

IMPROVING STUDENTS' SPEAKING ABILITY BY USING MIND MAPPING TECHNIQUE AT THE ELEVENTH GRADE OF SMA NEGERI 6 KOTA BENGKULU

Stepy Theresia Kurnia Putri¹, Nadrah², Hanura Febriani³

^{1,2,3}English Education Study Program, Faculty of Tarbiyah and Tadris,
UIN Fatmawati Sukarno Bengkulu

¹stepytheresia@gmail.com, ²nadrah@mail.uinfasbengkulu.ac.id,

³hanura.febriani@mail.uinfasbengkulu.ac.id

ABSTRACT

This study aimed to explain the implementation of the Mind Mapping technique in improving students' speaking ability. The research employed a collaborative Classroom Action Research (CAR) design following the Kemmis and McTaggart (2014) model, conducted in two cycles with 36 students of class XI F. Data were collected through speaking tests, field notes, and interviews, and assessed using Heaton's (1988) rubric across four components: fluency, accuracy, pronunciation, and comprehensibility. The success criterion required at least 70% of students to achieve a minimum score of 70. The findings revealed significant improvement in students' speaking ability after the implementation of the Mind Mapping technique. In Cycle 1, the mean score was 63.6 with only 30.6% of students achieving the KKM. After implementing revisions in Cycle 2, such as the use of dictionaries, more varied topics, and additional individual practice time, the mean score increased to 75.1 with 86.1% of students achieving the KKM. All four speaking components showed improvement, with comprehensibility showing the most significant increase. This study concludes that the Mind Mapping technique is effective in improving students' speaking ability by helping them organize ideas visually, reducing cognitive load and anxiety, and providing a structured thinking framework.

Keywords: *Speaking Ability, Mind Mapping Technique, Classroom Action Research, Analytical Exposition*

ABSTRAK

Penelitian ini bertujuan menjelaskan penerapan teknik Mind Mapping dalam meningkatkan kemampuan berbicara siswa. Penelitian menggunakan desain Penelitian Tindakan Kelas (PTK) kolaboratif model Kemmis dan McTaggart (2014) yang dilaksanakan dalam dua siklus pada 36 siswa kelas XI F. Data dikumpulkan melalui tes berbicara, catatan lapangan, dan wawancara, serta dinilai menggunakan rubrik Heaton (1988) pada empat komponen: kelancaran, keakuratan, pengucapan, dan keterpahaman. Kriteria keberhasilan penelitian menetapkan minimal 70% siswa mencapai nilai minimum 70. Temuan penelitian menunjukkan peningkatan signifikan pada kemampuan berbicara siswa setelah

penerapan teknik Mind Mapping. Pada Siklus 1, nilai rata-rata siswa adalah 63.6 dengan hanya 30.6% siswa yang mencapai KKM. Setelah dilakukan perbaikan pada Siklus 2, seperti penggunaan kamus, topik yang lebih bervariasi, dan tambahan waktu latihan individu, nilai rata-rata meningkat menjadi 75.1 dengan 86.1% siswa mencapai KKM. Keempat komponen berbicara mengalami peningkatan, dengan keterpahaman menunjukkan peningkatan paling signifikan. Penelitian ini menyimpulkan bahwa teknik Mind Mapping efektif meningkatkan kemampuan berbicara siswa dengan membantu mengorganisasi ide secara visual, mengurangi beban kognitif dan kecemasan, serta menyediakan kerangka berpikir terstruktur.

Kata Kunci: Kemampuan Berbicara, Teknik Mind Mapping, Penelitian Tindakan Kelas, Teks Eksposisi Analitis

A. Introduction

The demands of 21st-century education go beyond mere mastery of knowledge and place greater emphasis on communication skills, especially in the context of English as a Foreign Language (EFL). As emphasized by Brown (2015), speaking is an interactive process of constructing meaning that involves the production, reception, and processing of information, making it essential for academic success and communication in the real world. Sharma (2024) conceptualizes speaking skills as a set of abilities developed through directed instruction that helps learners articulate thoughts coherently, express ideas fluently, and communicate effectively through interactive activities.

