

**The Use of Mind Mapping on PowerPoint Presentations in**

**Understanding TEFL Material**

**THESIS**

This research is submitted to fulfill the requirements for “sarjana” degree in English

Tadris Study Program



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*Assalamualaikum Warahmatullahi Wabarakatuh*

Semoga bapak selalu dalam kesehatan dan lindungan dari Allah SWT.  
dalam setiap urusannya.

Setelah mengadakan pemeriksaan dan juga perbaikan yang penting, maka kami berpendapat bahwa skripsi atas nama **Dwi Indah Sari** sebagai Mahasiswa dari Program Studi Tadris Bahasa Inggris, dengan judul "**The Use of Mind Mapping on PowerPoint Presentations in Understanding TEFL Material**". sudah dapat diajukan dalam Sidang Munaqasah di Institut Agama Islam Negeri (IAIN) Curup.

Demikian Permohonan ini kami ajukan, besar harapan kami agar bapak dapat menyetujui hal ini. Terima kasih.

*Wassalamualaikum Warahmatullahi Wabarakatuh*

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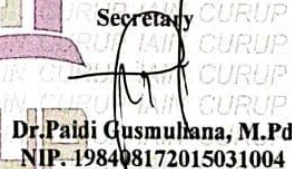
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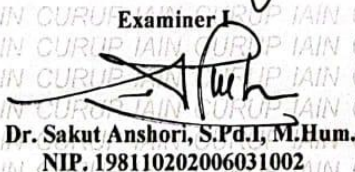
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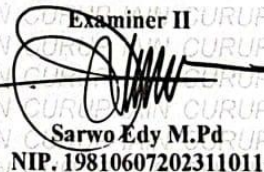
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I hereby certify that thesis entitled "**The Use of Mind Mapping on PowerPoint Presentations in Understanding TEFI. Material**" is honestly my own work. I am fully aware that I have quoted some statements and ideas from various sources and they are properly acknowledged in the text.

This statement is made truly, if in the next day there are any mistakes, the researches ready to accept the punishment or other criticism from IAIN Curup suitable with it is in regulation.

Curup, 17 Februari 2026



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## PREFACE

All praises be to Allah SWT That the researcher had finally finished writing his thesis entitled **“The Use of Mind Mapping on PowerPoint Presentations in Understanding TEFL Material”**

This thesis submitted as a part of the compilation for undergraduate degree of strata 1 (S1) in English Tadris Study Program of (IAIN Curup). The researcher realizes that this thesis is far from being perfect, therefore she really appreciates any suggestions and critics for being perfect in the future.

Last but not least, the researcher hopes that this will be useful to those who are interested in this field of study.

Curup, 27 Februari 2026

The researcher



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The researcher finished this research entitled “**The Use of Mind Mapping on PowerPoint Presentations in Understanding TEFL Material**” This thesis is presented in order to fulfil of the requirement for the degree of strata I in English study program of IAIN Curup. In the process of conducting this research, the researcher accepted valuable support, assistance, guidance, contribution and motivation from others. Because of those reason, the writer would like to presents his deepest Appreciation to:

1. Prof. Dr Idi Warsah, M.Pd.I as the Rector of IAIN Curup
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Finally, the researcher needs suggestion for being perfect in the future because this thesis is not perfect yet event in the grammar, structure of writing, discussion or anything else that is not suitable with hoped. Hopefully the result of this research can give beneficial contribution to the development of education in other school. For acknowledgment above, and those are not mentioned, may Allah SWT give them the best reward. Ameen.

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Curup, Februari 2026

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**MOTTO**

“Dan bersabarlah kamu, sesungguhnya janji Allah SWT adalah benar.”

– *Qs. Ar-Ruum60* –

“It’s fine to fake it until you make it, until you do, until it true.”

– *Taylor Swift* –

“I never felt like I was the smartest or the fastest, but I always tried to stay consistent. I completed this thesis not to appear impressive, but because I genuinely wanted to graduate, make my parents proud, and gradually build a better future, so that one day I can help my younger sibling continue their education.”

– *Dwi Indah S.* –

## DEDICATION

Alhamdulillahirabbil'alamin, all praise and gratitude I offer to Allah SWT for all His blessings, health, and strength that have enabled me to complete this thesis successfully. There is no power or effort without His help. Every process I have gone through is part of the best plan that Allah has ordained.

I have completed this thesis earnestly, not merely as an academic obligation, but because I wanted to fulfill this responsibility to the best of my ability. The support from friends, the prayers from family, and the encouragement from those closest to me strengthened me when I felt tired and doubtful. All of these motivators inspired me to complete this thesis on time and achieve the best results I could. Alhamdulillah... reaching this point, I truly realize that this journey has not been an easy one. There were many long nights, countless restless thoughts, and many tears that perhaps no one saw. Yet, within every moment of exhaustion, there was always a strength that kept me going. I know I did not walk this path alone. There were prayers flowing continuously and silent love supporting me from behind. Without all of this, I might have stopped halfway.

With full gratitude and happiness, I dedicate this simple work to the people I love dearly and who mean so much in my life, who have always been my reason to keep striving:

- ❖ To Bapak and Mamak, I want to express my deepest gratitude. Bapak, I may never fully understand the weight of the responsibilities you bear every day. You rarely speak of your fatigue, almost never complain, and often remain silent but from that silence, I have learned strength and steadfastness. Every step that has brought me here carries a part of your sacrifice, from funding

my education to meeting daily needs; the hard work behind it may not always be visible, but its results are always felt. Mamak, thank you for being the calmest place in my life. When I felt incapable, you were always the first to believe in me; when I doubted myself, you never did. I imagine my name in your prayers, and that has made me feel never truly alone. This thesis exists because of both your sacrifices, unwavering faith, and prayers. I hope this small achievement brings even a bit of happiness to you and shows that every effort, every act of love, and every sacrifice truly means the world to me.

- ❖ This thesis is dedicated especially to my elder sister, who has been the strongest supporter of my educational journey. To my father, I may never fully understand the weight of the responsibilities you carry every day, the silent sacrifices, and the unwavering strength you show. To my mother, thank you for being the calmest place in my life, always believing in me and supporting me even when I doubted myself, and for the endless prayers that have strengthened me when I almost gave up. To my elder sister, thank you for being such an important part of my journey—not only as a sibling but also as someone to share stories and burdens with. You have inspired me to persevere, to take responsibility, and to stay strong even when challenges arise. I am also grateful to my brother-in-law and my two nieces/nephews, who cheer me up and give me strength whenever I feel tired from studying. This thesis is the result of all your love, prayers, and encouragement, and I dedicate it especially to you, my elder sister, as a token of my gratitude and admiration.

- ❖ To my younger sister, you may never realize how much you have been a reason for me to finish this thesis quickly. I want you to have broader opportunities, higher education, and more choices in life than I have. I hope that one day, when you pursue your dreams, you will know that your older sister has strived to pave a small path for you. I want to be an example that, even though it is not easy, education is always worth striving for.
- ❖ To my friends, who have been there not only in joyful moments but also when I was at my weakest: I extend my deepest gratitude to those who have accompanied me throughout this thesis journey. Leza Melfia, you are not just a close friend, but the one who knows this thesis journey the most and has always been there when I felt confused, exhausted, or inadequate; without you, this process would have felt much heavier. Laras Ariani, thank you for being a patient discussion partner, a place to exchange ideas, dissect confusions, and rediscover direction and motivation. Dioba Meliza Karlita, from the first semester until now, we have grown together, learning to be students and more mature, which has made this long journey feel lighter. Ester Rindi Prastika, a friend from middle school who has stayed until today, played a role in major life decisions, including choosing TBI, and has unknowingly shaped the path I am on now. Nazla Oktavia Ramadani and Niken Salsabil, friends who accompanied me during the thesis writing period, shared the stress, the tension of revisions, and the exhaustion of deadlines, yet also laughed, joked, and supported each other, making this heavy process feel more humane. Ayu Lestari and Liza Anggraini, my PPL friends who became a safe space to share and express myself, taught me the

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**ABSTRACT**

**Dwi Indah Sari** : **The Use of Mind Mapping on PowerPoint Presentations in Understanding TEFL Material**

**Advisor** : **Dr. Leffi Noviyenty M.Pd**

**Co-advisor** : **Dr. Paidi Gusmuliana M.Pd**

This study investigated the use of mind mapping on PowerPoint presentations in enhancing TEFL students' understanding at the English Tadris Study Program of IAIN Curup. A mixed-methods descriptive design was employed, involving 54 students completing perception questionnaires and 13 students participating in semi-structured interviews to explore cognitive processing and learning experiences. Findings indicated that students had highly positive perceptions, The findings show that students generally have positive perceptions of this method, with the highest scores in cognitive understanding (82.1%), memory retention (81.3%), and overall perception (81.5%). In terms of understanding, students excelled in recognizing and recalling concepts, explaining theories, classifying information, and summarizing content, whereas higher-order skills such as analysis, evaluation, and creation were observed less frequently. Cognitive demands were primarily intrinsic, stemming from the complexity of content and English terminology, while extraneous load arose from intricate visual designs, and germane load reflected students' efforts in integrating and reflecting on material. Overall, mind map on PowerPoint presentations proved effective in supporting conceptual understanding, procedural application, and structured organization, while highlighting the need for additional scaffolding to develop advanced cognitive skills.

**Keywords:** *TEFL, visual mind map, PowerPoint, students' perceptions, Students' understanding, cognitive demands*

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## CHAPTER I

### INTRODUCTION

#### A. Background of the Study

Teaching English as a Foreign Language (TEFL) is recognized as a fundamental course in English education programs, particularly for students preparing to become future English teachers. This course plays a crucial role in equipping students with both theoretical knowledge and practical skills necessary for teaching English to non-native speakers. Through TEFL lectures, students are introduced to essential topics such as language teaching methodologies, classroom management, lesson planning, and assessment strategies. According to recent perspectives in language teacher education, effective TEFL instruction requires not only content knowledge but also the ability to integrate pedagogical strategies that support meaningful learning<sup>1</sup>. Therefore, mastering TEFL material is essential for students to develop their professional competence as prospective educators.

In addition, TEFL plays a significant role in developing students' pedagogical awareness and critical thinking in teaching English. Students are expected not only to understand teaching concepts but also to evaluate and adapt different strategies based on learners' needs. This aligns with the perspective of Paul A. Kirschner<sup>2</sup>, who emphasizes that effective learning occurs when students actively process information and engage in meaningful

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<sup>1</sup> Jack C. Richards, J. C. (2021). *Exploring teacher competence in language teaching*. Cambridge University Press.P.23

<sup>2</sup> Paul A. Kirschner, P. A., & Hendrick, C. (2020). *How learning happens: Seminal works in educational psychology and what they mean in practice*. Routledge.P.67

learning activities. In the context of TEFL, this means that students must be actively involved in analyzing teaching methods, designing lesson plans, and reflecting on teaching practices. Therefore, TEFL lectures should encourage active learning rather than passive knowledge reception.

However, mastering TEFL material requires students to understand complex and interconnected concepts, which often poses challenges in the learning process. The course combines linguistic knowledge, pedagogical theory, and practical application, making it cognitively demanding for many students. From the perspective of cognitive learning theory, meaningful understanding occurs when learners can organize and connect new knowledge with prior knowledge structures. Richard E. Mayer highlights that structured and well-designed instructional materials are essential to support this process<sup>3</sup>. Therefore, the importance of TEFL as a lecture also implies the need for effective instructional strategies that can help students better organize, understand, and retain the material.

Despite its importance, understanding TEFL material is often challenging for students due to its complex and multidimensional nature. The course requires learners to grasp abstract theories such as language acquisition, teaching methodologies, and learner differences, while simultaneously applying them in practical teaching contexts. This dual demand can create cognitive overload, especially when students are not provided with structured and meaningful learning support. According to John Sweller, Cognitive Load Theory explains that learners may struggle when instructional materials present

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<sup>3</sup> Richard E. Mayer, R. E. (2021). *Multimedia learning* (3rd ed.). Cambridge University Press. P.23

too much information at once without proper organization<sup>4</sup>. In TEFL lectures, dense explanations and multiple concepts delivered simultaneously can make it difficult for students to process and retain information effectively.

Furthermore, students often struggle to see the relationships between different TEFL concepts, such as how teaching methods relate to learning objectives or assessment strategies. This lack of conceptual connection can hinder deep understanding and long-term retention. Richard E. Mayer highlights in his *Cognitive Theory of Multimedia Learning* that learners understand better when information is presented in a structured and visually organized way. Without such organization, students may perceive TEFL material as fragmented and disconnected. Therefore, addressing these challenges requires instructional strategies that can simplify complex information and help students build meaningful connections among concepts.

In response to the challenges in understanding TEFL material, the integration of technology in teaching has become increasingly important. One of the most commonly used tools in classroom instruction is Microsoft PowerPoint, which allows lecturers to present information in a structured and visually supported format. PowerPoint can incorporate text, images, diagrams, and multimedia elements to enhance students' learning experiences. According to recent educational research, digital tools can support learning by making abstract concepts more concrete and accessible to students<sup>5</sup>. In TEFL lectures,

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<sup>4</sup> John Sweller, J. (2020). *Cognitive load theory and educational technology*. Educational Technology Research and Development, 68(1), 1–16

<sup>5</sup> Richard E. Mayer, R. E. (2021). *Multimedia learning* (3rd ed.). Cambridge University Press

PowerPoint is widely used to organize teaching materials and guide classroom discussions.

However, the effectiveness of PowerPoint largely depends on how it is designed and implemented. In many cases, PowerPoint slides are overloaded with text, leading to passive learning and reduced student engagement. When slides simply replicate lecture notes, students tend to focus on memorizing information rather than understanding it. Ruth C. Clark explains that poorly designed multimedia presentations can hinder learning by increasing cognitive load and distracting learners from key concepts<sup>6</sup>. This suggests that simply using PowerPoint is not enough; it must be designed in a way that supports active and meaningful learning.

Mind mapping is a visual learning strategy that can help address the challenges of understanding complex material such as TEFL. It involves organizing information around a central idea and connecting related concepts through branches, keywords, and visual elements. This technique allows learners to see the relationships between ideas more clearly and supports meaningful learning. According to Tony Buzan's concept, which continues to be supported by recent studies, mind mapping enhances memory retention and comprehension by engaging both the visual and cognitive processes of learners. In modern educational contexts, mind mapping is widely recognized as an effective tool for organizing knowledge.

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<sup>6</sup> Ruth C. Clark, R. C., & Mayer, R. E. (2021). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning* (5th ed.). Wiley.P.34

From a theoretical perspective, mind mapping aligns with the principles of meaningful learning and constructivism. David Ausubel's theory, as revisited in recent studies, emphasizes that learning becomes meaningful when new information is connected to existing knowledge. Mind mapping facilitates this process by visually linking new concepts with prior understanding<sup>7</sup>. In TEFL learning, this is particularly useful because students need to relate various teaching theories, strategies, and practices. By using mind maps, students can actively construct their understanding and develop a clearer conceptual framework.

Integrating mind mapping into PowerPoint presentations offers a promising solution to enhance students' understanding of TEFL material. By combining the visual structure of mind maps with the multimedia capabilities of Microsoft PowerPoint, lecturers can present information in a more engaging and organized way. This integration allows complex TEFL concepts to be simplified into clear and interconnected visual representations. According to Richard E. Mayer, combining visual and verbal information effectively can significantly improve comprehension and retention<sup>8</sup>.

