the technique. According to a survey conducted by Stepanova (2015), translation students view the mind-mapping technique to be helpful and motivating in translation and interpretation classes, as it assists them to recall theoretical information as well as to grasp the information to be translated. Therefore, translation teachers can implement the mind-mapping technique that is likely to benefit their students to better learn material translation and interpretation.

### **1.1.3 Reading Comprehension**

Reading comprehension is one of the most important skills that develops and widens students’ knowledge of a language. In this context, Brevik, Olsen & Hellekjær (2016) define reading comprehension as “a cognitive as well as a social process that involves extracting and constructing meaning” (p. 162). Therefore, reading comprehension is a twofold process that engages the reader to communicate with the written text by inferring and building meaning from the script. Grabe (2009) views reading as a means of learning a language by which readers can associate the information they read in different academic fields. Hence, reading goes beyond being a mere instrument for learning a language to be a medium, which enables the reader to infer information. In this context, Kaya (2015) sees reading as a process whereby the reader discovers him/herself and where s/he empowers cognitive and metacognitive abilities to communicate with the written script. To clarify the objective of reading, Kaya (2015) adds that the aim of any reading process is, by essence, deducing meaning to build new insights, which makes comprehension an ultimate result of reading.

### **1.1.4 Improving Reading Comprehension through Mind-Maps**

Mind-maps are visual constructions that assist students’ comprehension of written texts. Brown (2000) claims that using mind-maps, in the reading process, helps students to infer the order and hierarchy of the text under investigation. The effectiveness of the mind-mapping technique, for Ramadhan (2015), lies in the fact that it takes the form of graphic organizers that students can develop while reading a

text to organize, present, understand and recall information. This is mainly because developing mind-maps gives students room to break the content of the text and organize it in a way that better serves their comprehension. From a pedagogical perspective, implementing the mind-mapping technique helps the teacher to guide and simplify the process of reading comprehension.

## **2. Methodology and Data Collection**

The current study employs a descriptive quantitative research method, namely, a questionnaire. The reasons behind the use of this research tool go back to the objectives of this research that can only be met using this instrument. Since the study aims at exploring the situation of teaching reading comprehension to EFL university students, and investigating EFL university teachers' alertness about the effects of adopting the mind-mapping technique to effectively teach their students reading comprehension, a descriptive method and a large population are required together with a need for statistical data that can only be collected through the use of questionnaire, which produces reliable results.

### **2.1 Description of the Questionnaire**

The designed questionnaire contains twenty-four (24) questions divided into four sections. Section one is entitled 'Background Information'. It aims to deal with teachers' personal and academic background and includes five (5) questions. Then, section two is called 'Reading Comprehension Instruction'. It comprises nine (9) questions and focuses on teachers' instruction of reading comprehension to EFL students. Next, section three is labeled 'Mind-mapping as a Reading Comprehension Technique'. It is made up of ten (10) questions and deals with teachers' perception on the use of the mind-mapping technique as a reading comprehension tool. Lastly, section four that is entitled 'Suggestions.' It consists of one (1) question. The last section of the questionnaire aims at collecting further suggestions from the respondents regarding the implementation of the mind-mapping technique to foster EFL students' reading comprehension.

### **2.2 Population and Sampling**

The questionnaire was targeted to a sample of thirty-four (34) teachers from the department of the English language at Badji Mokhtar - Annaba University, Algeria. The designed questionnaire contains twenty-five (25) questions divided into four sections.

The population of this study is teachers from the English department at Badji Mokhtar - Annaba University. Information about the participants was collected from the first section of the questionnaire that aims to collect demographic data. The representative sample consists of thirty-four (34) teachers. As far as teachers'

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academic qualification is concerned, 82% of the respondents have a magister degree, 15% have a PhD degree, and only 3% have a professor degree. With regard to the study population's years of teaching experience, it varies from 4 to 44 years with an average of 12 years in the field of EFL instruction.

