

The Effect of using Semantic Mapping Strategies on Students' Reading Comprehension at SMK N 1 Pangkalan Kerinci

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ABSTRAK

Abstract: This article's goal is to find out how semantic mapping strategies affect SMKN 1 Pangkalan Kerinci students' reading comprehension. Two classes of SMK N 1 Pangkalan Kerinci first-year students make up the research participants. XI Networking Computer Technique (28 students) served as experimental group 1 and X Accounting Major (28 students) served as experimental group 2. Cluster random sampling was applied. Using SPSS 21 version, the data were analyzed using the paired sample t-test and independent sample t-test formula. According to the data analysis, applying the Semantic Mapping Strategy significantly improves students' ability to comprehend narrative texts while reading them aloud to a second experimental group. Using SPSS 21 version, the data were analyzed using the paired sample t-test and independent sample t-test formula. According to the data analysis, the use of the Semantic Mapping Strategy has a substantial impact on students' reading comprehension of narrative text for experimental group 2. This effect is greater than t with df 27 in significance levels of 5% and 1% ($2.06 < -10,708 > 2,79$). Moreover, it is evident that the probability, or Sig. (2-tailed), is 0.000 less than 0.05 ($0.000 < 0.05$). That indicates that H_a is accepted and H_o is denied. Students in experimental group 2 can improve by 29,1% on the pre-test and post-test based on the percentage of significant effect between the two tests in the experimental class, as determined by calculating the effect size or eta-squared.

Abstrak: Tujuan artikel ini adalah untuk mengetahui bagaimana strategi pemetaan semantik mempengaruhi pemahaman membaca siswa SMKN 1 Pangkalan Kerinci. Dua kelas siswa tahun pertama SMK N 1 Pangkalan Kerinci menjadi partisipan penelitian. XI Teknik Komputer Jaringan (28 siswa) sebagai kelompok eksperimen 1 dan X Jurusan Akuntansi (28 siswa) sebagai kelompok eksperimen 2. Cluster random sampling diterapkan. Dengan menggunakan SPSS versi 21, data dianalisis menggunakan rumus uji t sampel berpasangan dan uji t sampel independen. Berdasarkan analisis data, penerapan Strategi Pemetaan Semantik secara signifikan meningkatkan kemampuan siswa dalam memahami teks narasi sambil membacanya dengan lantang pada kelompok eksperimen kedua. Dengan menggunakan SPSS versi 21, data dianalisis menggunakan rumus uji t sampel berpasangan dan uji t sampel independen. Berdasarkan analisis data, penggunaan Strategi Pemetaan Semantik mempunyai dampak besar terhadap pemahaman membaca teks naratif siswa. kelompok eksperimen 2. Pengaruh ini lebih besar dari t dengan df 27 pada taraf signifikansi 5% dan 1% ($2.06 < -10,708 > 2,79$). Selain itu, terbukti bahwa probabilitas, atau Sig. (2-tailed), adalah 0,000 kurang dari 0,05 ($0,000 < 0,05$). Hal ini menunjukkan H_a diterima dan H_o ditolak. Siswa kelompok eksperimen 2 dapat meningkat sebesar 29,1% pada pre-test dan post-test berdasarkan persentase pengaruh signifikan antara kedua tes pada kelas eksperimen, yang ditentukan dengan menghitung effect size atau eta-squared.

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INTRODUCTION

The four components of the English language are speaking, writing, listening, and reading. One of the most crucial abilities that is becoming more and more valued is reading comprehension (Flinders, 2021). It influences academic achievement at a far later level as well as performance in other subject areas, like science and the humanities, at the primary stage. Learning vocabulary, syntax, and sentence structure by reading is a receptive skill (Amirzai, 2021). Snow (2002) points out that long-term

development includes the acquisition of reading skills. Additionally, he said that proficient adult readers are able to read for comprehension even when the subject is neither easy nor engaging, as well as for a number of objectives.