Furthermore, the use of mind mapping in PowerPoint can transform passive lectures into more interactive learning experiences. Students can follow the development of ideas visually, making it easier to understand relationships between concepts such as teaching methods, objectives, and assessment. Dale H. Schunk emphasizes that active engagement and structured

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<sup>7</sup> David Ausubel, D. P. (2020). *The acquisition and retention of knowledge: A cognitive view*. Springer. P.45

<sup>8</sup> Ibid. P.12

representation of knowledge are essential for effective learning<sup>9</sup>. Through mind mapping, students are encouraged to think critically and participate more actively during the lecture.

In the context of IAIN Curup, lecturers have applied mind mapping in PowerPoint presentations during TEFL classes to support students in understanding complex theoretical material while also improving their English presentation skills. To gain an initial insight into students' perceptions of this strategy, the researcher conducted a pilot study involving five students from the 2022 cohort of the English Tadris Study Program. The pilot study was conducted through informal interviews between May 29 and June 3, 2025. The findings revealed that students had varied perceptions of the use of mind map-based PowerPoint presentations in learning TEFL material.

On the positive side, students reported that using mind mapping in PowerPoint helped them identify key ideas, summarize material more effectively, and remember information more easily through visual elements such as keywords, colors, and structured layouts, which supported their understanding of TEFL concepts. However, some students also experienced difficulties, including confusion in identifying main ideas, challenges in arranging information hierarchically, and problems organizing content in English. In addition, students faced cognitive challenges when preparing and presenting mind map-based slides, as they needed to analyze relationships between concepts, organize information clearly, and explain it in English at the

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<sup>9</sup> Dale H. Schunk, D. H. (2020). *Learning theories: An educational perspective* (8th ed.). Pearson. P.67

same time, which required greater mental effort and divided their attention. Overall, these findings indicate that while mind mapping in PowerPoint can support students in organizing and remembering information, it may also demand different levels of understanding and cognitive effort from each student.

These conditions indicate that although mind map-based PowerPoint presentations have potential benefits in helping students organize and understand TEFL material, students may experience different aspects of understanding and cognitive effort when using this learning strategy. Therefore, this study aims to explore students' perceptions, understanding, and cognitive learning demands toward the use of mind mapping in the form of PowerPoint presentations in TEFL learning at IAIN Curup, in a study entitled "*The Use of Mind Mapping on PowerPoint Presentations in Understanding TEFL Material*".

## **B. Research Question**

Based on the background above, the research is guided by the following question:

1. What are students' perceptions on the use of mind mapping on PowerPoint presentations in understanding TEFL material?
2. How do cognitive Aspects influence students' understanding of TEFL material using mind mapping on PowerPoint presentations?
3. How do students experience cognitive learning demands using mind mapping on PowerPoint Presentation in TEFL classes?

### **C. Objectives of the Research**

Based on research question above, the objectives of the study are as followed:

1. To investigate students' perceptions on the use of mind mapping on PowerPoint presentations in understanding TEFL material
2. To identify cognitive Aspects influence students' understanding of TEFL material using mind mapping on PowerPoint presentations
3. To investigate students experience cognitive learning demands using mind mapping on PowerPoint Presentation in TEFL classes

### **D. Delimitation of the Research**

This study is delimited to students of the 2022 cohort of the English Education Study Program (Tadris Bahasa Inggris) at IAIN Curup who are currently in their eighth semester and have previously completed the TEFL course in their fifth semester. The research focuses on students' perceptions, cognitive aspects of understanding, and cognitive learning demands related to the use of mind mapping on PowerPoint presentations in TEFL classes.

### **E. Significance of the Research**

This research is expected to provide benefits for:

#### **1. Theoretically**

This research is expected to provide a theoretical reference and empirical insight for other researchers who are interested in exploring technology-enhanced media, particularly mind mapping on PowerPoint presentations, in TEFL contexts.

## **2. Practically**

### **a. For Lecturer**

The findings of this study can serve as a reflective source to improve instructional strategies, especially in integrating digital and visual tools in TEFL classes to foster deeper student understanding

### **b. For Students**

This research provides students with a platform to articulate their learning experiences and cognitive learning demands related to the use of mind mapping on PowerPoint presentations, helping them become more aware of their own learning processes

### **c. For Institution**

The results may offer empirical evidence that supports the integration of visual and language-based approaches into TEFL course design and teacher training curricula, aligning with the goals of 21st-century learning and digital pedagogy

## **F. Operational Definitions**

### **1. Perception**

Robbins defines perception as the process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment.<sup>10</sup> In this study, perception refers to how students of

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<sup>10</sup> Stephen P. Robbins, *Organizational Behavior*, 9th ed. (Upper Saddle River, NJ: Prentice Hall, 2001), 123.

English Tadris Study Program of IAIN Curup respond to the use of mind mapping on PowerPoint presentations in TEFL classes.

## **2. Understanding**

According to Anderson & Krathwohl, understanding is the process of constructing meaning from instructional messages, including written, spoken, and visual materials.<sup>11</sup> In the revised Bloom's taxonomy, the cognitive process dimension consists of six aspects: remember, understand, apply, analyze, evaluate, and create. In this study, understanding of TEFL material means how students process after using mind mapping on PowerPoint presentations, in order to evaluate how effectively the media supports their learning.

## **3. Mind Mapping**

According to Tony buzan, Mind maps are visual diagrams that organize information hierarchically through branches, keywords, and images, stimulating both hemispheres of the brain to improve memory, creativity, and conceptual clarity.<sup>12</sup> In this study, the mind map is presented on PowerPoint slides where the central topic appears in the middle of the slide and is connected to several branches representing key concepts of the material delivered by students of English Tadris Study Program of IAIN Curup in presentation.

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<sup>11</sup> Anderson, L. W., & Krathwohl, D. R. (Eds.). (2001). *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*. New York: Longman.

<sup>12</sup> Tony Buzan, *The Mind Map Book: Unlock Your Creativity, Boost Your Memory, Change Your Life* (London: BBC Active, 2010).

#### 4. Learning Media

Arsyad defines learning media as all forms of tools that can be used to convey messages or information in the learning process so that it can stimulate students' thoughts, feelings, attention, and interest in learning.<sup>13</sup> In this study, learning media refers to PowerPoint presentations used as a media to present TEFL materials, where the content is organized in the form of mind mapping presented by students of English Tadris Study Program of IAIN Curup.

#### 5. TEFL Material

As Brian Tomlinson explain, Materials in language teaching refer to any resources used to facilitate learners in acquiring a language, whether in the form of textbooks, workbooks, audiovisual media, or teacher prepared materials.<sup>14</sup> In this research, TEFL material refers specifically to the content delivered in TEFL related courses in the English Education (TBI) program at IAIN Curup.

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<sup>13</sup> Arsyad, A. (2016). *Media Pembelajaran*. Raja Grafindo Persada. p.10

<sup>14</sup> Brian Tomlinson (ed.), (2011) *Materials Development in Language Teaching*, 2nd ed. (Cambridge: Cambridge University), p. xiii–xiv.

## CHAPTER II

### LITERATURE REVIEW

#### A. Review of Related Theories

##### 1. Definition of TEFL

###### a. Definition of TEFL

Teaching English as a Foreign Language (TEFL) refers to the process of teaching English to learners whose first language is not English, particularly in contexts where English is not used as a primary language in daily communication. TEFL focuses on helping learners develop their language skills, including listening, speaking, reading, and writing, in order to communicate effectively in academic and global contexts. According to Jack C. Richards, TEFL involves not only language instruction but also the application of appropriate teaching methods that respond to learners' needs and learning contexts<sup>15</sup>. This highlights that TEFL is both a theoretical and practical discipline that prepares students to become competent English teacher.

From a theoretical perspective, TEFL is closely related to several learning theories. First, Stephen Krashen's Input Hypothesis emphasizes that language acquisition occurs when learners are exposed to comprehensible input slightly above their current level. Second, Lev Vygotsky's Social Constructivism theory explains that learning happens through interaction and collaboration within a social context. Third,

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<sup>15</sup> Jack C. Richards, J. C. (2021). *Exploring teacher competence in language teaching*. Cambridge University Press.

David Ausubel's Meaningful Learning Theory highlights that new knowledge is best understood when it is connected to learners' prior knowledge<sup>16</sup>. These theories show that TEFL is not only about delivering content but also about facilitating meaningful, interactive, and effective language learning experiences.

#### **b. Objectives of TEFL in Higher Education**

The primary objective of TEFL in higher education is to prepare students with the knowledge and skills required to teach English effectively in diverse classroom settings. This includes developing students' understanding of language systems, teaching methodologies, and classroom practices that support language learning. TEFL courses aim to equip students with the ability to design lessons, manage classrooms, and assess learners' progress. According to Jeremy Harmer, effective English teaching requires a balance between theoretical understanding and practical application, which is a key focus of TEFL programs in universities<sup>17</sup>.

In addition, TEFL in higher education seeks to develop students' critical thinking and reflective teaching skills. Students are encouraged to analyze different teaching approaches and adapt them to meet learners' needs. Paul A. Kirschner emphasizes that higher education should promote deep learning, where students actively process and

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<sup>16</sup> David Ausubel, D. P. (2020). *The acquisition and retention of knowledge: A cognitive view*. Springer.P.45

<sup>17</sup> Harmer, J. (2022). *Jeremy Harmer's 50 Communicative Activities*. Cambridge University Press.P23

apply knowledge rather than simply memorize information<sup>18</sup>. Therefore, TEFL courses are designed not only to provide knowledge but also to foster professional competence and lifelong learning skills among future English teachers.

**c. Components of TEFL Material (Methods, Strategies, Lesson Planning, Assessment)**

TEFL material consists of several key components that support effective language teaching. These include teaching methods, instructional strategies, lesson planning, and assessment techniques. Teaching methods provide general approaches to language instruction, while strategies focus on specific techniques used in the classroom. Lesson planning helps teachers organize learning activities systematically, and assessment is used to evaluate students' progress and achievement. According to Jim Scrivener, successful language teaching requires the integration of these components to create meaningful and engaging learning experiences<sup>19</sup>.

1) Teaching Methods

Teaching methods refer to the general approaches used by teachers to deliver language instruction. These methods guide how teaching is organized and how students are expected to learn. Examples include the Grammar Translation Method, Communicative Language Teaching (CLT), and Task-Based Language Teaching

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<sup>18</sup> Kirschner, P. A., & Hendrick, C. (2020). *How learning happens: Seminal works in educational psychology and what they mean in practice*. Routledge

<sup>19</sup> Scrivener, J. (2011). *Learning teaching: The essential guide to English language teaching* (3rd ed.). Macmillan Education

(TBLT). Each method has different principles and focuses, such as emphasizing grammar, communication, or real-life tasks. In TEFL, choosing an appropriate method is important because it influences how effectively students can understand and use the language

## 2) Instructional Strategies

Instructional strategies are specific techniques or activities used by teachers during the lesson. While methods are general approaches, strategies are more practical and flexible. Examples include group discussions, role plays, questioning techniques, and using visual aids. These strategies help make learning more interactive and engaging. In TEFL, effective strategies support students in practicing language skills actively and help them better understand the material.

## 3) Lesson Planning

Lesson planning is the process of organizing teaching activities before the class takes place. A lesson plan usually includes learning objectives, materials, teaching steps, and activities. It helps teachers structure the lesson clearly and manage time effectively. In TEFL, good lesson planning ensures that teaching is systematic and aligned with learning goals. It also helps teachers prepare appropriate methods and strategies to make the lesson more effective.

## 4) Assessment

Assessment refers to the process of evaluating students' learning progress and achievement. It can be done through tests, quizzes,

assignments, presentations, or classroom observation. In TEFL, assessment is important to measure students' language skills and understanding. It also helps teachers identify students' strengths and weaknesses. Effective assessment should be aligned with learning objectives so that it accurately reflects what students have learned

All these components are interconnected. Teaching methods influence the choice of strategies, lesson planning organizes how they are applied, and assessment measures the results. That's why students need to understand all components together, not separately, to achieve effective learning in TEFL

d. Challenges in learning TEFL

Despite its importance, learning TEFL can be challenging for students due to the complexity of its content. TEFL requires students to understand abstract theories, apply them in practical situations, and integrate various teaching components. Many students struggle to connect theoretical knowledge with real classroom practice, which can affect their overall understanding. According to John Sweller, Cognitive Load Theory explains that learners may experience difficulties when they are required to process too much information at once without proper organization<sup>20</sup>.

In addition, traditional teaching methods used in TEFL lectures may contribute to these challenges. Lectures that rely heavily on text-

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<sup>20</sup> Sweller, J. (2020). *Cognitive load theory: Recent theoretical advances*. *Educational Psychology Review*, 32(4), 529–547

based explanations can limit student engagement and make it difficult for learners to actively process information. Dale H. Schunk emphasizes that active participation and meaningful interaction are essential for effective learning<sup>21</sup>. Therefore, students need learning strategies that can help them organize information, reduce cognitive load, and improve their understanding of TEFL material.

## 2. Mind Mapping

### a. Definition of Mind Mapping

Mind maps, as introduced by Tony Buzan, are visual diagrams that organize information hierarchically through branches, keywords, and images, stimulating both hemispheres of the brain to improve memory, creativity, and conceptual clarity.<sup>22</sup> Similarly, Novak and Canas define concept maps as visual tools that help learners meaningfully organize and represent knowledge by connecting new concepts to prior knowledge.<sup>23</sup> In addition, Windura states that mind mapping is a learning and thinking system that visually reflects how the brain works when processing and organizing information.<sup>24</sup> Sulichah further explains that mind mapping is a creative and effective note-taking technique that literally maps one's thoughts, enabling learners to focus on key ideas rather than linear text.<sup>25</sup> According to Bobbi DePorter and

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<sup>21</sup> Schunk, D. H. (2020). *Learning theories: An educational perspective* (8th ed.). Pearson.

<sup>22</sup> Tony Buzan, *The Mind Map Book: Unlock Your Creativity, Boost Your Memory, Change Your Life* (London: BBC Active, 2010).

<sup>23</sup> Joseph D. Novak and Alberto J. Cañas, *The Theory Underlying Concept Maps and How to Construct and Use Them* (Florida Institute for Human and Machine Cognition, 2008), pp. 1–6.

<sup>24</sup> Widia, Fitria Sarnita, Fathurrahmaniah, and Jessy Parmawati Atmaja, "Penggunaan Strategi Mind Mapping Untuk Meningkatkan Penguasaan Konsep Siswa," *Jurnal Ilmiah Mandala Education* 6, no. 2 (2020): 468.

<sup>25</sup> *Ibid.*, 468.

Mike Hernacki, mind mapping is flexible, enhances concentration, improves comprehension, and makes learning more enjoyable by combining creativity and imagination.<sup>26</sup>

Based on the explanations above, the researcher concludes that mind mapping is more than just a way of taking notes. It is a visual learning strategy that helps students organize ideas clearly through branches, keywords, colors, and images, as introduced by Tony Buzan. Supported by the ideas of Joseph D. Novak and Alberto J. Cañas, mind maps help learners connect new information with what they already know. In addition, as explained by Windura, Sulichah, and Bobbi DePorter with Mike Hernacki, mind mapping makes learning more focused, creative, and enjoyable. Therefore, the researcher believes that mind mapping can effectively support students in understanding and organizing concepts in a clearer and more meaningful way.