Despite the recognition of its importance, there is still a significant gap between pedagogical goals and practical outcomes among Indonesian high school students. Sabilla and Kaniadewi (2025) argue that students encounter various speaking problems including linguistic problems (lack of vocabulary, poor pronunciation, and grammatical errors) and psychological problems (lack of confidence, fear of making mistakes, and shyness). Students also face difficulties in organizing their ideas coherently when speaking English spontaneously. Katemba et al. (2024) also state that although students may have acquired basic vocabulary and grammatical knowledge, they struggle with organizing their thoughts coherently for production. The limited exposure to speaking activities and the fear of

making mistakes further exacerbate these difficulties. As noted by Sharma (2024), successful speaking performance is closely related to cognitive preparation before speaking, where learners are supported to generate, connect, and organize ideas before delivering an oral message.

This pedagogical gap highlights the need for innovative teaching strategies that target the cognitive processes underlying speaking performance, one evidence-based strategy being the Mind Mapping technique. Created by Buzan (2018), mind mapping is a graphical method for representing ideas around a central theme using a non-linear format with branches, keywords, colors, and images to mimic the associative nature of the brain. As a visual organization tool, this technique allows students to externalize their thoughts, explore relationships between concepts, and create a clear structure for their ideas before communicating verbally. This visual design reduces cognitive load during speech production, allowing students to focus more on fluent pronunciation and linguistic accuracy (Sweller, 1988). Its theoretical basis is grounded in cognitive learning theory.

Mayer (2021) argues that combining visual and verbal representations enhances cognitive processing and reduces unnecessary cognitive load.

Previous research has proven the effectiveness of mind maps in education. Hoa and Trang (2020), through a case study at Danang University, found that students actively used mind maps to structure their ideas before speaking. Students' positive attitudes toward this technique also increased because they felt more confident and less confused when they had to start speaking. Reinforcing these findings, Berta and Mulat (2024) in their narrative review explain the mechanism behind the positive impact of mind maps. This technique activates both hemispheres of the brain and helps students recall vocabulary and grammar that they have learned. Meanwhile, Kobayashi (2021) highlights the cognitive benefits of mind maps in reducing mental load during preparation. By externalizing ideas into visual form, students' working memory is not easily overwhelmed, allowing them to focus more on fluency and pronunciation when speaking.

Although studies by Sukaesih et al. (2022), Febriani et al. (2024), and Oktavia & Sapta Rindu Simanjuntak (2022) have extensively documented the use of mind mapping for reading and writing in Indonesia, research on its application to speaking skills, particularly in the senior high school context, remains limited. Existing studies on speaking using mind mapping, such as Shobri (2023), have predominantly employed quantitative experimental designs. Similarly, several other quantitative studies have recently emerged, including pre-experimental research by Alfiah (2020), and Wulandari (2023). However, these studies have largely focused on measuring general speaking achievement without systematically measuring the specific sub-components of speaking ability, namely fluency, accuracy, pronunciation, and comprehensibility as outlined by Heaton (1988). Furthermore, most previous studies have focused on university-level participants or general high school contexts without considering the unique characteristics of senior high school students, who exhibit different cognitive load levels and higher speaking anxiety.

The problem of low speaking ability was evident based on initial observations conducted at SMA Negeri 6 Kota Bengkulu. Initial observations indicated that many students were reluctant to speak in front of the class and showed signs of anxiety during speaking activities. The researcher observed that most students experienced great difficulty when asked to speak independently in front of the class. Their voices, when audible at all, were often barely above a whisper, punctuated by long pauses and fragmented sentences. Beyond vocabulary limitations, this problem extends to cognitive failures in organizing ideas coherently for oral delivery. During initial observations, when the teacher gave a discussion topic, students took a very long time to start speaking. They seemed confused about what to say first and how to construct a logical sequence of ideas. Unnatural pauses and unnecessary word repetitions often occurred when students got stuck translating sentences from Indonesian to English literally. This created an excessive cognitive load, resulting in disjointed and uncommunicative speech.

Seeing this complexity, the researcher realized the need to apply Mind Mapping as an instructional solution. Hoa and Trang (2020) found that this technique facilitates students' oral speaking performance, particularly during the preparation stage. Berta and Mulat (2024) reinforced this finding by concluding that mind mapping activates both hemispheres of the brain and helps learners recall vocabulary and grammar the foundation for building a structured speaking framework. Therefore, this study investigates how the implementation of the Mind Mapping Technique can improve Students' Speaking Skills among 11th grade students at SMA Negeri 6 Kota Bengkulu. To address these problems, this study adopts a collaborative Classroom Action Research (CAR) design.