### **3. Results and Discussion**

#### **Section 1: Background Information**

The modules of fundamental unit are those the research participants teach. Particularly, 29 respondents report to have taught the written expression module, followed by 25 participants, who say that they taught the oral expression module and 18 respondents, who claim to have a teaching experience of the grammar module. Moreover, 13 teachers have taught the literature module, and linguistics module has been taught by 12 participants. As for the civilization and the ESP modules, both were taught by 10 teachers followed by the phonetics module, which was taught by 8 teachers. Another number of 5 participants report that they taught the didactics module, and 4 respondents say that they taught the psychology module. Concerning TEFL and discourse analysis modules, they were taught by 3 teachers each. As far as the modules of the methodological unit are concerned, 16 participants indicate that they taught the study skills module followed by the research methodology module, which has been taught by 12 respondents. Results also indicate that 5 teachers taught modules other than the ones listed in the questionnaire. These modules are: conversational English, technical English, scientific English, ICTS, and text study. However, none of the participants have indicated to teach the reading comprehension module. This can be attributed to the absence of such module in the curriculum of the English department at Badji Mokhtar - Annaba University.

When specifying the academic levels they taught, the highest rates of teachers went to undergraduate levels. This means that all of the participants (100%) taught first year freshmen students, 85% of the respondents taught second year students, and 79% of them taught third year students. In contrast, few teachers have a teaching experience of post-graduate levels. In other words, 35% of the respondents taught master one students while 20% of the participants taught master two students and only 14% of teachers tutored doctorate students. Nonetheless, it is worth to mention that adopting the mind-mapping technique in foreign language classes would have positive effects not only on teaching the target language, but also on learning it.

#### **Section 2: Reading Comprehension Instruction**

An investigation of the extent to which teachers perceive reading comprehension as central to EFL students reveals that the vast majority of participants ( i.e. 29 teachers) views reading comprehension as very important to EFL students, 3 respondents claim it to be, somewhat, important, and only 2 teachers see it as important.

Next, 94% of the respondents approve to know their students' reading comprehension level, and 6% attest to be unaware of their EFL students' reading

comprehension level. 94% of the respondents (31 teachers), who claim to know their students' reading comprehension level, were asked to reflect the overall reading comprehension position of their students. Results indicate that a majority of 18 teachers ranks students' reading comprehension level as average, 9 respondents perceive it as good, and 4 participants assess it to be poor while another teacher considers his/her students to have a very good reading comprehension level. This signifies that, since teachers claim to be aware of their students' reading comprehension status, they can put into practice different reading comprehension strategies that will take students' reading comprehension ability to a more advanced level.

An exploration of teachers' perception of EFL students' reading motivation uncovers that 14 of the study participants rank their EFL students to be slightly motivated to read English documents, and 10 teachers describe their EFL students to be motivated to read English texts. Furthermore, while 5 of the participants perceive their students to be fairly motivated, 4 teachers claim that their EFL students are not motivated at all to read English scripts. In contrast, only one (1) respondent reports his/her EFL students to be very motivated to read English documents. This entails that teachers play a vital role in motivating their students to read English texts by introducing them to the different reading comprehension techniques and strategies.

Concerning the question, which investigates how often teachers supply their EFL students with reading comprehension assignments, results indicate that 15 participants give their students reading assignments once or twice a month while 11 respondents provide students with reading tasks once or twice a semester. However, 5 teachers hold that they attribute reading assignments to EFL students on a regular basis; that is to say every session.