#### **b. Mind Map Techniques**

Mind mapping is a visual method developed by Tony Buzan that helps organize information in a structured and visually appealing way. The technique of creating mind maps is based on specific principles outlined by Buzan to make the results effective and easy to understand.<sup>27</sup> Below are the four main techniques and two layout in mind mapping according to Buzan, along with their sub-indicators, quoted directly from his works

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<sup>26</sup> Ibid., 468.

<sup>27</sup> Tony Buzan, Op. Cit. P.93-105

### 1) Use Emphasis

This technique emphasizes the importance of visual elements in mind maps to make the presented information stand out and be easily remembered:

- a) Always use a central image. Always use a central image as the main focus of the mind map.
- b) Use images throughout your Mind Map. Use images on every branch to strengthen visualization.
- c) Use three or more colours per central image. Use three or more colors on the central image to increase appeal.
- d) Use dimension in images. Add dimension or 3D effects to images for visual depth.
- e) Use synaesthesia (the blending of the physical senses). Combine various physical senses such as color, size, and shape.
- f) Use variations of size of printing, line and image. Vary the size of print, lines, and images for emphasis.
- g) Use organised spacing. Use organized spacing so the mind map does not look cluttered.
- h) Use appropriate spacing. Ensure proper spacing between elements for readability.

### 2) Use Association

This technique focuses on connecting ideas within the mind map to form logical and cohesive relationships:

- a) Use arrows when you want to make connections within and across the branch pattern. Use arrows to connect related branches both directly and across branches.
- b) Use colours. Use colors to group and differentiate ideas.
- c) Use codes. Use codes or symbols to clarify relationships between concepts.

### 3) Be Clear

3. Clarity in a mind map is essential so that the message can be easily understood:

- a) Use only one key word per line. Each branch line contains only one keyword.
- b) Print all words. All words are printed (in block letters) for easy reading.
- c) Print key words on lines. Keywords are printed following the branch lines.
- d) Make line length equal to word length. Line length is adjusted to the length of the word.
- e) Connect lines to other lines. Connect branch lines to other lines without breaks.
- f) Make the central lines thicker. Make main lines thicker to emphasize focus.
- g) Make your boundaries 'embrace' your branch outline. Boundaries are drawn to embrace the branch outline neatly.

- h) Make your images as clear as possible. Images are made as clear as possible for easy recognition.
- i) Keep your paper placed horizontally in front of you. Keep the paper horizontal when creating the mind map.
- j) Keep your printing as upright as possible. Keep the writing upright for easy reading.

#### 4) Develop a Personal Style

Developing a personal Mind Map style means creating Mind Maps that reflect each person's unique way of thinking, because everyone has different patterns of ideas in their brain. To develop this personal style, the "1+ rule" should be applied, which means that every Mind Map should be slightly better than the previous one, such as being more colorful, more creative, more imaginative, more logically connected, or more visually attractive. By doing this, mental skills will continue to develop, the Mind Maps will be more enjoyable to review and use for learning and communication, and the information in them will be easier to remember.

#### 5) Layout:

##### a) Use hierarchy

Using hierarchy and categorization through Basic Ordering Ideas helps organize information from main ideas to details, which significantly strengthens the brain's ability to understand and process information.

##### b) Use numerical order

Using numerical or alphabetical order helps arrange ideas in a clear sequence, such as chronological order or level of importance, making thoughts more logical and easier to communicate, especially for tasks like speeches, essays, or exam answers.

### c. **Advantages of Mind Maps in Language Learning**

Mind maps have been shown to support vocabulary development, critical thinking, and content retention in EFL contexts. Fatemeh and Dehghani reported that visual mind mapping strategies significantly improve learners' reading comprehension and critical thinking skills.<sup>28</sup> For visual learners in particular, mind maps increase engagement and long-term retention. In TEFL classes, where learners deal with abstract pedagogical concepts (such as lesson planning, SLA models, or teaching methods), mind maps help break down complex content into manageable units of meaning

## **3. Learning Media**

### a. **Definition of Learning Media**

Learning media, as introduced by Leli Hasanah, refers to tools, methods, or techniques used to facilitate the delivery of learning materials so that students can understand the material more easily and effectively.<sup>29</sup> According to Arsyad, learning media are all forms of tools

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<sup>28</sup> Fatemeh H. and Dehghani M., "The Effect of Visual Mind Mapping Strategy for Improving English Language Learners' Critical Thinking Skills and Reading Ability," *International Journal of Educational Investigations* 5, no. 6 (2018): 60–71.

<sup>29</sup> Leli Hasanah Lubis, Dkk., (2023), "The Use of Learning Media and its Effect on Improving the Quality of Student Learning Outcomes," *International Journal of Education, Social Studies, and Management (IJESSM)*, Vol. 3, No. 2, p. 10.

that can be used to convey messages or information in the learning process so that it can stimulate students' thoughts, feelings, attention, and interest in learning.<sup>30</sup> This means that learning media are not only physical tools, but also include methods and strategies that support the learning process. Similarly, Wahyuningtyas and Sulasmono state that learning media are tools used to deliver messages that can stimulate students' thoughts, feelings, and willingness to learn, so that the learning process can run more effectively.<sup>31</sup>

Based on these explanations, it can be concluded that learning media are important components in the learning process that function as tools to deliver learning material, stimulate students' interest and motivation, and help students understand the material more easily and effectively.

#### **b. Type of Learning Media**

Learning media can be classified into several types based on their form and the way they are used in the learning process. According to Lubis et al., learning media can be divided into two-dimensional media and projected media.<sup>32</sup> Two-dimensional media include media such as charts, graphs, posters, and images, while projected media are media that require tools such as projectors or computers to display information,

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<sup>30</sup> Arsyad, A. (2016) In Lubis Hasanah , Dkk., (2023), "*The Use of Learning Media and its Effect on Improving the Quality of Student Learning Outcomes,*" *International Journal of Education, Social Studies, and Management (IJESSM)*, Vol. 3, No. 2, p. 10.

<sup>31</sup> Wahyuningtyas, R., & Sulasmono, B. S. (2020). *Pentingnya Media dalam Pembelajaran Guna Meningkatkan Hasil Belajar di Sekolah Dasar*. *EDUKATIF : JURNAL ILMU PENDIDIKAN*. <https://doi.org/10.31004/edukatif.v2i1.77> p.10

<sup>32</sup> *Ibid*, p. 10.

such as films, slides, and multimedia presentations. This shows that learning media can be in the form of printed media or technology-based media used to deliver learning materials.

In addition, the development of technology has influenced the development of learning media. According to Alpizar Technology-based multimedia can be used as learning media in the classroom because multimedia presentations have a significant and positive effect on improving student learning outcomes.<sup>33</sup> Multimedia learning media combine audio and visual elements so that they can optimize students' senses in the learning process. Therefore, technology-based learning media are increasingly used in the learning process because they can make learning more effective and interesting. Furthermore, Puspitarini & Hanif stated that the internet also influences the use of learning media in learning.<sup>34</sup> The internet provides independence, speed, feedback, accessibility, effectiveness, and productivity in learning. Therefore, internet-based media can also be used as learning media to support the teaching and learning process, especially in online learning

Based on the explanation above, it can be concluded that learning media consist of two-dimensional media, projected media, multimedia, and internet-based media that can be used to support the learning process and improve student learning outcomes. In line with Wirawan the

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<sup>33</sup> Alpizar, D., Adesope, O. O., & Wong, R. M. (2020). A meta-analysis of signaling principle in multimedia learning environments. *Educational Technology Research and Development*, 68(5), 2095–2119. <https://doi.org/10.1007/s11423-020-09748-7>

<sup>34</sup> Puspitarini, Y. D., & Hanif, M. (2019). Using Learning Media to Increase Learning Motivation in Elementary School. *Anatolian Journal of Education*, 4(2), 53–60. <https://doi.org/https://doi.org/10.29333/aje.2019.426a>

development of technology-based learning media, one of the technologies commonly used as learning media is PowerPoint.<sup>35</sup> PowerPoint is a medium that is easy to use and can be combined with video, text, images, or sound so that it can be developed into interactive learning media. Therefore, PowerPoint is categorized as a technology based multimedia learning media that can support the learning process and improve student learning outcomes

### **c. PowerPoint as Learning Media**

#### 1) Definition of PowerPoint

PowerPoint is a popular presentation software developed by Microsoft that allows users to create engaging and interactive slides. It consists of a series of slides containing text, images, diagrams, charts, and multimedia elements to support the speaker's message, along with features such as animations, transitions, and hyperlinks that enhance interactivity. With its user-friendly interface, PowerPoint is widely used by educators, students, and professionals to present ideas clearly and creatively. In education, the use of appropriate learning media like PowerPoint can increase students' motivation and improve learning outcomes, as technology-based tools make the learning process more effective, efficient, and interesting..

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<sup>35</sup> I Made Tangkas Arya Wirawan, (2022) "Interactive PowerPoint Learning Media on Science Content for Fifth Grade Elementary School," *Journal for Lesson and Learning Studies*, Vol. 5, No. 2, p. 191.

PowerPoint is an important technology-based learning tool that supports the teaching and learning process by presenting material in a structured, visual, and interactive way. By using text, images, diagrams, charts, and multimedia features, it helps lecturers explain complex material more clearly and makes it easier for students to understand. In TEFL learning, PowerPoint can increase students' motivation, improve their attention, and make the learning process more effective and engaging; therefore, it can be considered a useful instructional tool to support students' understanding of the material.

## 2) Advantages of PowerPoint in Learning

Interactive PowerPoint can also attract students' attention and increase their motivation in the learning process. Dewi and Manuaba state that interactive PowerPoint can be used as a learning medium to attract students' interest and attention.<sup>36</sup> In addition, Mahesti and Koeswanti explain that interactive PowerPoint learning media can improve student learning outcomes because it combines text, animation, audio, video, and evaluation in a systematic way.<sup>37</sup> Therefore, PowerPoint is not only used to present material but also

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<sup>36</sup> Dewi, N. L. P. S., & Manuaba, I. bagus S. (2021). Pengembangan Media Pembelajaran Powerpoint Interaktif Pada Mata Pelajaran IPA Siswa Kelas VI SD. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 5(1), 76–83. <https://doi.org/10.23887/jppp.v5i1.32760>.

<sup>37</sup> Mahesti, G., & Koeswanti, H. D. (2021). Pengembangan Media Pembelajaran Permainan Monopoli Asean untuk Meningkatkan Hasil Belajar Tema 1 Selamatkan Makhluk Hidup Pada Siswa Kelas 6 Sekolah Dasar. *Mimbar PGSD Undiksha*, 9(1), 30–39. <https://doi.org/10.23887/jppgsd.v9i1.33586>.

functions as an interactive multimedia learning media that can improve students' motivation, engagement, and learning outcomes.

#### **4. Mind Mapping on PowerPoint Presentations**

##### **a. Integration of Mind Mapping and PowerPoint**

The use of mind maps presented through PowerPoint slides in English serves as a visual and language-based learning medium in TEFL classes. In this context, PowerPoint functions as a presentation platform, while the mind map functions as a visual organizer of the material, and English is used as the language of instruction. Therefore, this medium is not merely a combination of two tools, but a structured visual presentation delivered in the target language to support students' comprehension of TEFL material.

Through Mind Mapping on PowerPoint presentations, students are required to interpret visual relationships between concepts and understand the material in English at the same time. This process encourages students to focus on key concepts, recognize connections between ideas, and develop their academic English vocabulary related to TEFL. In addition, when students present or explain the mind map, they process the information using their own words, which supports deeper understanding and higher-order thinking skills. Thus, the use of mind mapping on PowerPoint presentations can be seen as a pedagogical medium that supports both content understanding and language development in TEFL learning.

## b. Visual Learning Tools in TEFL Classes

Visual learning tools, including diagrams and PowerPoint presentations, play a vital role in modern TEFL instruction. Richard E. Mayer, through his Cognitive Theory of Multimedia Learning, argues that learners understand material better when it is presented using both verbal and visual channels, as long as it adheres to principles such as multimedia, signaling, segmenting, and coherence.<sup>38</sup> This perspective is reinforced by Baddeley's working memory model, which explains the interaction between the phonological loop and visuospatial sketchpad in processing verbal and visual information.<sup>39</sup> Furthermore, Generative Learning Theory proposed by Logan Fiorella and Richard Mayer emphasizes that learners benefit most when they actively engage with visual materials through organizing, summarizing, or explaining content.<sup>40</sup> In TEFL classrooms, PowerPoint not only supports structured visual presentation but also facilitates active processing, guiding students' attention and reducing extraneous cognitive load. These principles reduce extraneous cognitive load and help students process information more efficiently. In TEFL classes, PowerPoint allows teachers to present content progressively and emphasize key points through visual organization and verbal narration.

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<sup>38</sup> Richard E. Mayer, *Multimedia Learning*, 2nd ed. (Cambridge: Cambridge University Press, 2009), pp. 60–65, 101–124.

<sup>39</sup> Alan Baddeley, "The Episodic Buffer: A New Component of Working Memory?" *Trends in Cognitive Sciences* 4, no. 11 (2000): 417–423.

<sup>40</sup> Logan Fiorella and Richard E. Mayer, *Learning as a Generative Activity: Eight Learning Strategies that Promote Understanding* (New York: Cambridge University Press, 2015).

The researcher concludes that using visual tools such as diagrams and PowerPoint in TEFL classes enhances students' understanding and retention by presenting information clearly and engagingly. By combining visuals with verbal explanations and encouraging active interaction with the material, these tools make learning more meaningful, help reduce cognitive overload, and support deeper comprehension.

**c. Challenges and Advantages of Using Mind Maps on Powerpoint Presentation**

PowerPoint in this study is used as a learning media to present mind maps in the form of visual diagrams. Mind maps displayed through PowerPoint help students see the relationships between concepts, keywords, and main ideas more clearly. When designed properly, visual mind maps presented through PowerPoint can help students organize information, understand complex TEFL material, and remember the material more easily. However, when the presentation is poorly designed, such as containing too much text or irrelevant visuals, it may lead to cognitive overload, a phenomenon explained by Sweller's Cognitive Load Theory. Learners may struggle to process too much information at once, especially when the material is presented in a second language. Therefore, this study explores students' perceptions, their understanding of TEFL material, and the challenges they face when learning through Mind Mapping on PowerPoint presentations.

## 5. Understanding in Learning

### a. Definition of Understanding (Cognitive Perspective)

Understanding in learning refers to the ability of students to comprehend, interpret, and make meaning of the information they receive. It goes beyond memorization, as students are expected to connect new knowledge with prior knowledge and apply it in different contexts. From a cognitive perspective, understanding involves mental processes such as organizing, integrating, and storing information in memory. According to Richard E. Mayer, meaningful learning occurs when learners actively select relevant information, organize it into a coherent structure, and integrate it with their existing knowledge<sup>41</sup>.

In addition, understanding is closely related to how information is processed in the human mind. Cognitive theory emphasizes that learners are not passive recipients of information but active processors who construct their own understanding. Dale H. Schunk states that learning becomes effective when students actively engage in thinking, analyzing, and connecting ideas<sup>42</sup>. Therefore, in the context of TEFL learning, students' understanding depends on how well they can process and organize complex teaching concepts into meaningful knowledge.

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<sup>41</sup> Ibid P.22

<sup>42</sup> Ibid P.34

**b. Levels of Understanding (e.g., Remembering, Understanding, Applying)**

Understanding in learning can be categorized into different levels, ranging from basic to more complex cognitive processes. One widely used framework is Bloom's Taxonomy, which includes levels such as remembering, understanding, applying, analyzing, evaluating, and creating. Benjamin Bloom's taxonomy, updated in recent educational studies, helps educators identify how deeply students understand a concept. At the basic level, students are able to remember information, while at higher levels, they can apply knowledge in real situations and analyze relationships between concepts.