Reading a range of texts can help students extract both implicit and explicit meaning from the text and change the speed and manner of reading to meet their needs (Arshad 2020). Consequently, one of the most crucial things that should be taught in schools to help students understand the meaning of the text is reading comprehension. Abilities related to reading comprehension (Balas, Roe, and Magnuson, 2019). The capacity to comprehend written material, integrate it with prior knowledge, and process it is known as reading comprehension (Osslund & Elemand, 2019). It is a creative, multifaceted process that depends on a variety of language skills, including phonology, syntax, semantics, and pragmatics (Bakri, Musatafa 2020). It depends on the capacity to read words and comprehend language.

A deliberate and active reader is able to comprehend, evaluate, and make meaning of what they read (Paul, Elder 2019). It has been shown that teaching reading comprehension aids students in understanding and remembering what they have read. It is an essential skill for success in the classroom and in real life. Numerous resources are available for students to hone and expand their comprehension, such as printable exercises and readings with associated questions.

Studies like "reading comprehension difficulties in Indonesian EFL students" and "An Investigation on English Reading Comprehension Problems in Indonesian Cultural Contexts (Azmi, Nanda 2020)" have shown that Indonesians struggle with English reading comprehension. According to this research, some of the difficulties faced by Indonesian students in learning English include culturally-based concerns about teaching and learning the language, social context issues, and difficulties identifying and understanding the main ideas between paragraphs.

The phenomenon occurred in the classroom as a result of several conditions that led to the students receiving low marks. In class, a few pupils continued to behave passively. It was evident that when the teacher offered the class time to debate the subject, the pupils did not provide thoughtful answers and that they consistently remained silent when the teacher gave them the opportunity to ask questions regarding the subject. The pupils' lack of confidence in their ability to learn English was another issue. Their inability to pronounce English words or sentences correctly, even while reading texts, was the root of the problem. Therefore, some of them lacked the courage to seize the chance the teacher gave them to read materials in English.

Semantic mapping is generally defined as a visual method that shows words related to each other in categories in order to expand vocabulary and extend knowledge (gadalla, 2020). Concept definition mapping is modified by semantic mapping, which draws on pupils' existing schema or past knowledge. Although it makes use of past information, it identifies key elements and illustrates how they relate to one another. Semantic mapping framework: concept term, two category examples, and further instances. The teacher should provide an example for this highly involved procedure first.

The mapping approach was first developed by Bawaneh (2019); its original purpose was to enhance the study skills instruction. The phrase "semantic mapping" refers to a range of techniques intended to visually represent data into categories associated with a primary idea. According to research, semantic mapping can be a very helpful reading technique that works well in place of more conventional pre- and post-reading activities (Oudjedane, Benhamlaoui, 2021). In a semantic mapping brainstorming session, students create a map based on a subject either prior to or following text reading.

The process of reading comprehension has been compared by reading theorists as constructing bridges between the unfamiliar and the new (Cervetti, Wright 2020). Numerous schema researchers have shown since the 1970s that developing comprehension skills is aided by prior knowledge of text structure. Aziz Radzi (2023). The development of schemata is undoubtedly one of the main advantages of semantic mapping, but there are numerous other advantages as well, such as improved reading comprehension.

Furthermore, when they conversed or asked questions, they favored speaking Bahasa Indonesia rather than English when exchanging ideas. Additionally, a few students failed to demonstrate their

inventiveness. It was evident that some of them preferred to open the dictionary and look up the definitions of the words when the teacher urged them to try guessing the meaning of challenging words in the text. The pupils received varying grades in English as a result of those issues, particularly in reading comprehension.

Due to these obstacles, educators have to devise workable strategies or procedures to aid students in comprehending the semantic mapping technique in order to solve these issues. Therefore, especially when working with narrative texts, it is recommended to use a teaching reading strategy to assist students in meeting their reading comprehension objectives. It's a strategy called semantic mapping.

The goal of the semantic mapping approach, according to Maccagno (2019), is to assist students in recognizing past knowledge and experiences that serve as a bridge to a new idea, lesson, or unit. The sixth task in the semantic mapping technique, which promotes student participation in English learning, involves identifying the study topic and determining the students' level of understanding on it. Additionally, it serves as a stimulant to boost their desire to study English. Students may lack enthusiasm for studying English at times due to a lack of understanding of the material. To sum up, the semantic mapping technique is a useful tactic for improving students' reading comprehension of narrative text.