B. Research Method

This study employed a Classroom Action Research (CAR) design following the Kemmis and McTaggart (2014) model, which comprises four interrelated phases: planning, acting, observing, and reflecting. The cyclical nature of this model enabled continuous

improvement, with each cycle informing the subsequent one. The research was conducted in two cycles, each consisting of three meetings.

The study was conducted at SMA Negeri 6 Kota Bengkulu, involving 36 students from class XI F (13 males and 23 females). This class was purposively selected based on preliminary observations indicating low speaking proficiency and prevalent speaking difficulties.

A preliminary study was conducted prior to Cycle 1 to identify specific student problems. In Cycle 1, the planning phase involved developing lesson plans integrating the Mind Mapping technique, preparing topic cards and blank paper, and designing speaking assessment instruments. The action was implemented over three meetings: Meeting 1 introduced students to analytical exposition text structure and Mind Mapping principles; Meeting 2 involved group-based mind map creation and short monologue practice; and Meeting 3 required students to individually construct mind maps and deliver oral presentations. Observations were conducted by a collaborator using field notes to document classroom activities. The

reflection phase involved analyzing outcomes and identifying weaknesses for improvement.

In Cycle 2, revisions were made based on Cycle 1 reflections, including permitting dictionary use, providing structured guidance sheets, offering more varied topics, and allocating additional individual practice time. The same three-meeting structure was maintained with these enhancements.

Data were collected through both qualitative and quantitative techniques. Qualitative data were obtained from unstructured pre- and post-interviews with the English teacher and field notes documenting the teaching-learning process. Quantitative data were gathered through speaking tests administered at the end of each cycle, where each student delivered a 1–2 minute monologue using their mind map as a visual aid.

An analytical scoring rubric adapted from Heaton (1988) was used to assess speaking performance across four indicators: fluency, accuracy, pronunciation, and comprehensibility. Each component was rated on a 1 to 5 scale (1 = very poor, 5 = excellent), with a maximum

total score of 20, subsequently converted to a percentage.

Quantitative data were analyzed using descriptive statistics, including mean score calculation ($M = \sum x/n$) and the percentage of students achieving the minimum mastery criterion (KKM) using $P = F/N \times 100\%$. Qualitative data from interviews and field notes were transcribed, coded, and thematically categorized.

The study was considered successful if two criteria were met: (1) at least 70% of students achieved the minimum score of 70, and (2) students demonstrated improved participation and reduced speaking anxiety during the learning process.

C. Result and Discussion

1. Result

The research was conducted in two cycles. In Cycle 1, the average speaking score was 63.6 with only 30.6% of students achieving the KKM. Analysis of the four speaking components revealed that all components remained in the "Fair" category: fluency (3.1), accuracy (3.2), pronunciation (3.1), and comprehensibility (3.25). Field notes recorded that students still experienced long pauses, frequent

repetitions, grammar errors, and high speaking anxiety.

Based on reflection from Cycle 1, several revisions were implemented in Cycle 2, including allowing students to bring dictionaries, providing more structured guidance sheets, offering more varied topics, and allocating additional individual practice time. In Cycle 2, the average speaking score increased to 75.1 with 86.1% of students achieving the KKM. All four speaking components improved to the "Good" category: fluency (3.7), accuracy (3.6), pronunciation (3.6), and comprehensibility (4.05). The comparison of results between cycles showed significant improvement in all indicators.

Table 1. Comparison of Speaking Scores Cycle 1 and Cycle 2

Indicator	Cycle 1	Cycle 2	Improvement
Average score	63.6	75.1	+11.5 points
Highest score	75	87	+12 points

Indicator	Cycle 1	Cycle 2	Improvement
Lowest score	42	55	+13 points
Students achieving KKM	30.6 %	86.1 %	+55.5%

2. Discussion

The findings of this study demonstrate that the implementation of Mind Mapping technique improved the speaking ability of eleventh-grade students at SMA Negeri 6 Kota Bengkulu. This is evidenced by the increase in average speaking scores from 63.6 in Cycle 1 to 75.1 in Cycle 2, with the percentage of students achieving the KKM rising from 30.6% to 86.1%. These findings support previous research by Saepuloh et al. (2025), who reported an increase in learning completion, and Nasution (2020), who found that Mind Mapping improved multiple aspects of speaking including vocabulary, pronunciation, fluency, grammar, and comprehensibility.