Furthermore, these levels of understanding are important in TEFL learning, where students must not only remember teaching theories but also apply them in classroom practice. For example, students may understand a teaching method conceptually, but true understanding is demonstrated when they can design a lesson plan or apply the method in teaching practice. Lorin Anderson, who revised Bloom's Taxonomy, emphasizes that higher-order thinking skills are essential for meaningful learning. Therefore, TEFL learning should aim to develop students' understanding at multiple levels<sup>43</sup>.

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<sup>43</sup> Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Longman

### **c. Factors Affecting Students' Understanding**

Students' understanding is influenced by various internal and external factors. Internal factors include prior knowledge, motivation, and cognitive ability, while external factors include teaching methods, learning media, and classroom environment. When students have sufficient prior knowledge and high motivation, they are more likely to understand new material effectively. According to John Hattie (2023), factors such as student engagement, teacher clarity, and instructional quality have a significant impact on learning outcomes.

In addition, the way information is presented also affects students' understanding. Poorly organized material can increase confusion and reduce comprehension. John Sweller (2020) explains through Cognitive Load Theory that excessive or unstructured information can overwhelm learners' cognitive capacity. Therefore, instructional strategies that present information clearly and systematically, such as visual tools and structured materials, are essential to support students' understanding.

### **d. Indicators of Understanding in Learning TEFL**

Students' understanding in TEFL learning can be identified through several observable indicators, including the ability to explain concepts clearly, identify main ideas, organize information, and apply knowledge in practical situations. When students are able to connect different TEFL concepts, such as teaching methods and assessment strategies, it indicates that they have achieved a meaningful level of

understanding. According to Richard E. Mayer, understanding is reflected in the ability to organize and integrate knowledge into a coherent structure<sup>44</sup>. These aspects are closely related to the cognitive dimension of learning, which becomes the basis for measuring students' comprehension.

Moreover, in the context of TEFL, understanding can also be observed through students' ability to use English to express their ideas and explain teaching concepts clearly. This includes organizing ideas logically and presenting them effectively during discussions or presentations. Dale H. Schunk emphasizes that learning outcomes should be observable through students' performance and active participation<sup>45</sup>. These theoretical perspectives are directly reflected in the questionnaire indicators used in this study, such as cognitive understanding (clarity of material, identifying main ideas, organizing information), memory retention, engagement, and language use. Therefore, the indicators in the questionnaire are designed to capture students' level of understanding based on both their cognitive processes and their observable learning performance in TEFL contexts.

**Tabel 2.1 Indicators of Understanding in Learning TEFL**

No	Theory	Indicator	Sub-Indicator	Level of Understanding	Description
1	Richard E. Mayer (2021)	Cognitive Understanding	Clarity of material	Understanding	Students are able to understand TEFL concepts

<sup>44</sup> Mayer, R. E. (2021). *Multimedia learning* (4th ed.). Cambridge University Press.

<sup>45</sup> Schunk, D. H. (2020). *Learning theories: An educational perspective* (8th ed.). Pearson

					clearly through structured information
		Cognitive Understanding	Identifying main ideas	Understanding	Students can identify key points in TEFL material
		Cognitive Understanding	Organizing information	Applying	Students are able to arrange concepts systematically
		Memory Retention	Recall ability	Remembering	Students can remember material more easily
		Memory Retention	Visual support	Remembering	Use of colors, keywords, and diagrams supports memory
2	Dale H. Schunk (2020)	Cognitive Load	Mental effort	Applying	Students need mental effort to process information

## 6. Perception

### a. Definition Of Perception

Robbins defines perception as the process by which individuals organize and interpret their sensory impressions in order to give meaning to their environment.<sup>46</sup> Beside that, Otara stated that the concept of perception has been defined by various experts as a psychological response to experiences and external stimuli.<sup>47</sup> It involves how individuals interpret and organize information received through their senses. Generally, perception begins with sensory input such as

<sup>46</sup> Stephen P. Robbins, *Organizational Behavior*, 9th ed. (Upper Saddle River, NJ: Prentice Hall, 2001), 123.

<sup>47</sup> Otara, A. In Azizah thesis (2023) Students' Perception toward Video Project in Speaking Class. p. 10

visual or auditory stimuli which is then processed in the brain to produce a personal interpretation or response. This process is shaped by how stimuli are selected, filtered, and understood by each individual, resulting in a unique viewpoint or judgment. In the context of this study, students' perception refers to how they mentally process, emotionally react to, and behaviorally respond to the use of mind mapping on PowerPoint presentations in TEFL classes.

Moreover, perception is also influenced by individuals' prior experiences, as people tend to more easily recognize or comprehend something they have previously encountered compared to those who have not. Accordingly, students may develop varying perceptions toward the use of mind mapping on presentations depending on how they process visual and verbal input. These theoretical foundations are relevant to this research, as students' perceptions are shaped by both external factors such as the design and delivery of visual presentations and internal factors like background knowledge, motivation, and individual interpretation. Furthermore, Walgito emphasizes that perception is an active process involving not only external stimuli but also the individual as a whole, including their experiences, motivations, and attitudes.<sup>48</sup> This suggests that perception plays a crucial role in how individuals make sense of certain learning media based on their internal conditions and past encounters.

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<sup>48</sup> Bimo Walgito, Op. Cit. P.87

## **b. Types of Perception**

According to Richard, perception can be categorized into three main types<sup>49</sup>:

- 1) Visual perception, which is obtained through the sense of sight. It is developed from visual stimuli and information originating from the external environment. Among the three, visual perception is considered the earliest to develop in human life.
- 2) Auditory perception, which is related to the sense of hearing. It involves the ability to identify and interpret sounds, processed by the auditory system including the ears, neural pathways, and brain.
- 3) Speech perception, which focuses on the understanding of spoken language. This type of perception is closely associated with an individual's verbal ability.

Based on these classifications, perception is fundamentally shaped by sensory experiences through which individuals interpret information and construct meaning from external stimuli.

## **c. Forms of Perception**

An individual tends to evaluate an object by considering whether it aligns with their personal appreciation and can be accepted both rationally and emotionally. Conversely, when the object is perceived as inconsistent with one's prior understanding or expectations, the individual may develop a negative view and become inclined to reject

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<sup>49</sup> Richard Et al, "Longman Dictionary of Applied Linguistic", (Hongkong: Longman Ltd.1992), p.12

it. This aligns with the explanation by Walgito who divided perception into two forms:

1) Positive perception

Positive perception refers to a situation in which an individual views and receives an object or event favorably, as it aligns with their personal preferences, values, or expectations.

2) Negative perception

Negative perception occurs when an individual views an object or situation unfavorably, typically because it conflicts with their personal beliefs, experiences, or standards, leading them to reject it.<sup>50</sup>

**d. Perception Measurement**

Students' perceptions toward the use of mind mapping on PowerPoint presentations in understanding TEFL material can be analyzed through several key indicators. These indicators are derived from relevant learning theories and are used to measure how students interpret, experience, and evaluate the learning strategy.

1) Cognitive Understanding

First, cognitive understanding refers to students' ability to comprehend, identify, and organize TEFL material. This includes sub-indicators such as clarity of material, identifying main ideas, and organizing information. According to Richard E. Mayer, learners

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<sup>50</sup> Walgito, in Budiman Thesis, "Students' Perception of Lecturers' Role in Enhancing EFL Learners' Communication Ability (A Study at Eight Semester on Academic Year 2018 in IAIN Curup). "IAIN Curup. 2018. p.34

understand material more effectively when information is presented in a structured and meaningful way<sup>51</sup>. Therefore, mind mapping, which visually organizes concepts, is expected to support students' cognitive understanding.

## 2) Memory Retention

Second, memory retention refers to students' ability to store and recall information after learning. This indicator includes sub-indicators such as recall ability and the use of visual elements like colors, keywords, and diagrams. Visual representation plays an important role in memory, as explained by Richard E. Mayer, who states that combining visual and verbal information enhances long-term retention<sup>52</sup>. Thus, mind mapping in PowerPoint can help students remember TEFL material more easily.

## 3) Engagement

Third, engagement refers to the level of students' interest and attention during the learning process. This includes sub-indicators such as learning interest and attention. Dale H. Schunk emphasizes that active involvement is essential for meaningful learning. When students are engaged, they are more likely to process information deeply and understand the material better<sup>53</sup>. Therefore, interactive visual tools such as mind mapping in PowerPoint are expected to increase student engagement.

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<sup>51</sup> Ibid. P.56

<sup>52</sup> Ibid. P.45

<sup>53</sup> Ibid P.60

#### 4) Ease of Use

Fourth, ease of use refers to how easily students can understand and use mind mapping in PowerPoint presentations. This includes sub-indicators such as simplicity and perceived difficulty. According to John Sweller, learning becomes more effective when instructional materials are simple and well-organized, reducing unnecessary cognitive load<sup>54</sup>. If students perceive the tool as easy to use, their understanding of the material will likely improve.

#### 5) cognitive load

Fifth, cognitive load refers to the mental effort required by students during the learning process. This includes the sub-indicator of mental effort. John Sweller explains that excessive cognitive load can hinder learning, especially when students must process complex information simultaneously<sup>55</sup>. In the context of mind mapping and PowerPoint, students may need to divide their attention between understanding content and interpreting visual structures, which can affect their comprehension.

##### a) Cognitive Load Theory

Cognitive overload occurs when the amount of information presented exceeds the learner's working memory capacity, making it difficult to process and retain knowledge effectively.

This concept is central to Sweller's Cognitive Load Theory,

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<sup>54</sup> Sweller, J. (2020). *Cognitive load theory: Recent theoretical advances*. *Educational Psychology Review*, 32(4), 529–547

<sup>55</sup> *Ibid.* P.75

which divides cognitive load into three types: intrinsic load (complexity of the content), extraneous load (how information is presented), and germane load (mental effort devoted to learning).<sup>56</sup> In multimedia or visually rich presentations such as those that combine dense visuals, long texts, complex diagrams, and narration extraneous load can become excessive, interfering with the learning process. Similarly, Chandler explain the redundancy effect, where unnecessary information overloads the working memory.<sup>57</sup> Ayres highlights that split attention between multiple information sources can impair learning.<sup>58</sup>

Therefore, these theories suggest that learning is most effective when the cognitive demands on students are carefully managed. Excessive or poorly organized information, whether through redundant visuals, long texts, or complex diagrams, can overwhelm working memory and reduce comprehension. By minimizing extraneous load, avoiding redundancy, and guiding attention effectively, educators can help learners focus on meaningful processing, build stronger mental schemas, and retain knowledge more efficiently. Thoughtful design of instructional materials, especially in multimedia or visually rich

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<sup>56</sup> John Sweller, "Cognitive Load During Problem Solving: Effects on Learning," *Cognitive Science* 12, no. 2 (1988): 258–263.

<sup>57</sup> Chandler, P., & Sweller, J. (1991). Cognitive load theory and the format of instruction. *Cognition and Instruction*, 8(4), 293–332.

<sup>58</sup> Ayres, P. (2006). Using subjective measures to detect variations of intrinsic cognitive load within problems. *Learning and Instruction*, 16(5), 389–400.

contexts, is therefore crucial to prevent cognitive overload and support deeper learning.

**Tabel 2.2 Students' Demands in Using Mind Mapping on PowerPoint Presentations in TEFL Classes**

No	Aspects	Indicators	Number of Items
<b>1.</b>	<b>Intrinsic Load</b>	TEFL topics like SLA, grammar pedagogy, and teaching strategies feel abstract and complex when shown in mind maps.	<b>1</b>
		Using English in mind maps makes it harder to understand complex TEFL content.	<b>2</b>
		Students need extra effort to follow mind maps with linguistically dense topics.	<b>3</b>
<b>2.</b>	<b>Extraneous Load</b>	Too many colors, inconsistent shapes, or excessive branches make the mind map confusing.	<b>4</b>
		English keywords without explanation make the content harder to understand.	<b>5</b>
		The visual design distracts from the main message of the lesson.	<b>6</b>
<b>3.</b>	<b>Germane Load</b>	Students must exert additional effort just to interpret the structure of the mind map.	<b>7</b>
		Effort is also spent understanding the terminology or translating English labels.	<b>8</b>
		Limited remaining capacity to engage in deep conceptual processing or reflection.	<b>9</b>

#### 6) Language use

Sixth, language use refers to students' ability to organize and express ideas in English when using mind mapping. This includes the sub-indicator of organizing ideas in English. In TEFL learning, language production is an important aspect, and students must be

able to structure their ideas clearly. Stephen Krashen highlights that language acquisition improves when learners actively use the language in meaningful contexts<sup>59</sup>. Therefore, mind mapping can support students in organizing and expressing their ideas in English.

#### 7) Overall perception

Finally, overall perception refers to students' general evaluation of the effectiveness of mind mapping in PowerPoint presentations for understanding TEFL material. This indicator reflects students' overall judgment after experiencing the learning strategy. According to Stephen P. Robbins, perception is the process by which individuals interpret and evaluate their experiences. Thus, this indicator is important to capture students' overall views of the learning method<sup>60</sup>.

**Tabel 2.3 Indicators and Sub-Indicators of Students' Perception**

No	Indicator	Sub-Indicator	Description	Theoretical Basis
1	Cognitive Understanding	Clarity of material	Students are able to understand TEFL material clearly through structured presentation	Richard E. Mayer (2021)
		Identifying main ideas	Students can identify key concepts in TEFL material	Richard E. Mayer (2021)
		Organizing information	Students are able to arrange and structure information systematically	Richard E. Mayer (2021)

<sup>59</sup> Krashen, S. D. (2020). *Principles and practice in second language acquisition* (2nd ed.). Pergamon Press.

<sup>60</sup> Ibid. P.56

2	Memory Retention	Recall ability	Students can remember TEFL material after learning	Richard E. Mayer (2021)
		Visual support	Visual elements (colors, keywords, diagrams) help students remember information	Richard E. Mayer (2021)
3	Engagement	Interest	Students show interest in learning activities using mind mapping	Dale H. Schunk (2020)
		Attention	Students pay attention during the learning process	Dale H. Schunk (2020)
4	Ease of Use	Simplicity	Mind mapping in PowerPoint is easy to understand and use	John Sweller (2020)
		Perceived difficulty	Students perceive difficulty when using mind mapping	John Sweller (2020)
5	Cognitive Load	Mental effort	Students need mental effort to process and understand information	John Sweller (2020)
6	Language Use	Organizing ideas in English	Students are able to express and structure ideas in English	Stephen Krashen (2020)
7	Overall Perception	Effectiveness	Students evaluate the overall usefulness of mind mapping in PowerPoint	Stephen P. Robbins (2021)

## B. Review of Related Findings

There are several studies related to this topic. One relevant study conducted by Sakkir (2023) entitled “*Students' Perceptions on the Use of Mind Mapping Technique in Writing Class*” investigated students’ perceptions of mind mapping in teaching descriptive writing at MTsN 2 Makassar with 22 eighth-grade students. The study used a quantitative descriptive design with a 20-item Likert-scale questionnaire. The findings showed that most students had strongly positive perceptions, with 63.63% categorized as strongly

positive, 22.72% positive, and 13.63% undecided, and a mean score of 82.18. The results indicated that mind mapping helped students understand the material, develop ideas, organize vocabulary, increase confidence, and create an engaging learning atmosphere, while negative perceptions were mostly rejected. However, this study only focused on writing classes and did not examine TEFL material or the use of PowerPoint. In contrast, the present study focuses on students' perceptions of mind mapping in the form of PowerPoint presentations in understanding TEFL material, uses a 4-point Likert scale, applies Tony Buzan's mind mapping principles, and adopts a mixed-methods approach. Therefore, although both studies discuss students' perceptions of mind mapping, the present study has a broader scope and a stronger theoretical framework.