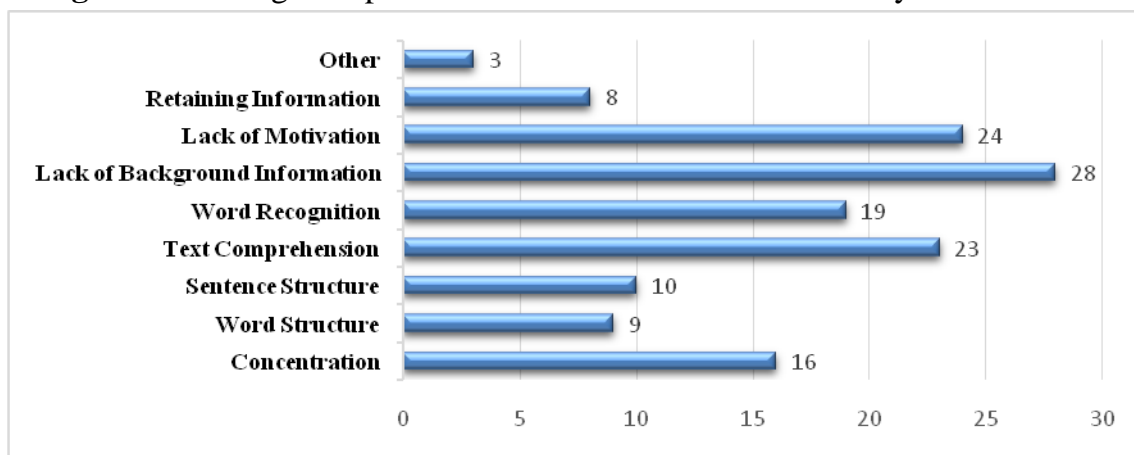
The vast majority of the participants (i.e. 23 teachers) have never taught the reading or reading comprehension module to EFL students. As previously stated, this can be attributed to the absence of reading comprehension as an independent module in the curriculum of the English department at Badji Mokhtar - Annaba University. Nevertheless, the 11 respondents, who taught the reading/ reading comprehension module, can be grouped as: 4 teachers say that they taught 'Text Study' (as part of the written expression module) for one year, and 2 teachers clarify that they taught the module for students of the French language for five years. Moreover, 2 participants mention that they taught the module in question in another university for two years, and 2 other teachers certify that they taught the reading comprehension module for scientific streams in other departments for one semester. Finally, one teacher attests that s/he taught the module for seven years in a different university.

Figure 1 shows the different challenges that EFL students face when reading English documents as reported by teachers. Results say that 28 respondents believe that lack of background information amongst EFL students is a serious reading barrier

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they encounter, and 24 participants see lack of motivation as the main reading problem that EFL students face. Furthermore, 23 teachers think text comprehension to be a reading obstacle. In addition, 19 of the research samples perceive word recognition as hindering the reading process amongst EFL students. As for concentration, 16 respondents see it as problematic followed by 10 participants, who perceive sentence structure as adding to EFL reading difficulty, and 9 teachers think that word structure forms a reading barrier. Nevertheless, 8 teachers identify retaining information as the source of reading dilemma that EFL students experience. In addition, figure 1 indicates that 3 teachers have mentioned other reading problems than those listed in the questionnaire. These EFL reading difficulties include limited vocabulary, negative attitude towards reading, and poor mastery of the language.