The effectiveness of this technique can be explained through Sweller's (1988) Cognitive Load Theory, which posits that human working memory has limited capacity. Before the intervention, students had to simultaneously store ideas, organize structure, select words, and monitor grammar in their working memory, causing cognitive overload. With Mind Mapping, students externalized their ideas and speech structure into visual form, allowing their working memory to focus primarily on delivery. This reduction in cognitive load explains why fluency increased significantly. This finding is consistent with Sharma's (2024) conceptualization that successful speaking performance is closely linked to pre-speaking cognitive preparation.

Comprehensibility showed the most significant improvement at 16 points. With Mind Mapping, students organized their ideas into hierarchical structures that reflect the generic structure of analytical exposition texts. This visual structure showed logical relationships among ideas, so when students spoke, they automatically followed a logical and orderly sequence. This finding aligns with

Mayer's (2021) Cognitive Theory of Multimedia Learning, which suggests that combining visual and verbal representations enhances cognitive processing and reduces unnecessary cognitive load. According to Berta and Mulat (2024), mind mapping activates both hemispheres of the brain and helps learners recall vocabulary and grammar.

The improvement in fluency supports Ghasemi and Mozaheb's (2021) explanation that speech fluency is closely related to temporal characteristics such as the speed of articulation and the number of pauses. The improvement in pronunciation can be understood through Sun's (2023) explanation that speaking skill combines pronunciation, fluency, vocabulary, and grammatical accuracy. The improvement in accuracy aligns with Wang et al.'s (2024) definition of accuracy as the ability to produce grammatically correct utterances with appropriate vocabulary and sentence structures.

The findings of this study also support Ausubel's (1968) Meaningful Learning Theory, which emphasizes that new knowledge is learned more effectively when it is connected to existing cognitive structures. Through

the visual organization of concepts, mind maps helped learners identify relationships between concepts and integrate new information with prior knowledge. This was evident in how students connected their personal experiences about healthy lifestyle to the arguments they developed in their mind maps.

The collaborative Classroom Action Research design allowed for continuous improvement between cycles. The revisions implemented in Cycle 2 successfully addressed the weaknesses identified in Cycle 1 and contributed to the significant increase in mastery percentage. This aligns with Burns's (2010) assertion that action research enables teachers to respond directly to learners' needs while continuously improving the quality of instruction.

Although the Mind Mapping technique proved effective for 86.1% of students, six students did not reach the KKM in Cycle 2. Students with the highest speaking anxiety showed the smallest improvement, consistent with Horwitz et al.'s (1986) finding that language anxiety can significantly impair speaking performance. Students who struggled with vocabulary limitations, despite having

access to dictionaries, support Nation's (2022) emphasis that vocabulary knowledge is foundational to speaking proficiency. These findings suggest that while Mind Mapping is effective as a core strategy, it should be combined with individualized support for students with specific learning needs.

D. Conclusion

Based on the findings of this research, several conclusions can be drawn. First, the implementation of the Mind Mapping technique in teaching speaking for analytical exposition texts was carried out in two cycles following the Kemmis and McTaggart (2014) action research model. Each cycle consisted of four stages: planning, acting, observing, and reflecting. The improvements implemented in Cycle 2 successfully addressed the weaknesses identified in Cycle 1.

Second, the application of the Mind Mapping technique demonstrated an improvement in students' speaking ability. This was evidenced by the increase in average scores from 63.6 in Cycle 1 to 75.1 in Cycle 2, and the percentage of students achieving the KKM rose from 30.6% to 86.1%. All four speaking

components (fluency, accuracy, pronunciation, and comprehensibility) showed improvement.

Third, the Mind Mapping technique contributed to each component of speaking ability in specific ways. For fluency, mind maps helped students reduce long pauses by providing a visual structure of their ideas. For accuracy, the use of dictionaries helped students verify vocabulary choices. For pronunciation, increased confidence helped students articulate words more clearly. For comprehensibility, logically structured mind maps resulted in more coherent speech.

Fourth, both success criteria established at the beginning of this research were met in Cycle 2. The process criteria were met, as evidenced by increased active participation and reduced anxiety. The product criteria were met, as shown by the achievement of a mastery percentage of 86.1%, exceeding the target of 70%.

Finally, this study reinforces that the Mind Mapping technique is an appropriate pre-speaking strategy to improve students' speaking skills, especially at the high school level. The findings support Cognitive Load

Theory (Sweller, 1988), Cognitive Theory of Multimedia Learning (Mayer, 2021), and Meaningful Learning Theory (Ausubel, 1968) in explaining how visual organization of ideas reduces cognitive load, enhances cognitive processing, and connects new knowledge with existing cognitive structures to improve speaking performance.