An important related study was conducted by Kadek Anggun (2022) entitled "*Students' Perception of the Use of Mind Mapping as a Visual Learning Tool*" at SMA Negeri 1 Singaraja. This study investigated students' perceptions of mind mapping as a visual learning tool using a qualitative approach. The study involved 16 twelfth-grade students, and data were collected through open-ended questionnaires and interviews. The findings showed that most students had positive perceptions, especially because mind mapping helped them summarize material, take notes, enhance creativity, develop ideas, and understand and remember material better. Students also stated that mind mapping made learning more creative, engaging, and structured compared to conventional methods. However, unlike the previous study which only used qualitative methods, the present study uses a mixed-

methods approach to investigate students' perceptions of mind mapping in the form of PowerPoint presentations in TEFL classes. This study uses a 4-point Likert scale and interviews, and also applies Tony Buzan's mind mapping theory focusing on technique and layout aspects. Therefore, this study expands previous research by examining mind mapping in TEFL PowerPoint presentations using a clearer theoretical framework.

Another significant study was conducted by Rui Feng et al. (2023) entitled *"Impact of Mind-Mapping Technique on EFL Learners' Vocabulary Recall and Retention, Learning Motivation, and Willingness to Communicate."* This quasi-experimental study involved Iranian EFL learners divided into experimental and control groups. The findings showed that students who used mind mapping performed better in vocabulary recall and retention, had higher motivation, and were more willing to communicate. The study concluded that mind maps help organize vocabulary, improve memory, and increase learning engagement. However, unlike Feng et al. (2023), which focused on learning outcomes, the present study focuses on students' perceptions of mind mapping in the form of PowerPoint presentations in TEFL classes. This study uses a 4-point Likert scale, applies Tony Buzan's mind mapping theory (technique and layout), and adopts a mixed-methods approach to explore both quantitative results and qualitative reasons behind students' perceptions. Therefore, this study fills a gap by examining students' perceptions of mind mapping in TEFL PowerPoint presentations.

Another study conducted by Köksal, Ulum, and Yürük (2023) entitled *"The Inclusion of Revised Bloom's Taxonomy in the Reading Sections of EFL*

*Textbooks*” analyzed the cognitive levels of reading comprehension questions in Turkish EFL textbooks using the Revised Bloom’s Taxonomy. The study classified questions into lower-order thinking skills (remembering, understanding, applying) and higher-order thinking skills (analyzing, evaluating, creating). The findings showed that most questions focused on lower-order thinking skills, especially remembering and understanding, while higher-order thinking skills were rarely found. Although both the previous study and the present study use Bloom’s Taxonomy, they have different focuses. The previous study analyzed textbook questions, while the present study examines students’ conceptual understanding and perceptions of mind mapping in the form of PowerPoint presentations in TEFL classes. This study uses a mixed-methods approach and applies the six levels of Bloom’s Taxonomy to examine how visual instructional media can support students’ cognitive engagement and understanding in TEFL learning.

Another recent study conducted by Ma (2025) entitled “*Investigation of the Impact of Cognitive Load on EFL Learners’ Satisfaction with MOOCs*” examined students’ cognitive learning demands in online learning using Cognitive Load Theory, which includes intrinsic, extraneous, and germane cognitive load. The findings showed that higher cognitive load reduced students’ satisfaction with MOOCs, while expectation confirmation and perceived usefulness influenced satisfaction. Although both the previous study and the present study use Cognitive Load Theory, they have different focuses. The previous study focused on students’ satisfaction in online learning, while the present study examines students’ cognitive learning demands when using

mind mapping in the form of PowerPoint presentations in TEFL classes. This study uses intrinsic, extraneous, and germane cognitive load to examine how visual instructional media influence students' mental effort, comprehension, and conceptual understanding of TEFL material. Therefore, while Ma focused on cognitive load and satisfaction in MOOCs, the present study focuses on how mind mapping PowerPoint presentations support students' cognitive processing and learning engagement in TEFL learning.

A recent study conducted by Bolatli and Zafer (2024) entitled "*The Effect of Concept Map Technique on Students' Cognitive Load and Academic Success in Anatomy Course*" investigated the effect of concept maps on nursing students' cognitive load and academic achievement in an anatomy course at Siirt University, Turkey. The study involved 135 first-year students who were divided into an experimental group using concept maps and a control group using traditional lectures. Data were collected through an anatomy knowledge test based on Bloom's Taxonomy (remembering and understanding), a Cognitive Load Scale, and an attitude scale toward concept maps. The results showed that the experimental group achieved higher posttest scores and experienced lower cognitive load than the control group, while students' attitudes toward concept maps were not influenced by gender or prior experience. Although both this study and the present research use Cognitive Load Theory and Bloom's Taxonomy, they differ in focus and context. The previous study focused on anatomy education and academic achievement, while the present study investigates students' conceptual understanding and cognitive learning demands in TEFL classes using mind mapping in the form

of PowerPoint presentations. This study uses Sweller's three types of cognitive load (intrinsic, extraneous, and germane) and all six levels of Bloom's Taxonomy with a mixed-method approach using questionnaires and interviews. Therefore, this study expands previous research by examining how visual mind mapping presentations support conceptual understanding, manage cognitive load, and engage students in TEFL learning.

Another relevant study was conducted by Hustarna (2025) entitled "*Students' Experiences and Strategies in Creating Mind Maps in the TEYL Course,*" which explored students' challenges in creating mind maps. This qualitative study involved twelve English Study Program students and used semi-structured interviews with thematic analysis. The findings showed several challenges, such as unfamiliarity with mind mapping, time-consuming preparation, difficulty organizing material visually, limited space, and the need to use additional references to understand the material. Students also used strategies such as digital mind maps, visual elements, pre-planning, grouping content, and using multiple resources. Although this study did not use Tony Buzan's theory, Bloom's Taxonomy, or Cognitive Load Theory, it is still relevant to the present study. The challenges and strategies reflect students' perceptions, cognitive aspects, and cognitive load, including intrinsic, extraneous, and germane load. Therefore, Hustarna's study helps explain students' perceptions, cognitive engagement, and cognitive learning demands when using mind mapping in learning.

## **CHAPTER III**

### **METHODOLOGY**

#### **A. Kind of Research**

This research employed a mixed method approach with an explanatory sequential design to investigate the use of mind mapping in the form of PowerPoint presentations in understanding TEFL material. A mixed method approach integrates both quantitative and qualitative research methods within a single study or a series of interrelated studies.<sup>61</sup> In this explanatory sequential design, the quantitative phase was conducted first to obtain an overall picture of students' perceptions of mind mapping on PowerPoint presentations in TEFL classes. Quantitative data were collected through a structured questionnaire and analyzed descriptively to identify general trends and aspects of agreement among students. The results of the quantitative analysis then guided the qualitative phase, which was conducted through semi-structured interviews to further explain and elaborate the quantitative findings, particularly regarding students' understanding of TEFL material and the cognitive learning demands they experienced when using the media.

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<sup>61</sup> John W Cresswell, *Research Design : Qualitatif, Quantitatif, and Mixed Method Approach*, 4th ed. (California: SAGE Publications, Inc., 2009).

## B. Subject of the Research

### 1. Population

Margono state that, population is the whole subjects of research that become our notice in the scope and time what we determine.<sup>62</sup> Population refers to the entire group of subjects involved in a research study, meaning all individuals who are relevant to the research and from whom data can be collected. In this study, the population consisted of students from the English Study Program at IAIN Curup, specifically those from the 2022 academic year, with a total of 54 students. These students were in the fifth semester and divided into three classes, namely Class A, Class B, and Class C; therefore, all students from these classes were included as the population of this research.

**Table 3.1**  
**Population of The Research**

<b>No</b>	<b>Class</b>	<b>Total</b>
<b>1</b>	<b>Class A</b>	18
<b>2</b>	<b>Class B</b>	18
<b>3</b>	<b>Class C</b>	18
	<b>Total Population</b>	<b>54</b>

(Source: TBI IAIN Curup)

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<sup>62</sup> Amiruddin Margono, *Metodologi Penelitian Pendidikan* (Jakarta: Rineka Cipta, 2004), 118.

## 2. Sample

According to sugiyono stated that the sample is a part of the number and characteristics possessed by the population.<sup>63</sup> The study focused on students from English Study Program academic years 2022. Because there are fewer than 100 of them in total, so that take all of the population research or total sampling. The total sample was 54 students.

For qualitative data collection, purposive sampling based on the results of the questionnaire was employed. Purposive sampling allows the researcher to select participants who meet specific criteria relevant to the research objectives. Based on the questionnaire results, all respondents were categorized into High and Very High levels of perception. Therefore, the researcher selected participants representing the lower and upper boundaries of positive perception in order to obtain varied and contrasting insights.

The criteria for selecting interview participants were as follows:

1. Students with the highest questionnaire scores (Very High Positive Perception): Participants who obtained scores above 90, indicating that most questionnaire indicators were strongly agreed upon and reflecting highly positive experiences in using visual mind map-based PowerPoint presentations.
2. Student with the lowest questionnaire score (Lower Boundary of Positive Perception): The participant who obtained the lowest score,

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<sup>63</sup> 4 Sugiyono, (2012). *Metode Penelitian Kuantitatif, Kualitatif, dan R & D.* (Bandung: Alfabeta), P.81.

representing the lowest boundary among all respondents. This selection aimed to explore aspects that were perceived as less supportive compared to other participants.

### **C. Techniques of Collecting Data**

Technique of collecting data means the way which researcher used to collecting data or information from the participant. in this research researcher choose questionnaire and interview as technique of collecting data.

#### **1. Quantitative Data**

##### **a. Questionnaire**

Questionnaire is one of proportionately technique in quantitative study. A questionnaire is defined as “any written instrument that presents respondents with a series of questions or statements to which they are to react either by writing their answers or selecting from existing options”.<sup>64</sup> In this study, the questionnaire served as a crucial tool to obtain detailed, structured, and quantifiable data regarding students’ responses to the use of mind mapping on PowerPoint presentations in TEFL classes.

The researcher used a closed-ended questionnaire format, in which the respondents answered based on options provided by the researcher. The questionnaire was distributed to the respondents after the learning activity using mind maps in the form of PowerPoint had been implemented. The respondents were asked to read each statement in the questionnaire and select one answer that best represented their opinion

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<sup>64</sup> James Dean Brown, *Understanding Research in Second Language Learning: A Teacher’s Guide to Statistics and Research Design* (Cambridge: Cambridge University Press, 1988), 6.

based on the options provided. Each statement was measured using a four-point Likert scale to indicate the level of agreement with the given statements. After all respondents completed the questionnaire, the researcher collected the responses and then analyzed the data by calculating the frequency and percentage of each response option.

**Table 3.2**  
**Likert Scoring**

<b>Strongly Agree</b>	<b>Agree</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
4	3	2	1

## 2. Qualitative Data

### a. Semi-Structure Interview

In this study, semi-structured interviews were conducted to validate and further explain the findings obtained from the questionnaire results. Additionally, Ritchie et al. explained that semi structured interviews enable researchers to conduct in-depth exploration and gain a thorough understanding of individuals' perspectives and reactions to particular phenomena.<sup>65</sup> The qualitative data were used to support the quantitative data, particularly to explore the reasons behind students' positive and negative perceptions of mind mapping on PowerPoint presentations in TEFL classes. The interviews were designed to address the second and third research questions. The first interview focused on exploring how the use of Mind Mapping on PowerPoint presentations supports students' understanding of TEFL material. Meanwhile, the second interview aimed

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<sup>65</sup> Ritchie, J., Lewis, J., Nicholls, C. M., & Ormston, R. (2018). *Qualitative Research Practice: A Guide for Social Science Students and Researchers* (2nd ed.). Sage Publications

to investigate the cognitive learning demands experienced by students when using this type of presentation in TEFL classes, including how students process information, manage cognitive load, and interpret visual and linguistic elements during learning.

#### **D. Instruments of the Research**

The instrument is something that used to collect the data or information required.<sup>66</sup> The instrument is a tool used to collect data in a research study. It plays an important role in helping the researcher obtain the required information. In this study, two types of instruments were used to collect both quantitative and qualitative data. A structured questionnaire was used to gather quantitative data on students' perceptions of using mind Mapping on PowerPoint presentations in TEFL classes. In addition, semi-structured interviews were conducted to collect qualitative data, aiming to gain deeper insights into students' experiences, perceived effectiveness, and the cognitive challenges they faced when using the media..

##### **1. The Instrument of Quantitative Research**

###### **a. Questionnaire**

Gay mentioned that a questionnaire is a written collection of self-report questions to be answered by a selected group of research participants.<sup>67</sup> In this research, the questionnaire was used as the primary instrument to gather data from 56 students of fifth semester of the English Tadris Study Program at IAIN Curup. The instrument used in

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<sup>66</sup> Imam Muslim Thesis, "An Analysis of English Lecturer's techniques in Teaching English to Islamic Education (PAI) Study Program in STAIN Curup", 2018.p.20

<sup>67</sup> L R Gay, "Education Research: Competence for Analysis and Application", (Florida International University), p.388

this study is a questionnaire designed to investigate students' perceptions of the use of mind mapping on PowerPoint presentations in understanding TEFL material. The questionnaire was developed by identifying the main variable, namely students' perceptions, which refers to how students interpret and evaluate the learning strategy. This variable was then divided into several indicators, including cognitive understanding, memory retention, engagement, ease of use, cognitive load, language use, and overall effectiveness. Each indicator was further broken down into sub-indicators and developed into clear and simple questionnaire items so that respondents could easily understand them. The questionnaire used a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5), to measure students' responses, and both positive and negative statements were included to reduce bias and improve data accuracy. The closed-ended questions were constructed in the form of Likert scale statements, which is a popular format for measuring perceptions and attitudes.<sup>68</sup> The Likert scale in this research provided five response options:

Strongly Agree : SA

Strongly Disagree : SD

Agree : A

Disagree : D

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<sup>68</sup> Ibid., 93.

**Table 3.3 Blueprint Students' Perceptions of the Use of Mind Mapping in the form of PowerPoint Presentations**

<b>Variable</b>	<b>Indicator</b>	<b>Sub-Indicator</b>	<b>Item Statement</b>	
Students' Perceptions	Cognitive Understanding	Clarity of material	Mind mapping in PowerPoint helps me understand TEFL material more clearly.	
			The material presented through mind mapping is easier to follow.	
		Identifying main ideas	Mind mapping helps me identify the main ideas in TEFL material.	
			I can easily distinguish main ideas and supporting details using mind mapping.	
		Organizing information	Mind mapping helps me organize TEFL material systematically.	
			Mind mapping helps me see the relationship between concepts clearly.	
		Memory Retention	Recall ability	I can remember TEFL material more easily when using mind mapping in PowerPoint.
				I can recall the material better after learning with mind mapping.
			Visual support	The use of colors, keywords, and diagrams helps me remember the material.
	Visual elements in mind mapping make the material easier to remember.			
	Engagement		Interest in learning	Mind mapping in PowerPoint makes the learning process more interesting.
		I feel more motivated when learning TEFL using mind mapping.		
		Attention	I pay more attention when the lecturer uses mind mapping in PowerPoint.	