**Figure 1.** Reading Comprehension Difficulties Encountered by EFL Students

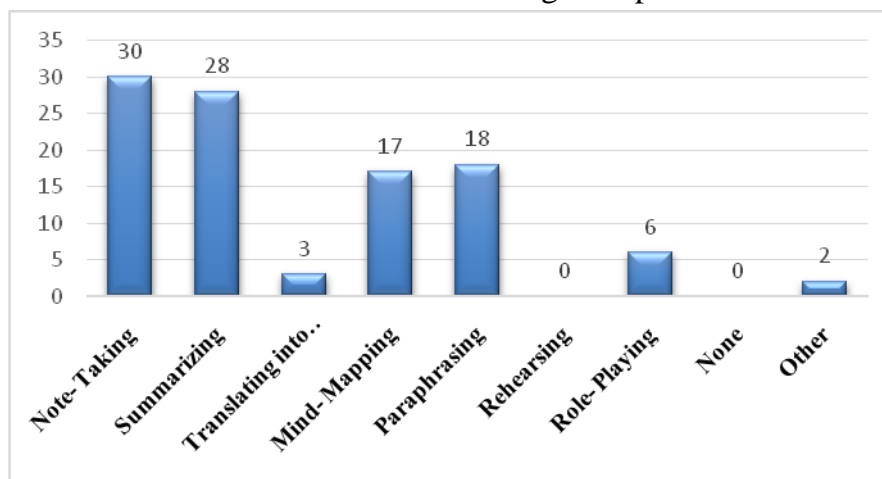


An attempt to record the reading comprehension strategies that EFL teachers adopt the most indicates that the ART (ask, read, tell) and PQRST (preview, question, read, summarize, test) strategies occupy the top of the list with 17 selections each. Moreover, while 12 teachers report to use the KWL (what students know, what they want to know, what they learned) strategy, 10 participants claim to refer to the RAP (read, ask, put) strategy and 9 respondents avow to employ the SQ3R (survey, question, read, recite, review) one. Concerning the TELLs (title, examine, look, look, setting) and PLAN (predict, locate, add, note) reading comprehension teaching strategies, they are not commonly used amongst teachers as the former is selected by 5 teachers and the latter by 3 respondents. Nonetheless, 2 teachers admit to use no reading comprehension strategy with EFL students.

Concerning the question, which tackles the techniques that teachers encourage their EFL students to use so that they make sense of an English text, and with reference to the findings that figure 2 displays, almost all of the respondents 30 recommend the note-taking technique, and 28 participants advocate the summarizing one. Also, 18 teachers suggest the application of the paraphrasing technique and 17 participants uphold the use of the mind-mapping as a reading comprehension technique to EFL students. Figure 2 also indicates that 6 of the study participants propose the role-

playing technique while 3 teachers acknowledge encouraging students to translate into another language, and none of the respondents recommend the rehearsing technique. The two other reading comprehension techniques, that teachers advocate to EFL students, are searching difficult words and, then, using them to develop a small personal dictionary, and discussing the text content generally.

**Figure 2.** Teachers’ Recommended Reading Comprehension Techniques



Most importantly, a majority of 62% of the respondents affirm that they train their students to apply these reading comprehension techniques, whereas 38% of the participants do not.

### Section 3: Mind-mapping as a Reading Comprehension Technique

An examination of EFL teachers’ alertness of the mind-mapping, as a reading comprehension technique, shows that while a rate of 79% of the research participants claim their awareness, 21% of the respondents acknowledge their ignorance of the mind-mapping, as a reading comprehension technique.

Furthermore, when asked about their awareness about the existence of different types of the mind-mapping technique that serve different purposes, 62% of teachers attested their negligence and only 38% of them claimed to be familiar with the various kinds of mind- maps.

Table 1 reveals that 65% of the participants adopt mind-mapping, as a reading comprehension tool, in the classroom in contrast to 35% of teachers, who attest that they do not use the mind-mapping technique with their EFL students while giving them reading comprehension assignments.

