

The application of semantic mapping technique to enhance English-majored students' reading competence

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Abstract: *This study seeks to investigate the perspectives of senior students majoring in English about the effectiveness of semantic mapping as a pre-reading technique for enhancing reading comprehension. Semantic mapping is a frequently employed strategy to assist students in accessing their prior knowledge related to the subject matter and language of a reading text. Throughout the four-week intervention period, the participants were provided with the pre-reading intervention known as semantic mapping. The data was gathered using a pretest and post-test to compare the students' reading comprehension accomplishment scores. Additionally, individual interviews were conducted to obtain the students' thoughts on the intervention. The posttest results indicated a marginal increase in the students' scores compared to the pre-test. The results also showed that the use of semantic mapping had a positive impact on the students' attitudes towards improving the learning experience. Future suggestions entail increasing the sample size and performing pre-test interviews with students to ascertain the tactics employed during testing.*

Keywords: *Pre-reading strategy; reading comprehension; semantic mapping*

1. Introduction

Proficiency in reading comprehension is crucial for learning English as a foreign language (EFL). Reading can enhance students' vocabulary, fluency, speaking, and writing abilities, thereby aiding them in achieving mastery of the target language. Nevertheless, students in EFL reading classes sometimes encounter difficulties such as insufficient vocabulary, language complexity encompassing lexical and syntactic understanding, and a lack of prior knowledge (Hung & Ngan, 2015). The researchers conducted informal chats and discovered that senior students at DNTU encountered difficulties in reading comprehension. The majority of students encounter difficulties in discerning the central concept, comprehending unfamiliar terminology and comprehending the material presented in the text with precision.

Vocabulary knowledge is a significant aspect in reading comprehension, as it plays a critical role in accurately understanding and interpreting a text (Duke & Cartwright, 2021).

Within the framework of Dong Nai Technology University, the grammar translation technique (GTM) remains the preferred teaching approach among English lecturers to assist their students in enhancing their English vocabulary. Although GTM offers

numerous advantages, it is important to acknowledge and not overlook its various limits. Khan & Mansoor (2016) note that the teaching approach is still centred around the teacher and that certain statements cannot be precisely translated between other languages. Moreover, students' reading skills would improve if they actively engaged in the process of reading. They should be granted the freedom to engage in discussions regarding the content of the text, rather than solely focusing on the questions and answers. Thus, it is strongly recommended to adopt a more efficient strategy to improve students' reading skills.

Semantic mapping is a vocabulary technique that is used to teach vocabulary before reading. Ariffin (2021) has demonstrated that this approach effectively enhances reading comprehension by establishing a strong vocabulary base for children. The technique facilitates active acquisition of the necessary vocabulary throughout the pre-reading phase and also stimulates the use of students' existing knowledge.

While the aforementioned research offer useful insights into the efficacy of semantic mapping, there is still less knowledge on learners' perspectives on this approach. Therefore, the purpose of this study is to examine the efficacy of employing semantic mapping as a pre-reading exercise and to assess the

perception of English seniors at DNTU regarding the use of this approach.

Research questions

1. Does semantic mapping used as a pre-reading activity increase reading comprehension scores among English-majored seniors?

2. What are the students' perceptions of the use of semantic mapping in the learning reading process?

2. Literature review:

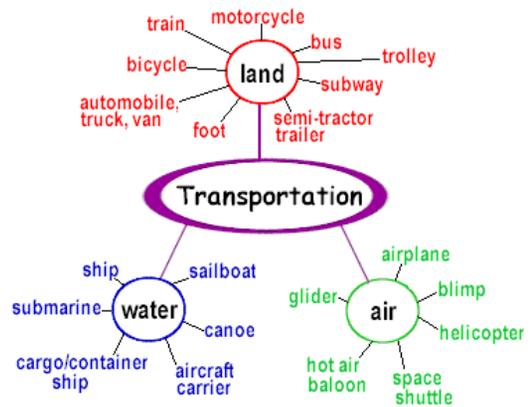
2.1. Pre-reading activities

In a study conducted by Thuy and Yen (2018), the objective was to examine the efficacy of the semantic mapping method and questioning as pre-reading activities. The study's findings indicated that both groups exhibited a significant improvement in their scores on the Reading Proficiency Test. Nevertheless, the group that engaged in semantic mapping demonstrated a much higher level of performance compared to the group that engaged in inquiry. This study also suggests that engaging in pre-reading activities can facilitate the development of new schema or the activation of existing ones. In addition, the study demonstrates that not all pre-reading activities yield the same level of effectiveness, with the semantic mapping strategy exhibiting greater efficacy compared to the questioning method.