			Mind mapping helps me stay focused during the lesson.
	Ease of Use	Simplicity	Mind mapping in PowerPoint is easy to understand.
			I find mind mapping simple to use in learning.
		Difficulty level	I find it difficult to understand TEFL material when using mind mapping in PowerPoint. (Negative)
			Mind mapping makes learning more complicated. (Negative)
	Cognitive Load	Mental effort	Using mind mapping in PowerPoint requires a lot of mental effort.
			I feel overwhelmed when using mind mapping in PowerPoint. (Negative)
Language Use	English organization	I find it easier to organize my ideas in English using mind mapping.	
		Mind mapping helps me express my ideas in English more clearly.	
Overall Perception	Effectiveness	Overall, mind mapping in PowerPoint helps me understand TEFL material better.	
		Mind mapping is an effective method for learning TEFL.	
		I would like to use mind mapping in other subjects.	

## 2. The Instrument of Qualitative

### a. Interview Guidance 1

The researcher used an interview guideline to collect detailed information from participants. This guideline included the list of questions, their order, and the level of probing allowed during the interview. Qualitative data were collected through semi-structured

interviews to explore students' understanding of TEFL material based on Lorin Anderson and David Krathwohl's Revised Bloom's Taxonomy. The interviews focused on students' understanding at different cognitive levels, including remembering, understanding, applying, analyzing, and evaluating.

The interview questions were developed through several steps. First, the researcher identified indicators of students' understanding based on the theoretical framework, such as understanding concepts, remembering information, applying knowledge, and analyzing ideas. Second, the questions were designed to align with these indicators to ensure they matched the research objectives. Finally, the questions were reviewed and validated to ensure they were clear, relevant, and appropriate for measuring students' understanding

**Table 3.4**  
**Blueprint Students' Understanding of TEFL Material through**  
**Mind Mapping in the form of PowerPoint Presentations**

<b>Aspect</b>	<b>Indicator</b>	<b>Level of Understanding</b>	<b>Interview Question</b>
Cognitive Understanding	Clarity of material	Understanding	How does the use of mind mapping in PowerPoint help you understand TEFL material?
			Can you explain whether the material becomes clearer when presented using mind mapping? Why?
	Identifying main ideas	Understanding	How does mind mapping help you identify the main ideas in TEFL material?
			Can you give an example of how you

			distinguish main ideas and supporting details using mind mapping?
	Organizing information	Applying	How do you organize TEFL concepts when using mind mapping in PowerPoint? In what way does mind mapping help you connect different TEFL concepts?
Memory Retention	Recall ability	Remembering	Do you find it easier to remember TEFL material when using mind mapping? Why? Can you recall any material that you learned better because of mind mapping?
	Visual support	Remembering	How do colors, keywords, and diagrams in mind mapping help your memory? Which visual elements are most helpful for you in remembering the material?
Cognitive Load	Mental effort	Applying	Do you feel that using mind mapping requires a lot of mental effort? Please explain. What difficulties do you experience when using mind mapping in PowerPoint presentations?
Cognitive Understanding	Overall integration	Applying	How do you apply your understanding of TEFL material when presenting using mind mapping?
	Analysis	Analyzing	How do you analyze the relationship between concepts when creating a mind map?

	Evaluation	Evaluating	In your opinion, how effective is mind mapping in helping you understand TEFL material compared to other methods? Why?
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### b. Interview Guidance 2

The second interview was conducted to address the third research question, which focuses on students' demands in using mind mapping on PowerPoint presentations in TEFL classes. This interview aimed to explore students' needs, expectations, and learning demands related to the use of visual mind map-based PowerPoint as instructional media. The interview blueprint was developed based on Sweller's Cognitive Load Theory, particularly emphasizing intrinsic load, extraneous load, and germane load as key dimensions influencing students' learning experiences. The blueprint of the interview questions is presented in the table below.

**Table 3.5**  
**Blueprint Students' Demands in Using Mind Mapping on PowerPoint Presentations in TEFL Classes**

Aspect	Indicator	Interview Question
Intrinsic Load	TEFL topics feel abstract and complex	How do you feel about the complexity of TEFL topics (such as SLA, grammar pedagogy, and teaching strategies) when they are presented using mind maps in PowerPoint?
	Using English makes understanding harder	How does the use of English in mind maps affect your understanding of TEFL material?
	Need extra effort for dense topics	Do you need extra effort to understand complex TEFL topics when using mind maps? Can you explain your experience?

Extraneous Load	Confusing visual design	How do colors, shapes, and branches in mind maps affect your understanding? Do they help or confuse you?
	Unclear English keywords	What difficulties do you face when mind maps use English keywords without explanation?
	Visual distraction	Do you feel that the design of the mind map ever distracts you from the main idea? Please explain.
Germane Load	Effort to interpret structure	How much effort do you need to understand the structure of a mind map?
	Effort for terminology/translation	Do you spend time trying to understand or translate English terms in the mind map? How does this affect your learning?
	Limited deep understanding	Do you feel that focusing on understanding the mind map limits your ability to think deeply about the material? Why?

## E. Validity of Instrument

### 1. Validity

Validity is an essential requirement to ensure that the results of a study are accurate and credible. A valid instrument refers to an instrument that is capable of measuring what it is intended to measure.<sup>69</sup> In this study, construct validity was employed, as suggested by Sugiyono, who states that non-test instruments should fulfill the requirements of construct validity.

The process of testing the validity was conducted through several stages. First, the researcher developed the questionnaire items based on the indicators derived from Tony Buzan's theory of mind mapping. After that, the questionnaire was consulted with an expert to obtain feedback regarding the clarity of language, the relevance of the indicators, and the

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<sup>69</sup> SugiyonoOp.cit, p.135

appropriateness of each statement in measuring the research variables. Based on the suggestions and comments provided by the expert, several revisions were made to improve the wording and structure of the questionnaire items.

After completing the expert validation process, the researcher conducted a try-out of the questionnaire on January 25th, 2026, involving 20 students from the English Education (Tadris Bahasa Inggris) Study Program at IAIN Curup who were not part of the research sample. This try-out aimed to examine the validity of each questionnaire item. The collected data were analyzed using item-total correlation to obtain the r-count value for each item, which was then compared with the r-table value. With a total of 20 respondents ( $N = 20$ ) at a 5% significance level, the r-table value was 0.444. An item was considered valid if the r-count value exceeded the r-table value ( $r\text{-count} > 0.444$ ), while items with r-count values lower than the r-table ( $r\text{-count} < 0.444$ ) were deemed invalid. Based on the analysis results, all questionnaire items were found to be valid and appropriate for use as the research instrument. The detailed results of the validity testing are presented in the appendix

## **2. Reliability**

After the validity of the questionnaire was analyzed, the researcher also conducted a reliability test to determine the consistency level of the research instrument. The reliability test was carried out using SPSS by applying the Cronbach's Alpha method. This method was selected because the questionnaire in this study consisted of multiple statement items

measured using a Likert scale to assess the same construct, namely students' perceptions of the use of mind mapping on PowerPoint presentations.

The reliability test was conducted using try-out data obtained from 20 students of the English Education (Tadris Bahasa Inggris) Study Program at IAIN Curup on January 25, 2026, who were not included in the research sample. The responses from the try-out questionnaire were then entered into the SPSS program to calculate the Cronbach's Alpha value in order to determine the internal consistency of the instrument. According to Nana, the reliability coefficient indicates the consistency of an instrument, and in psychometric testing, a Cronbach's Alpha value ranging from 0.70 to 0.90 is considered to indicate acceptable to high reliability.<sup>70</sup>

**Table 3.6**  
**Cronbach's Alpha**

<b>Cronbach's Alpha</b>	<b>Internal Consistency</b>
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Based on the output of SPSS, the Cronbach's Alpha value obtained was 0.749, as presented in Table 3.8. It denotes that the item "Acceptable" internal consistency rating.

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<sup>70</sup> Nana Sudjana, *Tuntunan Penyusunan Karya Ilmiah (Makalah Skripsi thesisi dan desertasi)*, (Sinar Baru Al gensindo Bandung 2001), P 56

**Table 3.7**  
**Cronbach's Alpha**

Cronbach's Alpha	N of Items
,749	25

## F. Data Analysis Technique

### 1. Quantitative Data Analysis Technique

After the researcher collects the data from the participants, the next step is to analyze it systematically. Data analysis in this study refers to the process of organizing, scoring, and interpreting the results from the students' responses to the questionnaire about their perceptions toward the use of mind mapping on PowerPoint presentations in TEFL classes. The steps of data analysis are as follows:

The first step is scoring the students' responses. After the questionnaires were collected from 56 fifth-semester students of the English Education Study Program at IAIN Curup, the researcher assigned scores to each response according to the Likert scale. The questionnaire in this study uses a Likert scale, which is commonly employed to measure attitudes, opinions, or perceptions.<sup>71</sup> Each item provides four response options: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1), the formula is described as follow :

$$x = \frac{(f SA \times 5) + (f A \times 4) + (f N \times 3) + (f D \times 2) + (f SD \times 1)}{N}$$

Where:

F : Frequency

SA : Strongly Agree

A : Agree

D : Disagree

SD : Strongly Disagree

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<sup>71</sup> Ibid.,93.

After each respondent's score were accounted, then the researcher were categorized into score ranges to describe students' perceptions of the use of mind mapping on PowerPoint presentations in TEFL classes. Then, the score from each respondent done to be counted, The total score was then compared with the maximum possible score to determine the level of students' perceptions. The formula is following below:

$$P = \frac{\Sigma score}{Max score} \times 100\%$$

Where: P: Percentage<sup>72</sup>  
 $\Sigma score$  : Total Score  
 Max score: Maximum score

The maximum score for each item was obtained by multiplying the highest Likert score (4) by the total number of respondents (56). After calculating the percentage for each item, the researcher interpreted the results to determine the overall level of students' perceptions toward the use of mind mapping on PowerPoint presentations in TEFL learning.

Furthermore, the responses were grouped into positive and negative perceptions. Responses of Strongly Agree and Agree were categorized as positive perceptions, while Disagree and Strongly Disagree were categorized as negative perceptions.

**Table 3.8**  
**Agreement of the Term for Positive Perception**

Scale	Category	
Strongly Agree	Combined	Positive Perception
Agree		
Disagree	Combined	Negative Perception
Strongly Disagree		

<sup>72</sup> Herzberg Paul, Principle of Statistics, (New York: University Press, 1983), p.73

**Table 3.9**  
**Agreement of the Term for Negative Perception**

<b>Scale</b>	<b>Category</b>	
Strongly Agree	Combined	Positive Perception
Agree		
Disagree	Combined	Negative Perception
Strongly Disagree		

Finally, the percentage results were interpreted using the classification proposed by Ridwan (2004) to determine the level of students' perceptions.

The interpretation categories were as follows::

**Table 3.10**  
**Interval Presents**

<b>Interval Presents (%)</b>	<b>Category</b>
76–100%	Very High
51–75%	High
26–50%	Low
0–25%	Very Low

Source: Ridwan, 2004<sup>73</sup>

## 2. Qualitative Data Analysis Technique

In this research, Qualitative data were analyzed using the interactive model proposed by Miles Haberman, which consists of three stages: data reduction, data presentation, and drawing conclusions/verification.<sup>74</sup> These stages were applied systematically to analyze the interview data obtained from 13 students of the English Education Study Program at IAIN Curup who were selected as interview participants.

<sup>73</sup> Ridwan as cited in Wisnu Budiman, Students' Perception Of Lecturers' Role In Enhancing Efl Learners' Communication Ability (A Study at Eight Semester on Academic Year 2018 in IAIN CURUP) P.53

<sup>74</sup> Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook* (3rd ed.). Thousand Oaks, CA: Sage.

a. Data Reduction

Based on Miles' theory, data analysis involves summarizing the data, selecting important information, and identifying themes and patterns. In this study, qualitative data were collected through semi-structured interviews with 13 students selected from the questionnaire results to represent both positive and negative perceptions of using mind mapping on PowerPoint presentations in TEFL classes. The interviews were audio-recorded and then transcribed into written form to facilitate analysis. The researcher read the transcripts repeatedly to understand the participants' responses and then conducted open coding by identifying key statements and summarizing them into main ideas related to students' experiences and perceptions. After that, axial coding was applied by grouping and connecting these ideas into broader categories linked to indicators of understanding, such as recognizing TEFL concepts, interpreting visual information, and understanding relationships between concepts. Through this process, the data were organized into meaningful themes related to students' understanding and cognitive learning demands

b. Data Display

Data displays are organized, compressed collections of information that enable conclusions and actions to be drawn. So, in this step the researcher organized the findings into structured descriptions and tables in order to clearly present the interview results. The data were presented by summarizing students' responses based on the

themes identified during the coding process. The researcher displayed the data by presenting selected interview excerpts, key ideas, conceptual categories, and related indicators. This organized presentation helped the researcher to identify patterns, similarities, and differences in students' experiences and perceptions regarding the use of mind mapping on PowerPoint presentations in TEFL classes.

c. Data Conclusion and Verification

The last step in qualitative research is drawing conclusions. In this stage, the researcher interpreted the patterns and themes that emerged from the interview data in order to answer the second and third research questions. The qualitative findings were also compared with the results obtained from the questionnaire to support and validate the quantitative data.

To ensure the accuracy of the findings, the researcher rechecked the interview transcripts and coding results to confirm that the interpretations were consistent with the participants' original statements. Through this verification process, the researcher was able to draw reliable conclusions regarding how the use of mind mapping on PowerPoint presentations supports students' understanding of TEFL material and the cognitive learning demands experienced during the learning process.

## **CHAPTER IV**

### **FINDINGS AND DISCUSSION**

#### **A. Finding of The Research**

The researcher presented the findings obtained from the questionnaire (quantitative data) and interviews (qualitative data). The purpose of this data collection was to examine students' perceptions, understanding, and cognitive demands regarding the use of mind mapping on PowerPoint presentations in TEFL classes among fifth semester students of the English Tadris Study Program at IAIN Curup. The data collection for this study was conducted in several stages from January 25th to February 18th, 2026 at the English Tadris Study Program, Faculty of Tarbiyah, IAIN Curup.

The first stage was conducted from January 25 to January 29, 2026. During this period, the researcher distributed two questionnaires online to the respondents. The first questionnaire consisted of 25 statements aimed at identifying students' perceptions toward the use of mind mapping on PowerPoint presentations in TEFL classes. A total of 54 students completed this questionnaire through an online form.

The second stage of data collection was conducted from February 15 to February 18, 2026, through semi-structured interviews. The interviews were conducted in various settings depending on the participants' availability, including at the campus, at the participants' homes, and through online communication platforms.

## 1. Students' Perceptions of the Use of Mind Mapping on PowerPoint Presentations in TEFL Classes at the English Tadris Study Program of IAIN Curup.

A questionnaire with 25 statements is used to perform the survey. There were 54 students that completed the questionnaire in its entirety. Since the aim of this study was to investigate students' perceptions, a survey method was employed.