**Table 1:** Teachers’ Implementation of the Mind-mapping Technique

Yes	No
22	12
65%	35%

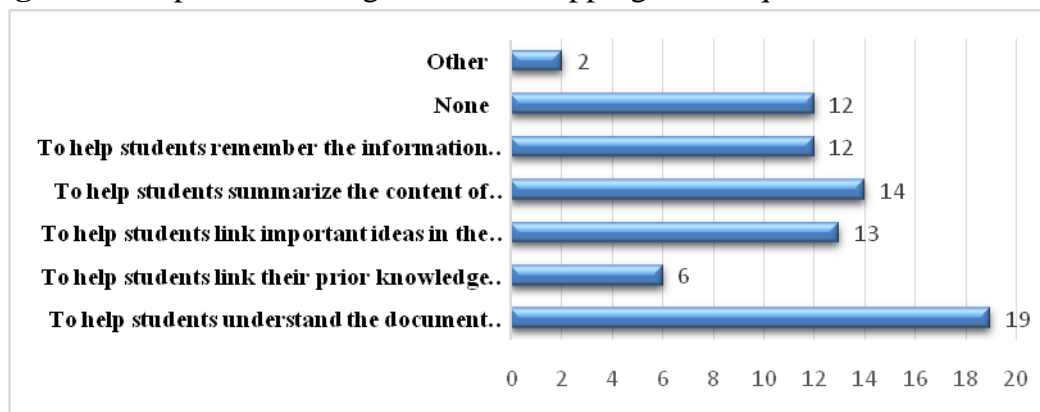


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To specify the percentage of applying the mind-mapping technique in EFL reading comprehension instances, the 22 teachers, who attest to apply the mind-mapping technique in reading comprehension tasks, fall into three categories. The first group, which includes 14 teachers, says that they use the mind-mapping as a reading comprehension technique once or twice a month with their EFL students. As for the second group, which has 6 respondents, they clarify that they refer to the mind-mapping technique as part of the reading comprehension assignments with their students once or twice a semester. Concerning the third group, it consists of 2 participants, who claim to implement the technique in question every session.

Next, participants were asked about the type of mind-maps they use the most with their EFL students. Findings indicate that concept maps are the most used ones amongst teachers as far as EFL reading comprehension instruction is concerned because they are adopted by 16 respondents followed by planning mind-maps, which are referred to by 10 participants. Moreover, argument mind-maps are implemented by 9 teachers, presentation maps as well as visual metaphors are applied by 6 respondents each, and library mind-maps are used by 2 participants while none of the research participants opt for sophisticated mind-maps. However, 12 teachers claim that they use none of the listed types of mind-maps. This goes back to the fact that these teachers are unaware of the different types of mind-mapping, or because they do not implement the mind-mapping technique with their EFL students (see table 1).

Dealing with the purposes behind implementing the mind-mapping technique in the classroom, findings in figure 3 indicate that 19 participants adopt the technique in question to help students understand the text they read, and 14 teachers use it to encourage students to summarize the content of a document. In addition, 13 respondents say that they implement the mind-mapping technique to stimulate students to relate important ideas in the script they read. Furthermore, figure 3 displays that 12 teachers embrace the mind-mapping technique to help students remember the data they read in the document, and 6 participants use the technique in question to stimulate students to incorporate prior knowledge about the topic they read with newly acquired information. Moreover, 2 participants use the mind-mapping technique for other purposes than those listed in the questionnaire. A respondent says that s/he adopts the technique to assist students to make a clear picture of the text they read while another participant adds that s/he refers to the mind-mapping technique to help students link the reading task to the course's goals as well as their learning goals. Nonetheless, 12 teachers had no determined answer because they do not adopt the mind-mapping technique in the EFL classroom (see table 1).

**Figure 3.** Purposes of Using the Mind-mapping Technique in EFL Classrooms

An exploration of the reading phases in which teachers implement the mind-mapping technique uncovered that 22 teachers, who admit to use the technique with their EFL students as part of the reading comprehension task (see table 1), apply it in different reading phases. While 12 respondents say that they use the mind-mapping technique in the post-reading phase, 6 participants claim to refer to it during the reading phase, and 4 teachers assert to implement it in the pre-reading one.

Moving to the criteria that teachers rely on to evaluate the mind-maps developed by EFL students, findings indicate that 17 participants depend on the use of key words relevant to the text read, and 13 respondents look for the use of various branches and arrows. Moreover, 8 teachers count on using central image, and similarly, 8 participants rely on understanding the drawn mind-map. In addition, while 6 of the research samples' evaluation of the students' designed mind-maps depend on the use of different colors, 6 respondents look for the absence of full sentences while assessing students' mind-maps. However, a respondent has another norm to add as far as evaluation of students' generated mind-maps is concerned. The criterion that the respondent specified is reflecting the reading experience and its link to the learning process. Here, it is worth clarifying that the 12 teachers, who do not use the mind-mapping technique with their EFL students (see table 1) had no determined criterion to select.