2.2. Semantic mapping

Several research studies have been conducted to investigate the efficacy of semantic mapping in enhancing and facilitating learners' reading comprehension. The majority of the findings indicate that the utilisation of the technique has a beneficial impact on enhancing reading comprehension (Maccagno, 2019; Sasabone et al., 2018; Kasim & Wahyuni, 2016). Semantic Mapping is a visual representation of words that are not pre-made, but rather created by the students to visually organise their ideas. The process involves utilising existing information to identify significant elements and demonstrate their interconnections. Building upon prior information is crucial for students' vocabulary development.

Semantic Maps can be generated either in a physical format or in a digital format. Additionally, they can be generated on an individual basis, in small groups, or as a collective endeavour including the entire class. An exemplary instance of a semantic word map is depicted below (Picture 1).



The process of integrating a semantic map in a classroom involves multiple steps: 1) Educators determine the primary topic, which is concisely introduced and printed in the middle of a whiteboard or digitally. 2) Prompt students to generate a list of associated words through a brainstorming activity; 3) Once the word list is finished, the words are categorised and students engage in discussions on the relationships between various terms. 4) Instruct pupils to convert these elements into a visual representation, such as a circular diagram with radiating lines or a structured graphic organiser. 5) The map is being analysed and talked about. 6) Instruct pupils to peruse the text and identify any words that are related to this particular theme. They should then incorporate these words into the map. While reading, students make the decision to include or remove specific words from the map. Prior knowledge is combined with new information. 7) Finally, the students are required to respond to the questions based on the text in order to determine their level of comprehension after completing the phase of semantic mapping. Semantic mapping is intricately connected to the process of understanding written text. It assists pupils in directing their attention not just towards keywords but also towards the structure of the text.

3. Research methods

3.1. Participants

The study included 60 senior students majoring in English at the faculty of foreign languages, Dong Nai Technology University. The researcher aggregated all of the subjects without employing a control or experimental group. Out of the total of 60 students, a subset of 10 students was chosen by a random and convenient process for a follow-up interview. All participants have prior experience with the IELTS,

either through formal examinations or comparable assessments administered by their instructors within their program.

3.2. Research Design

The study aims to ascertain the perspectives of English major students regarding the efficacy of the semantic mapping approach. In order to achieve this objective, a pre-test and post-test were utilized to assess if the implementation of the semantic mapping technique resulted in an enhancement in students' reading comprehension of English text. The reading passages employed in both tests were similar, adhering to the IELTS framework. The intervention period lasted for a duration of four weeks, immediately followed by the implementation of the semantic mapping technique in one session each week. The post-test was conducted under the same conditions as the pre-test, immediately following the treatment period. Additionally, a restricted number of semi-structured interviews were conducted to verify and obtain more specific information. The students' comments in the interviews were transcribed and analyzed thematically to validate, compare, and contrast with the quantitative data obtained from the assessments.

4. Results and Discussion

4.1. Results of the pre-test

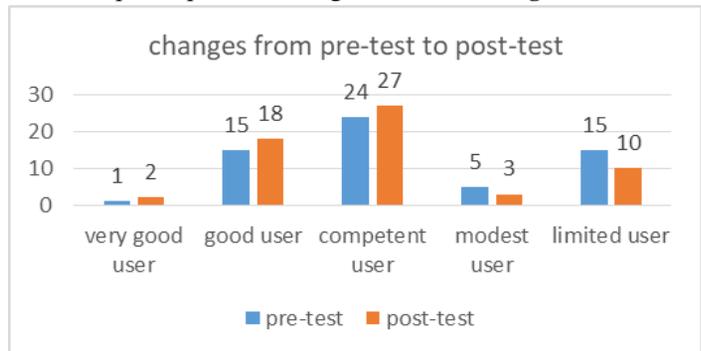
The participants' reading scores are calculated based on the number of correct answers they give out of 40 questions in the test. Table 1 displays the distribution of students' scores across different reading levels as established by the pre-test. Out of a total of 60 pupils, just one student attained band 8, which signifies an exceptional degree of proficiency. 25% of the students were categorised as band-7 users, whereas 40% of them fell into band 6. The proportions of the people perceived as modest and limited users were 8.3% and 25%, respectively.