The data were collected through an online questionnaire and then analyzed using descriptive statistical techniques. Each statement was measured using a four-point Likert scale: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). After all responses were collected, the researcher calculated the total score for each statement by multiplying the number of responses by the Likert scale score. Then, the total score was converted into a percentage to determine the level of students' perceptions. The percentages for each indicator are presented in Table below:

**Table 4.1**  
**Table of Students' Perceptions on the Use of Mind Mapping in the form of PowerPoint Presentations in TEFL Classes**

No	Aspects	Percentage	Interpretation
1	Cognitive Understanding	82.1%	Positive
2	Memory Retention	81.3%	Positive
3	Engagement	80.8%	Positive
4	Ease of Use	79.6%	Positive
5	Cognitive Load	77.9%	Positive
6	Language Use	80.0%	Positive
7	Overall Perception	81.5%	Positive
	<b>Average</b>	<b>80.5%</b>	<b>Positive</b>

Based on Table 4.1, The cognitive understanding aspect obtained the highest percentage (82.1%), indicating that the use of mind mapping in PowerPoint helps students understand TEFL material more clearly. Students were able to identify main ideas, organize information, and recognize relationships between concepts more effectively. The memory retention aspect scored 81.3%, showing that visual elements such as colors, keywords, and diagrams help students remember the material more easily, which supports long-term retention. In addition, the engagement aspect reached 80.8%, indicating that students were more interested and attentive during the learning process when mind mapping was used.

Meanwhile, the ease of use aspect obtained 79.6%, meaning that most students found mind mapping in PowerPoint relatively easy to understand, although some still experienced minor difficulties. The cognitive load aspect had the lowest score (77.9%), but it still falls into the positive category, suggesting that some students needed additional mental effort, especially when dealing with complex TEFL material. Furthermore, the language use aspect scored 80.0%, indicating that mind mapping helped students organize and express their ideas in English more clearly. Finally, the overall perception aspect reached 81.5%, showing that students generally considered mind mapping in PowerPoint to be an effective learning tool for understanding TEFL materia.

The findings of this study indicate that students generally have positive perceptions toward the use of mind mapping on PowerPoint presentations in understanding TEFL material. This is reflected in the overall average score,

which falls into the positive category. Mind mapping helps students improve their cognitive understanding by making the material clearer, more structured, and easier to organize. In addition, the use of visual elements such as colors, keywords, and diagrams supports students' memory retention and increases their engagement during the learning process..

However, although the results are positive, some students still experience challenges, particularly related to cognitive load and ease of use. A number of students reported that understanding complex TEFL material through mind maps requires additional mental effort, especially when the content is dense or presented in English. Despite these challenges, students still consider mind mapping in PowerPoint to be an effective learning strategy. Therefore, it can be concluded that mind mapping in PowerPoint presentations is beneficial for supporting students' understanding of TEFL material, provided that it is designed clearly and used appropriately in the learning process

## **2. Students' Aspects of Understanding TEFL Material Using Mind Mapping in the form of PowerPoint Presentations**

This section discusses students' aspects of understanding TEFL material when using mind mapping on PowerPoint presentations. It focuses on how students process, interpret, and respond to the material through several key aspects, including cognitive understanding, memory retention, engagement, ease of use, cognitive load, and language use. By examining these aspects, this section aims to provide a clearer picture of how mind mapping supports students' understanding as well as the challenges they may experience during the learning process

**Table 4.2**  
**Table of Students' Aspects of Understanding TEFL Material When**  
**Using Mind Mapping on PowerPoint Presentations**

<b>Level of Understanding</b>	<b>Key Findings</b>	<b>Interpretation</b>	<b>Students' Statements</b>
Understanding	Mind mapping makes TEFL material clearer and easier to follow.	Supports clearer conceptual understanding.	"The material is easier to understand when it's organized in a mind map with colors and keywords."
Understanding	Helps identify main ideas and distinguish supporting details.	Improves students' ability to recognize key concepts.	"I can quickly see which points are the main ideas and which are examples or details."
Applying	Students can organize TEFL concepts systematically and connect topics.	Facilitates structured organization of knowledge.	"Mind maps help me arrange the topics logically and see how they relate to each other."
Remembering	Students remember material more easily after using mind maps.	Enhances memory retention.	"I remember the content better because I can visualize it with colors and diagrams."
Remembering	Visual elements such as colors, keywords, and diagrams aid memory.	Visual cues play an important role in learning and recalling information.	"Using different colors for each branch helps me recall the material during the test."
Applying	Mind mapping requires extra mental effort for complex topics.	Mind mapping may increase cognitive load for some students.	"Sometimes it's hard to follow all the branches, especially when the material is complicated."
Applying	Students can apply their understanding when presenting using mind maps.	Supports application of knowledge.	"When I present, I can explain the concepts clearly because the mind map guides me."
Analyzing	Helps analyze relationships between concepts.	Promotes analytical thinking.	"I can see how different concepts connect, which makes it easier to explain them."

Evaluating	Most students consider mind mapping more effective than traditional methods.	Overall, mind mapping is perceived as an effective learning strategy.	"I think mind mapping is better than just reading slides because I understand and remember more."
------------	------------------------------------------------------------------------------	-----------------------------------------------------------------------	---------------------------------------------------------------------------------------------------

The table summarizes the findings of students' understanding of TEFL material when using mind mapping on PowerPoint presentations, based on interviews. The data show that students perceive mind mapping as a helpful tool across multiple levels of understanding, from basic comprehension to evaluation. For the understanding level, students reported that mind maps made TEFL material clearer and easier to follow. They also found it easier to identify main ideas and distinguish supporting details, which indicates that the method improves their conceptual understanding and helps them recognize key concepts in a structured way. One student commented, "*The material is easier to understand when it's organized in a mind map with colors and keywords,*" highlighting the role of visual structure in supporting comprehension.

At the applying and remembering levels, students stated that mind mapping helped them organize TEFL concepts systematically and remember the material more easily. The use of visual elements such as colors, keywords, and diagrams served as memory aids that reinforced retention. Students also noted that using mind maps required extra mental effort for complex topics, reflecting an increased cognitive load for some learners. One participant said, "*Sometimes it's hard to follow all the branches, especially when the material is complicated,*" which aligns with Cognitive Load Theory suggesting that highly structured visual information can demand more cognitive processing. Additionally, students reported that mind mapping supported them in applying

their understanding during presentations, as it helped them explain concepts clearly and connect different topics.

At higher cognitive levels, such as analyzing and evaluating, students noted that mind mapping facilitated analysis of relationships between TEFL concepts and promoted critical thinking. They appreciated that mind maps provided a visual overview that helped them see how concepts interconnect, which in turn allowed them to evaluate the effectiveness of the learning method compared to traditional approaches. One student expressed, *“I think mind mapping is better than just reading slides because I understand and remember more.”* Overall, the table demonstrates that mind mapping on PowerPoint supports multiple cognitive processes understanding, application, memory, analysis, and evaluation while also highlighting some challenges, such as increased mental effort for complex content. These findings show that mind mapping is generally perceived as an effective and engaging learning strategy in TEFL classes.

### **1. Understanding**

Based on the table, Understanding emerges as the most dominant aspect. This is indicated by the fact that five out of six indicators were fulfilled by all 13 students (the entire sample). These five indicators show that students were able to understand TEFL concepts presented visually, making difficult material simpler; summarize the main ideas of the material; grasp basic principles and draw conclusions; compare similarities and differences among methods visually; and identify cause-and-effect relationships as well as connections between theory and practice. The

remaining indicator, classifying concepts based on their characteristics, was relevant to 11 students, meaning that most students were able to group methods systematically, although not all. This was reflected in the following statements:

*"I usually look at the title first. From the title, I can identify the main topic. I also look at the definitions in the mind map to better understand the material." (S3)*

*"The branches help distinguish each part." (S5)*

*"Because in the mind map, it only contains the key points, so difficult theories are summarized into the main points, making them easier to understand." (S9)*

*"Because of the points, it's clearly visible the differences between this theory and that one." (S4)*

## **2. Remembering**

In the Remembering aspect, there are four indicators. The first three were fulfilled by all students: recognizing the main topic through the center or branches of the mind map, recognizing methods or strategies based on their visual appearance, and recalling previously learned material with the help of keywords and colors. This indicates that, in general, recognition and retrieval processes functioned effectively. However, the fourth indicator was only relevant to 3 students, who reported that the retention was temporary. This means that although most students were supported in recalling information, a small number experienced limited memory durability.. Representative statements include:

*"The points are written there, so we can immediately know what the main points of the material are." (S4)*

*"Maybe it's more fun when it's taught, and we practice it directly. So it sticks in my mind more." (S1)*

*"I feel it is easier to remember the material compared to studying in the usual way. Mind maps act like memory maps that help me reimagine the material, for example during exams. The most helpful parts are the keywords and relationships between concepts." (S13)*

### **3. Analyzing**

Within the Analyzing aspect, three indicators were identified. Two were fulfilled by all students: organizing concepts into a systematic structure and identifying the goals and focus of each approach. This suggests that students were generally able to recognize the structure and orientation of the TEFL material. The remaining indicator, differentiating relevant and irrelevant information, was related to 11 students, indicating that this analytical skill was not evenly demonstrated across the entire sample. Evidence from the data includes:

*"I only include the important points in the mind map. Less important information is usually not written or is placed on the side without long explanations." (S3)*

*"The structure is organized from the center to the branches." (S5)*

*"The mind map forces me to think logically and hierarchically, different from long texts that are sometimes rigid and messy." (S13)*

*"Yes, it is clearly visible, for example whether a method is student-centered or teacher-centered." (S2)*

#### **4. Evaluating**

For the Evaluating aspect, both indicators were fulfilled by all students. Students were able to assess the effectiveness of a method based on certain criteria and to examine the consistency and accuracy of strategies or materials by identifying inappropriate or inaccurate elements. This demonstrates that evaluative skills were consistently present among all participants. Representative statements:

*"Yes. If a part is incomplete, for example missing an example, I notice it and usually look for additional explanations from friends or other sources." (S3)*

*"From the points first. Usually I have to understand the meaning and examples first, then I can assess if it's effective or not. Sometimes I also need to review or ask friends to understand better." (S4)*

*"I evaluate it based on the objectives, relevance of the material, and practicality of application, which are clearly visible from the mind map." (S13)*

These responses highlight that the mind map format promotes critical evaluation by making conceptual relationships and potential gaps explicit.

#### **5. Applying**

In the Applying aspect, three indicators were identified. One indicator executing TEFL procedures in familiar instructional contexts was fulfilled by all students, meaning that they were able to follow and implement

known instructional steps. However, in unfamiliar contexts, only 9 students were able to adapt methods to different situations. Additionally, 2 students stated that the implementation of methods depended on the learning situation. This indicates that application in new contexts was not uniformly demonstrated. Illustrative statements:

*"Yes, it was practiced during microteaching and PPL." (S6)*

*"In microteaching, I find it easier to arrange the learning steps systematically, from opening, core, to closing." (S13)*

*"Yes, because there are several options in the subtopics that we can use according to real-life situations." (S1)*

These findings suggest that while mind maps are effective for procedural application in familiar contexts, transferring knowledge to novel situations requires higher-level reasoning and adaptive thinking.

## **6. Evaluating**

For the Evaluating aspect, both indicators were fulfilled by all students. Students were able to assess the effectiveness of a method based on certain criteria and to examine the consistency and accuracy of strategies or materials by identifying inappropriate or inaccurate elements. This demonstrates that evaluative skills were consistently present among all participants. Representative statements:

*"Yes. If a part is incomplete, for example missing an example, I notice it and usually look for additional explanations from friends or other sources." (S3)*

*"From the points first. Usually I have to understand the meaning and examples first, then I can assess if it's effective or not. Sometimes I also need to review or ask friends to understand better." (S4)*

*"I evaluate it based on the objectives, relevance of the material, and practicality of application, which are clearly visible from the mind map." (S13)*

These responses highlight that the mind map format promotes critical evaluation by making conceptual relationships and potential gaps explicit.

### **3. Students' Cognitive Learning Demands in Mind Mapping on PowerPoint Presentations**

The findings show that using mind mapping on PowerPoint presentations creates specific cognitive demands for students in TEFL classes. Students need to process visual structures, connect concepts, remember information, and express their ideas in English. These tasks require attention, mental effort, and analytical thinking, which influence how well students understand and retain the material. The following sections present detailed results on the cognitive demands experienced by students while using mind mapping in learning TEFL.

**Table 4.3**  
**Table of Students' Cognitive Learning Demands in Mind Mapping**  
**on PowerPoint Presentations**

No	Aspect	The Way They Influence Students' Cognitive Learning Demands
1.	Germane Load	Students had to translate English terminology, look up meanings, discuss terms, and spend time understanding the flow of the mind map before fully understanding the material, which slowed them down and made deeper thinking difficult.
2.	Extraneous Load	Students felt confused by too many colors, excessive branches, dominant visuals, and unexplained keywords, which distracted them from focusing on the main TEFL content.
3.	Intrinsic Load	Students perceived TEFL topics such as SLA and grammar pedagogy as abstract and inherently complex, and they felt that the use of English in mind maps made the material harder to understand.
<b>Additional Findings Emerging from the Interview Data</b>		
4.	Affective / Motivational Response (Additional Finding)	Students felt that attractive visual design increased their initial interest in reading the material.

The summary table shows that students experienced cognitive learning demands in three main aspects: germane, extraneous, and intrinsic load. In terms of germane load, students reported that they had to translate English terminology, look up unfamiliar words, discuss meanings with peers, and spend additional time understanding the structure and flow of the mind map before they could fully grasp the material. This process slowed their learning and reduced their immediate ability to engage in deeper conceptual thinking. Regarding extraneous load, students felt confused by excessive colors, too many branches, dominant visual elements, and unexplained keywords, which distracted them from focusing on the core TEFL concepts. For intrinsic load, students perceived TEFL topics such as SLA, grammar pedagogy, and teaching strategies as abstract and inherently complex, and they felt that the

use of English terminology in the mind maps further increased the level of difficulty. However, a different pattern appeared in the fourth aspect, Affective/Motivational Response, where one student stated that the attractive visual design increased initial interest in reading the material. Unlike the other findings that describe cognitive burden, this aspect reflects a positive emotional response rather than a cognitive load factor.