In order to record the extent to which teachers perceive the mind-mapping technique as a potent tool in boosting EFL students' reading comprehension competency, a question was addressed to the participants about the usefulness of the mind-mapping as a reading comprehension tool. Data show that 19 participants consider the mind-mapping technique as very useful at improving EFL students' reading comprehension, and 6 respondents see it as useful. In contrast to 2 teachers who view the technique as somewhat useful, 2 respondents describe it to be slightly useful. Nevertheless, 5 teachers did not answer the question, which means that such participants have little, if any, experience with implementing the mind-mapping technique as a reading comprehension tool with their EFL students (see table 1).

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The last question of the questionnaire's third section investigates teachers' perception of their EFL students' attitude towards mind-mapping as a reading comprehension technique. Data gathered from this question reveal that a rate of 44% of the respondents say that students have a positive attitude towards the mind-mapping technique, 21% describe their students' attitude to be neutral, and none of the participants considers students' attitude to be negative. As for the 35% of teachers (i.e., 12 respondents), who abstained to answer the question, they reflect that they never implemented the mind-mapping technique with EFL students (see table 1).

### **Section 4: Suggestions**

Finally, yet importantly, the research participants were given freedom to add any comments about teaching and learning reading comprehension in general and mind-mapping in specific. Here, all the comments made by the research participants are centered on the importance of reading and the significance of the mind-mapping technique to EFL students. Teachers stress the value of reading and call for encouraging EFL students to read more and more, as it is the optimal way to master the English language. Respondents also add that it is their role, as FL teachers, to make reading an enjoyable task for student by adopting different techniques, especially mind-mapping, as it is so helpful for reading comprehension. In the same vein, teachers say that mind-maps are beneficial tools to clarify, simplify and organize ideas, and that if students are acquainted to this technique more frequently, they will be in an urge to read and interact with English texts, which will, in turn, contribute to their academic achievement. For this end, respondents view that the mind-mapping technique needs more attention from both teachers and students. Most importantly, participants admit that a lot of knowledge about the mind-mapping technique is necessary for both teachers and students before its implementation to, actively, involve the two parties in the learning/teaching process. However, some teachers say that, unfortunately, the majority of students lack the motivation to read, and that it will be a challenge for the teacher to involve them to use the mind-mapping technique. Furthermore, mind-mapping technique is criticized to be a time-consuming tool, mainly with large groups of student, as it is the case in Algerian universities, and that it cannot be used, frequently, in the same module; yet, at least, it can be used by teachers in different modules.

### **4. Interpretation of Findings**

An analysis of teachers' questionnaire reveals that the vast majority of the research participants taught EFL freshmen university students modules of fundamental units that involve students to reading, understanding, and analyzing content. These students are, yet, novice learners of EFL, and they have little experience with the English language, let alone grasping the content of the modules they learn. The questionnaire shows that most of the teachers are aware of the importance of reading comprehension

to EFL students. However, they perceive students' reading comprehension level to be average. This is mainly because the department of the English language at Annaba University does not provide a specialized training for EFL students in reading/ reading comprehension as a separate module. This, negatively, influenced EFL students' willingness to read, which is evident because teachers rank students' reading motivation, as slightly motivated. Students' unwillingness to read stems from the low frequency of reading assignments given by teachers, which is done once or twice a month if not once or twice a semester. This is far from enough for EFL learners, especially freshmen students. Most importantly, it is worth bearing in mind that 68% of teachers did not teach the reading comprehension module, and the 32% of respondents, who claim to have taught the reading comprehension module, either taught it at a different university, or in other departments. Indeed, this can affect teachers' take on reading comprehension instruction because, unless they teach it to EFL students, teachers are likely to have a confusing pedagogical picture of the challenges that might arise when teaching reading comprehension. The lack of the reading comprehension module in the English department at Badji Mokhtar University- Annaba can be explained by the general focus in the curriculum on the other skills-based modules, namely listening, speaking and writing. Such a lack of formal training of EFL students to read and understand English documents led students to face reading problems, mainly text comprehension and motivation to read. To help their EFL students overcome these reading obstacles, teachers refer to different reading comprehension strategies such as ART, PQRS, KWL, RAP, and SQ3R in the occasional reading tasks they have with EFL students. Moreover, teachers do recommend and assist their EFL students to use some reading comprehension techniques mainly, linear note-taking, summarizing, paraphrasing, and mind mapping.