DAFTAR PUSTAKA

- Alfiah, S. N. (2020). The use of mind mapping as a guidance on students' speaking ability. 21(1), 1–9.
- Ausubel, D. P. (1968). *Educational psychology: A cognitive view*. Holt, Rinehart and Winston.
- Berta, G., & Mulat, A. (2024). Mind Mapping: An Effective Technique for EFL Students' Language Skills Improvement. *English Language, Literature & Culture*, 9(5), 150–158.
- Brown, H.D. and Lee, H. (2015) *Teaching by Principle: An Interactive Approach to Language Pedagogy*. 4th Edition, Pearson.

- Burns, A. (2010). *Doing Action Research in English Language Teaching*. Routledge.
- Burns, A. (2005). Action research: An evolving paradigm? *Language Teaching*, 38(2), 57–74.
- Buzan, T. (2018). *Mind map mastery: The complete guide to learning and using the most powerful thinking tool in the universe*. Watkins Publishing.
- Febriani, S. R., et al. (2024). Creativity in Narrative Writing: Utilizing Mind Mapping with Ethnic Identification Model in Higher Education. *Jurnal Al Bayan*, 16(1), 16.
- Ghasemi, A. A., & Mozaheb, M. A. (2021). Developing EFL learners' speaking fluency: Use of practical techniques. *MEXTESOL Journal*, 45(2).
- Heaton, J. B. (1988). *Writing English Language Tests*. London: Longman Group UK Ltd.
- Hoa, P. Van, & Trang, N. T. H. (2020). Mind Maps in EFL Speaking Classes: a Case Study At University of Foreign Language Studies the University of Danang. *VNU Journal of Foreign Studies*, 36(6), 175–186.
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70(2), 125–132.
- Katamba, C. V., et al. (2024). Unraveling the obstacles to English learning among EFL junior high school students in the Parongpong region. *Acuity*, 9(2), 161–182.
- Kemmis, S., McTaggart, R., & Nixon, R. (2014). *The Action Research Planner: Doing Critical Participatory Action Research*. Singapore: Springer.
- Kobayashi, D. (2021). Sources of Speaking EFL Self-Efficacy of Japanese University Students. *JALT Postconference Publication*, 2020(1), 114.
- Mayer, R. E. (2021). *Multimedia learning* (3rd ed.). Cambridge University Press.

- Nasution, D. S. (2020). Mind Mapping to Improve Students' Speaking Skill. *English Journal for Teaching and Learning*, 08(01), 1–12.
- Nation, I. S. P. (2025). The twenty most effective language teaching techniques. Routledge.
- Oktavia, Y., & Simanjuntak, D. S. R. (2022). Efektivitas teknik mind map dan motivasi belajar terhadap hasil belajar menulis karangan ilmiah siswa. *Jurnal Pendidikan Bahasa Indonesia*, 72–82.
- Sabilla, A. N., & Kaniadewi, N. (2025). Investigating English-Speaking Problems of Senior High School Students in Indonesia. *SALEE*, 88–107.
- Saepuloh, A., et al. (2025). Enhancing students' speaking skills through mind mapping technique. *International Journal of English Language and Pedagogy*, 24–34.
- Sharma, L. R. (2024). Exploring the Landscape of Challenges and Opportunities in Teaching Speaking Skills. *International Journal of Advanced Multidisciplinary Research and Studies*, 74–78.
- Shobri, S. B. (2023). The Influence of Mind Mapping Towards Student's Speaking Ability in Descriptive Text. Thesis.
- Sukaesih, S., et al. (2022). Enhancing students' nature of science understanding through project-based learning and mind mapping. *International Journal of Evaluation and Research in Education*, 11(4), 1704–1713.
- Sun, W. (2023). The impact of automatic speech recognition technology on second language pronunciation and speaking skills of EFL learners. *Frontiers in Psychology*, 14, 1210187.
- Sweller, J. (1988). Cognitive Load during Problem Solving: Effects on Learning. *Cognitive Science*, 12, 257-285.
- Wang, W., Rezaei, Y. M., & Izadpanah, S. (2024). Speaking accuracy and fluency among EFL learners: The role

of creative thinking, emotional intelligence, and academic enthusiasm. *Heliyon*, 10(18), e37620.

Wulandari, W. (2023). Mind map: Learning model to improve creative thinking ability. *Perspektif Pendidikan dan Keguruan*, 14(1), 1–6.