Table 1. Results of the pre-test

Levels/bands scores	No. of correct answers	No. of students	Percentage
Very good user-band 8	33-36	1	1.7%
Good user- band 7	27-32	15	25%
Competent user- band 6	19-26	24	40%
Modest user- band 5	13-18	5	8.3%
Limited user- band 4	8-12	15	25%
Total		60	100%

4.2 Results of the post-test

Figure 1 compared the scores of the pupils in the pre- and post-tests. Figure 1 demonstrates a marginal enhancement in the quantity of pupils whose test scores were deemed as excellent, satisfactory, and proficient, as seen by the little disparities between the pre-test and post-test results. There was a higher number of pupils who achieved a band 8 score in the post-test (2 students) compared to the pre-test (1 student). The results also indicated a slight increase of 3 pupils in the number of students attaining a band score of 7 and 6. Nevertheless, there was a decrease in the quantity of students categorised as moderate and restricted. The study demonstrates that semantic mapping techniques had a positive effect on the participants' reading abilities. See Figure 1.



The current study employed statistical analysis to assess the efficacy of the semantic mapping technique as a pre-reading exercise. The post-test scores exhibited minimal improvement, suggesting that the therapy had an insignificant statistical impact on the post-test outcomes.

4.3. Findings from the interviews

All the interviews with the students were conducted using a primary instruction that asked them to provide their thoughts on the usage of semantic mapping. They were specifically asked to describe their experience with semantic mapping, focusing on its usefulness or limits. Below are excerpts from the students' responses and reflections during the interview.

1. Student A: "I liked semantic mapping because it helped me see how various ideas were connected. It helped me put together different pieces of information because I could see how they all fit together." Student A found the semantic mapping approach beneficial as it facilitated his understanding of the interconnectedness between various concepts and ideas. Through the utilization of semantic

mapping, he achieved an enhanced comprehension of the broader framework and established connections between disparate pieces of knowledge.

2. Student B: “*To be honest, I didn’t think semantic mapping was very helpful. It felt like an extra step we had to take before reading the real stuff. I like to start reading and learn as I go.*” Student B found the semantic mapping method to be ineffective. They perceived it as a superfluous measure that detracted from the primary reading material. They choose to immerse themselves in the reading and solve problems as they progressed.

3. Student C: “*Towards the start, I had some doubts about semantic mapping. But it helped me once I got used to it. It helped me get my ideas in order and understand the key points better before I read.*” Initially, Student C had challenges with the semantic mapping approach. However, through consistent practice, they discovered its usefulness. Through the utilization of semantic mapping, they successfully structured their thoughts and gained a clearer understanding of the primary concepts prior to commencing their reading.

4. Student D: “*I liked conceptual mapping before reading. That helped me figure out the key points and how they fit together, which made it easier to understand what I read later.*” Student D considered the semantic mapping method to be beneficial. The users derived pleasure from utilizing it as a preliminary reading exercise and discovered that it increased their ability to recognize fundamental ideas and their interconnections. By engaging in this practice, students enhanced their comprehension of the reading material during subsequent encounters.

While some students initially faced difficulties in understanding the technique, they eventually managed to identify the main point, establish connections between ideas and situations using conceptual linking, interpret the cultural meanings of specific terms, and ultimately comprehend the text at a deeper inferential level.

5. Conclusion

This study investigated the efficacy of the Semantic Map technique as a pre-reading activity in enhancing reading comprehension proficiency. The findings indicate that the implementation of semantic mapping resulted in a marginal improvement in reading comprehension performance, as indicated by the non-significant statistical results of the post-test. Nevertheless, the study revealed that the implementation of the Semantic Map technique

had a noteworthy effect on the students’ learning experience. By means of interviews, the method proves to be more efficient in enhancing advanced cognitive abilities, such as deducing and reaching logical outcomes, rather than merely comprehending the superficial significance of the text. Thus, integrating the Semantic Map approach into instructional techniques can improve higher-level reading comprehension skills.

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