The questionnaire's findings report that even though 79% of the research respondents are aware of mind-mapping, as a reading comprehension technique, 65% of them ignore the existence of different types of mind-maps that can be used for different purposes. Furthermore, 65% of teachers do adopt the mind-mapping technique with EFL students once or twice a month. This frequency matches that of the reading assignments given by teachers. However, such regularity is not enough for EFL students to highly benefit from the mind-mapping technique, as far as reading comprehension is concerned. Here, again, this can be attributed to the absence of a designated module for reading comprehension. Results of the questionnaire also report that EFL teachers do implement different types of mind-maps including concept-maps, planning maps and argument maps. Furthermore, although the research participants make use of the mind-mapping technique with their EFL students to help them summarize the read document, assist them to relate ideas and to maintain them to retain the information they read, teachers apply the technique in question, mainly in the post- reading phase. This means that participants are not aware of the best practices

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of the mind-mapping technique, as a reading comprehension tool, and as the best way to benefit from the technique in question is do adopt it in the three reading phases. Regarding the criteria that teachers rely on to assess the mind-maps designed by EFL students, it seems that teachers look for the use of key words, use of various branches as well as arrows, use of a central image, and understandability of the drawn mind-map. However, many teachers are unaware that a mind-map should not include full sentences as, in contrast to linear note-taking, it focuses on the use of key ideas. Essentially, the questionnaire uncovered that both teachers and students, as reflected by teachers, have a positive take on the mind-mapping as a reading comprehension tool. This is mainly because teachers view the mind-mapping technique as a very useful reading comprehension tool and proclaim that EFL students have a positive attitude towards it.

### **5. Pedagogical Implementations**

Appealing EFL students into reading comprehension tasks is the optimal way to expose them to the English language. Adopting the mind-mapping technique, as a reading comprehension tool, is, yet, the best way for EFL students to develop their creative thinking. This means that if EFL students are introduced to reading comprehension as a module, and if teachers embrace the mind-mapping technique, as a reading comprehension tool, EFL students' level will be positively influenced. However, EFL teachers should recommend the mind-mapping technique to EFL students more than the linear note-taking one, as the former gives room for EFL students to actively interact with the text they read in a creative way. Lastly, we suggest to EFL teachers to use mind-mapping software, so that they guarantee that their EFL students are equipped with the appropriate tool that is meant to foster their reading comprehension performance.

### **6. Conclusion**

Reading is inhaling the language in, and writing is exhaling it out. Language teachers play a potent role in developing EFL students' reading comprehension by acquainting them to the different reading comprehension techniques. Successful readers rely on effective reading comprehension techniques, i.e., techniques that effectively assist them in grasping new data easily. Results of the present study have provided answers to the research questions. The department of the English language at Badji Mokhtar - Annaba University focuses on skills-based modules that include listening, speaking and writing. As for reading comprehension, teachers, occasionally, engage their EFL students into reading comprehension tasks. Furthermore, even though EFL teachers are aware of the efficacy of the mind-mapping technique in enhancing students' reading comprehension ability, they abstain from implementing it with their EFL students. Therefore, teachers should be encouraged to raise students' awareness about the effectiveness of mind-mapping, for visual maps are brain friendly learning techniques that help students to capture and recall significant amount of data.

## 7. References

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