METHOD

With a pre-test and post-test group design, the study used a quasi-experimental methodology (Sratton 2019). All of the first-year students of SMK N 1 Pangkalan Kerinci made up the research population. 56 students who were majoring in X Networking Computer Technique and X Accounting participated in the experimental classes. Using the SPSS 21 version, the paired sample t-test and independent sample t-test formulas were applied to the data. A reading exam and an instrument pre-test were given to X Networking Computer Technique and X Accounting Major prior to treatment in order to gather data. The purpose of the post-test is to ascertain how much pupils' reading comprehension has improved following therapy. Semantic mapping procedures were used to provide the treatment following the pretest. The selection of scoring criteria was based on the data analysis technique scoring guide, which reflects the fundamental elements of reading. Five factors were taken into consideration when evaluating the reading outcomes and each factor had a score or level. The aspects' specifications included word meaning, inference, textual reference, primary idea, and specific idea. When assessing the data, the researcher makes use of the experimental and control groups' pre- and post-test results. Both descriptive and inferential statistics are applied to this score.

RESULTS AND DISCUSSION

The primary aim of the research is to examine if there are any notable variations in students' reading comprehension between the pre- and post-semantic mapping periods.

Table 1. Students' Reading Comprehension between the Pre- and Post-Semantic Mapping Periods

Subject	Research Groups	Mean	Standard Deviation	N
Pre - test	Experimental Group 1	-29,07143	14.36541	28
	Experimental Group 2		14.36541	28

When the third hypothesis is tested using the paired sample t test formula, the result is -10,708, which at significance levels of 5% and 1% is bigger than the tt with df 27 ($2.05 < -10,708 > 2,79$). Furthermore, it is clear that the probability, or Sig. (2-tailed), is $0.000 < 0.05$, or less than 0.05. It suggests that either the semantic mapping approach greatly enhances students' comprehension of narrative texts when they read them for experimental group 2, or that H_0 is rejected and H_a is accepted. The goal of the semantic mapping approach, according to Maccagno (2019), is to assist students in recognizing past knowledge and experiences that serve as a bridge to a new idea, lesson, or unit. Teaching reading comprehension by semantic mapping is an effective method, particularly for narrative and

informational literature. The study's findings indicate that EFL learners' reading comprehension skills have significantly improved. The significance of reading methods and their effects on students' performance in reading classes are discussed in the study's findings. Semantic mapping techniques, in summary, assist the experimental group in focusing more intently on the learning objective, exerting greater mental and cognitive effort, and engaging in more in-depth cognitive processing.

CONCLUSIONS AND RECOMMENDATIONS

According to this study, traditional strategies taught with normal training performed worse than semantic mapping strategies on average when it came to advances in reading comprehension. Additionally, the EFL learners were able to recall a larger percentage of the processes related to the semantic-mapping procedures. This study provides a new perspective on the body of research by examining the effects of different strategies on reading comprehension. In the future, further research may be done on specific types of semantic maps as a helpful reading comprehension and reading speed technique. There is still more research to be done on the application of various semantic maps. More study on semantic-mapping strategies in particular and cognitive strategy education in general is required to determine which teaching strategies will work best for improving EFL learners' reading comprehension abilities. It is advised to employ semantic mapping techniques while teaching reading, especially for narrative texts, in light of the research findings. These techniques assist pupils in paying greater attention and successfully include them in reading comprehension. Instructors must take into account the varied interests of their students, offer suitable educational resources, allot enough time, and investigate the application of semantic mapping tactics across several academic tiers.

REFERENCES

- Ali, H. H. H. (2022). The importance of the four English language skills: Reading, writing, speaking, and listening in teaching Iraqi learners. *Humanitarian and Natural Sciences Journal*, 3(2).
- Amirzai, G. A. (2021). Assessing the effects of teaching vocabulary in developing receptive skills: A review article. *Journal of World Englishes and Educational Practices*, 3(3), 15-21.
- Arshad, A., Shakir, A., & Ahmad, M. (2020). A Review on the Principles of a Reading Comprehension Test Construction to assess the Test Takers at different levels. *Psychology and Education*, 57(8), 1290-1302.
- Flinders, D. J., & Thornton, S. J. (Eds.). (2021). *The curriculum studies reader*. Routledge.
- Bawaneh, A. K. (2019). The effectiveness of using mind mapping on tenth grade students' immediate achievement and retention of electric energy concepts. *Journal of Turkish Science Education*, 16(1), 123-138.
- Cervetti, G. N., & Wright, T. S. (2020). The role of knowledge in understanding and learning from text. *Handbook of reading research*, 5.
- De Porter, Bobbi dan Hernacki, Mike. 1992. *Quantum Learning*. Membiasakan Belajar Nyaman dan Menyenangkan. Terjemahan oleh Alwiyah Abdurrahman. Bandung: Penerbit Kaifa.
- Elida, Y., & Oktadela, R. (2022). The effect of RAP paraphrasing strategy and semantic map strategy on reading comprehension. *Journal of English Language and Education*, 7(1), 68-74.
- Elleman, A. M., & Oslund, E. L. (2019). Reading comprehension research: Implications for practice and policy. *Policy Insights from the Behavioral and Brain Sciences*, 6(1), 3-11.
- Gadallah, E. I. A. (2020). *Investigating strategies of using semantic mapping for developing vocabulary learning* (Doctoral dissertation, Sudan University of Science and Technology).
- Maccagno, L. M. (2019). Effectiveness of Semantic Mapping in Increasing Reading Comprehension for English Language Learners.

- Magnusson, C. G., Roe, A., & Blikstad-Balas, M. (2019). To what extent and how are reading comprehension strategies part of language arts instruction? A study of lower secondary classrooms. *Reading Research Quarterly*, 54(2), 187-212.
- Mustafa, M., & Bakri, N. (2020). Analyzing the level of the students' reading comprehension in comprehending the narrative text. *Acitya: Journal of Teaching and Education*, 2(2), 152-161.
- Nanda, D. W., & Azmy, K. (2020). Poor reading comprehension issue in EFL classroom among Indonesian secondary school students: Scrutinizing the causes, impacts and possible solutions. *Englisia: Journal of Language, Education, and Humanities*, 8(1), 12-24.
- Oudjedane, S., & Benhamlaoui, L. (2021). Examining the effectiveness of pre-reading activities-semantic mapping and teaching vocabulary-on reading comprehension.
- Paul, R., & Elder, L. (2019). *How to read a paragraph: The art of close reading*. Rowman & Littlefield.
- Radzi, A. H. M., & Aziz, N. H. A. (2023). The Influence of Content Schemata on ESL Learners' Reading Comprehension. *Journal of Creative Practices in Language Learning and Teaching (CPLT)*, 11(2), 135-155.
- Stratton, S. J. (2019). Quasi-experimental design (pre-test and post-test studies) in prehospital and disaster research. *Prehospital and disaster medicine*, 34(6), 573-574.
- Suparno. 2000. *Langkah-langkah Penulisan Artikel Ilmiah* dalam Saedah, Ali dan Waseso, M.G. 2000. Menulis Artikel untuk Jurnal Ilmiah. Malang: UM Press.
- Thuwaibah.(2005). The effect of semantic mapping strategy training on reading comprehension of scientific texts among matriculation students. Faculty of Language. Universitas Pendidikan Sultan Idris
- UIN Suska Riau. 2000. *Pedoman Penulisan Artikel Jurnal*, Surabaya: Lembaga Penelitian Universitas Negeri Surabaya.
- Wahab, Abdul dan Lestari, Lies Amin. 1999. *Menulis Karya Ilmiah*. Surabaya: Airlangga University Press.
- Winardi, Gunawan. 2002. *Panduan Mempersiapkan Tulisan Ilmiah*. Bandung: Akatiga.