### **1. Germane Cognitive Load**

Based on the table, Germane Load appears as the most dominant aspect influencing students' cognitive learning demands. This is shown by the fact that three indicators under this aspect were reported by all 13 students. All respondents stated that they needed additional effort to understand or translate English terminology, that they had to spend time interpreting the structure and flow of the mind map, and that the translation process slowed down their learning. Furthermore, 12 out of 13 students reported that because much of their mental energy was used to understand terminology and structure, they found it difficult to immediately engage in deeper conceptual processing or critical reflection. These findings indicate that students' cognitive resources were largely allocated to organizing and comprehending the material before they could move to higher-level thinking. These experiences were clearly reflected in the following interview excerpts:

*"I have to translate some of the English terms first before I understand what the branch means." (S3)*

*“Before understanding the content, I need time to follow the flow from the center to the smaller branches.” (S7)*

*“When I stop to translate the words, the learning process becomes slower.” (R8)*

*“Sometimes I am already tired just trying to understand the main concept, so it is hard to think more deeply.” (S11)*

## **2. Extraneous Cognitive Load**

The second finding reveals that for Extraneous Load, two indicators were also consistently experienced by all 13 students. All respondents mentioned that overly crowded designs such as too many colors, excessive branches, and inconsistent shapes caused confusion. They also stated that dominant visual elements sometimes distracted them from focusing on the main TEFL content. In addition, 2 students specifically reported that English keywords without explanation made the material harder to understand. Although this indicator was mentioned by only two respondents, it still indicates that unexplained keywords contributed to additional cognitive difficulty for some students. These experiences were clearly reflected in the following interview excerpts:

*“If there are too many colors and branches, I feel confused about which part is important.” (S4)*

*“The design is sometimes too dominant, so I focus more on the appearance than on the explanation.” (S6)*

*“When there are only keywords without explanation, I do not clearly understand the meaning.” (S5)*

### 3. Intrinsic Cognitive Load

In terms of Intrinsic Load, all 13 students perceived TEFL topics such as SLA, grammar pedagogy, and teaching strategies as abstract and inherently complex, especially when presented in mind map form. They also stated that the use of English in the mind maps increased the difficulty of understanding the material. Additionally, 1 student specifically highlighted that linguistically dense terminology required extra effort to follow. These findings show that the inherent complexity of the TEFL content itself contributed significantly to students' cognitive demands. These experiences were clearly reflected in the following interview excerpts:

*“The theory is still difficult because it is abstract, even if it is summarized in a mind map.” (S1)*

*“Concepts like language acquisition need more detailed explanation, not only keywords.” (S12)*

*In addition, students emphasized that the use of English academic terminology increased the level of difficulty.*

*“It interrupts my concentration because I have to stop and translate the English terms.” (S9)*

*“If the topic contains many technical terms, it takes more effort to follow the mind map.” (S10)*

### 4. Affective / Motivational Response

Lastly, the fourth aspect, Affective/Motivational Response, represents a different pattern. Unlike the previous aspects, which focus on cognitive burden and learning obstacles, this finding reflects a positive response. One

student stated that attractive visual design increased their initial interest in reading the material. This result does not align with the indicators analyzing cognitive load barriers, but it emerged as an additional finding from the interview data. Therefore, it can be considered a complementary insight that, although the design sometimes created cognitive challenges, it could also generate positive motivational effects for some students: These experiences were clearly reflected in the following interview excerpts:

*“If the design is attractive, I feel more interested to read it at first.” (S2)*

The findings show that students’ cognitive learning demands when using mind mapping on PowerPoint were influenced by four main aspects. Germane cognitive load was the most significant, as students needed to translate English terms, interpret the connections between ideas, and reorganize information, which sometimes slowed down deeper thinking. Extraneous load appeared when crowded designs, too many colors, or distracting visuals made it harder to focus on the main TEFL content, and a few students struggled with unexplained English keywords. Intrinsic load was also present because TEFL topics like SLA, grammar pedagogy, and teaching strategies were naturally complex, and English academic terms added extra difficulty. A minor affective effect was noted, where attractive visuals increased initial interest in learning. Overall, mind map-based presentations required students to manage terminology, structure, visual design, and complex content, shaping their cognitive effort during learning.

## **B. Discussion**

In this section, the researcher discusses the findings of the study concerning students' perceptions toward the use of mind mapping on PowerPoint presentations in TEFL classes at the English Tadris Study Program of IAIN Curup. The discussion is intended to interpret and analyze the results presented in the previous section in order to answer the three research questions formulated in this study. Furthermore, the researcher relates the findings to relevant theories and previous studies on mind mapping, visual learning, and instructional media. Through this discussion, the researcher aims to explain how the use of mind mapping on PowerPoint presentations influences students' understanding of TEFL material and how students perceive its implementation in the classroom.

### **a. Students' Perceptions of the Use of Mind Mapping on PowerPoint Presentations in TEFL Classes**

Students' perceptions refer to how learners evaluate and respond to instructional media based on their experiences, understanding, and cognitive engagement. In the context of TEFL classes at IAIN Curup, students' perceptions of mind mapping in the form of PowerPoint presentations were consistently positive across all six aspects of Tony Buzan's mind mapping principles: *Use Emphasis*, *Use Association*, *Be Clear*, *Develop a Personal Style*, *Use Hierarchy*, and *Use Numerical Order*. This study found an overall positive perception with an average of **80.2%**, indicating that most students believe visual presentations help them

understand TEFL material, connect concepts, and organize information logically.

Several previous studies support these findings. For instance, Sakkir (2023) examined students' perceptions of mind mapping in a writing class at MTsN 2 Makassar and found that the majority of students (63.63%) had very positive perceptions of using mind mapping to organize ideas, enhance comprehension, and increase confidence.<sup>75</sup> Similarly, Kadek Anggun (2022) reported that visual mind mapping helped high school students summarize and recall material, develop creativity, and increase engagement in learning.<sup>76</sup> These studies align with the present findings, particularly regarding the benefits of visualization, concept linking, and clarity in information organization. Additionally, Feng et al. (2023) found that mind mapping significantly improved vocabulary recall, retention, and learning motivation among Iranian EFL learners.<sup>77</sup> Although their study focused on quantitative outcomes rather than subjective perceptions, the positive effects of visual representation are consistent with the present study, where students reported that structured visual presentations facilitated understanding and information retention.

However, there are differences between previous research and this study. Sakkir and Kadek Anggun did not explicitly apply a structured mind mapping theoretical framework, whereas the current study integrates Tony

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<sup>75</sup> Geminastiti Sakkir, (2023) "Students' Perceptions on the Use of Mind Mapping Technique in Writing Class," *Journal of Indonesian Scholars for Social Research* 3, no. 1: p. 59–61

<sup>76</sup> Anggun Kadek S., (2022) "Students' Perception of the Use of Mind Mapping as a Visual Learning Tool," *Journal of Educational Science* 2, no. 2: p. 160–166

<sup>77</sup> Rui Feng, dkk., (2023) "*Impact of Mind-Mapping Technique on EFL Learners' Vocabulary Recall and Retention, Learning Motivation, and Willingness to Communicate,*" *Heliyon* 9, p. 6-11

Buzan's principles, evaluating both technique aspects (emphasis, association, clarity, personal style) and layout aspects (hierarchy, numerical order). Moreover, earlier studies primarily examined writing classes or general mind mapping use, while this study specifically applies mind mapping to TEFL material and combines quantitative and qualitative approaches to capture both perception scores and students' explanations for their attitudes.

Overall, this study confirms and extends previous findings by demonstrating that mind mapping on PowerPoint presentations in TEFL classes are not only positively perceived but also support cognitive organization, comprehension, and student engagement. Student statements consistently emphasize the role of *visual emphasis*, associative linking, and structural clarity in facilitating meaningful understanding, aligning with prior literature while adding insights specific to TEFL instructional contexts.

## **2. Students' Aspects of Understanding of TEFL Material When Using Mind Mapping on PowerPoint Presentations**

This study aimed to examine students' Aspects of understanding of TEFL material when using mind mapping on PowerPoint presentations. The findings indicate that among the six cognitive aspects of Bloom's Revised Taxonomy when using mind mapping on PowerPoint presentations in TEFL classes at IAIN Curup, students demonstrated the greatest engagement in *understanding*. They were able to visually interpret TEFL concepts, simplify complex material, summarize main ideas, infer basic principles, compare

instructional methods, explain relationships between theory and practice, and classify concepts according to their characteristics. This dominance of *understanding* contrasts with Köksal, Ulum, and Yürük, who found that in Turkish EFL textbooks, the *remembering* aspect was most prevalent (65.79%), with *understanding* at 30.51% and higher-order skills such as analyzing and evaluating almost absent.<sup>78</sup> This difference suggests that while textbooks primarily promote lower-order cognitive engagement, the integration of mind mapping on PowerPoint presentations actively encourages students to process and organize knowledge conceptually, enhancing comprehension beyond rote memorization. Unlike Köksal et al., whose study quantitatively analyzed textbook questions, the present research demonstrates through qualitative interviews and observation how instructional media scaffold students' cognitive processing in real-time learning contexts, supporting meaningful connection and integration of TEFL concepts. Hustarna similarly reported that mind mapping strategies facilitate concept organization, though students often encounter challenges in structuring unfamiliar material.<sup>79</sup> The present study extends these insights by showing that visual PowerPoints can reduce cognitive barriers while fostering conceptual understanding, particularly in TEFL-specific learning environments.

Regarding *remembering*, students reported that they could identify main topics and recall previously learned information using keywords,

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<sup>78</sup> Köksal, F., Ulum, Ö., & Yürük, N. (2023), "The Inclusion of Revised Bloom's Taxonomy in the Reading Sections of EFL Textbooks," *Journal of Educational Studies* 15, no. 3: 45–57.

<sup>79</sup> Hustarna, N., & Efriani, N. (2025), *Students' Experiences and Strategies in Creating Mind Maps in The TEYL Course*, Universitas Jambi, Jambi, Indonesia, 104–111.

colors, and structured visual cues. This aligns with Kadek Anggun (2022), who found that visual mind mapping enhances memory retention in high school learners.<sup>80</sup> However, unlike the textbook context in Köksal et al. (2023), where *remembering* dominates due to the nature of exercises, the current study found that although students could recall content effectively, retention was sometimes temporary, suggesting that mind maps support immediate recall but may require repeated exposure for long-term consolidation.<sup>81</sup> Bolatli and Zafer (2024) also emphasized that visual structuring reduces cognitive load, reinforcing the idea that memory retention depends on the clarity, hierarchy, and organization of instructional material.<sup>82</sup> These findings indicate that while *remembering* remains important, the instructional medium shifts the cognitive focus toward *understanding* and higher-order engagement.

At the analytical and higher-order levels, students demonstrated the ability to differentiate essential from non-essential information, organize concepts coherently, and identify the goals of various TEFL approaches. Ma noted that high cognitive load can impede such analytical processing in online learning; however, in the present study, mind map-based visuals appear to reduce extraneous cognitive load, allowing students to concentrate on meaningful comparison and categorization of TEFL concepts.<sup>83</sup>

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<sup>80</sup> Kadek Anggun, S. (2022), "Students' Perception of the Use of Mind Mapping as a Visual Learning Tool," *Journal of Educational Science* 2, no. 2: 160–166.

<sup>81</sup> Ibid.

<sup>82</sup> Bolatli & Zafer, "The Effect of Concept Map Technique on Students' Cognitive Load and Academic Success in Anatomy Course," *Medical Science Educator* 34 (2024): 1487–1496.

<sup>83</sup> Ma, "Investigation of the Impact of Cognitive Load on EFL Learners' Satisfaction with MOOCs," *BMC Psychology* 13, no. 416 (2025), 6–10.

Similarly, students reported generating new ideas, planning instructional procedures, and producing teaching materials, though not all outputs were fully original, echoing Hustarna's observation that learners often rely on structured templates when producing creative content.<sup>84</sup> These findings suggest that while the medium stimulates higher-order cognitive engagement, including creating and evaluating, additional scaffolding and iterative practice are necessary to fully develop independent creative skills in TEFL lesson design.

In conclusion, this study demonstrates that mind mapping on PowerPoint presentations primarily support students' *understanding* of TEFL material, while still engaging other cognitive aspects such as remembering, analyzing, creating, evaluating, and applying knowledge. Compared with prior studies, the present research reveals a shift in cognitive engagement: from textbook-driven lower-order focus (*remembering*) to media-enhanced comprehension and conceptual processing (*understanding*). These findings highlight the importance of instructional design quality, repeated exposure, and scaffolded support to fully realize higher-order cognitive outcomes in TEFL learning, emphasizing both the cognitive advantages and the remaining challenges of mind map-based instructional media.

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<sup>84</sup> Ibid.

### **3. Students' Cognitive Learning Demands in Mind Mapping on PowerPoint Presentations**

The findings of this study regarding students' cognitive learning demands when using mind mapping on PowerPoint presentations in TEFL classes at IAIN Curup reveal nuanced insights into how instructional design and content complexity interact with cognitive processing. Analysis revealed that students experienced multidimensional cognitive demands categorized according to Sweller's Cognitive Load Theory into germane, extraneous, and intrinsic load, with an additional affective/motivational response dimension.<sup>85</sup> Among these, germane load was the most dominant, as students frequently reported allocating extra mental effort to translate English terminology, interpret structural flows, and understand complex TEFL concepts before engaging in deeper analysis or reflection. This demonstrates that the process of understanding and organizing knowledge actively engages learners' cognitive resources, supporting conceptual comprehension beyond rote memorization.

#### **a. Germane Load**

Germane load in this study is closely associated with students' effort to process, integrate, and make meaningful connections among TEFL concepts. Thirteen students consistently reported that they needed to translate English terms, interpret mind map structures, and discuss content with peers to fully grasp the material. This aligns partially with Ma, who observed that cognitive load in MOOCs can inhibit analytical processing;

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<sup>85</sup> Ma, X. (2025). *Investigation of the impact of cognitive load on EFL learners' satisfaction with MOOCs: the mediating role of expectation confirmation and perceived usefulness*. *Journal of Online Learning Research*, 10(3), 67–89.

however, unlike Ma, the present study focuses on how germane load facilitates rather than impedes learning once students navigate terminology and structure.<sup>86</sup> Similarly, Hustarna noted that mind-mapping requires effortful organization, time, and planning, which mirrors the current findings, though in TEYL rather than TEFL contexts.<sup>87</sup> Unlike Köksal, Ulum, and Yürük, who focused on textbook questions and found that remembering dominated with minimal higher-order engagement, the present study demonstrates that conceptual understanding and germane processing dominate when interactive visual media are used, highlighting a shift in cognitive emphasis due to instructional design. This contrast illustrates that Sweller's framework can be applied differently depending on instructional medium: textbook exercises primarily impose minimal germane demand, while mind maps actively engage it.

#### **b. Extraneous Load**

Students also experienced extraneous load due to visual complexity, including excessive colors, numerous branches, and unexplained keywords. Thirteen students reported that these design features sometimes distracted them from focusing on the main TEFL content. This is consistent with Bolatli and Zafer, who found that poorly structured concept maps increase extraneous cognitive load, reducing learning efficiency.<sup>88</sup> Unlike Bolatli and Zafer, the current study specifically identifies the influence of language

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<sup>86</sup> Ibid.

<sup>87</sup> Hustarna, R. (2025). "Students' Experiences and Strategies in Creating Mind Maps in the TEYL Course." *Indonesian Journal of Language Teaching*, 11(2), 55–78.

<sup>88</sup> Köksal, A., Ulum, Ö., & Yürük, N. (2023). "The Inclusion of Revised Bloom's Taxonomy in the Reading Sections of EFL Textbooks." *Journal of Language and Education*, 9(1), 45–67.

complexity on extraneous load, as students must process English terminology while navigating complex visuals. Compared to Kadek Anggun (2022), who found overall positive perceptions of mind maps among high school students, this study emphasizes that positive attitudes do not fully mitigate extraneous cognitive challenges, suggesting that both design clarity and linguistic accessibility are crucial for effective TEFL learning.<sup>89</sup>

### c. Germane Load

Intrinsic load was high due to the inherent complexity of TEFL topics (SLA, grammar pedagogy, teaching strategies) and the use of English terminology. All 13 students reported difficulty in comprehending abstract concepts, especially when compounded by dense terminology. This aligns theoretically with Sweller, indicating that material complexity determines the baseline cognitive demand.<sup>90</sup> Rui Feng et al similarly noted that mind mapping improves vocabulary organization and retention, but they focused primarily on quantitative outcomes, whereas the present study highlights students' perceived cognitive effort and the need to manage intrinsic load through structured scaffolding.<sup>91</sup> This distinction underlines that the interaction between intrinsic and germane load is particularly significant in TEFL contexts: students first invest effort in understanding content

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<sup>89</sup> Sweller, J. (2011). *Cognitive Load Theory*. *Psychology of Learning and Motivation*, 55, 37–76.

<sup>90</sup> Bolatli, H., & Zafer, S. (2024). "The Effect of Concept Map Technique on Students' Cognitive Load and Academic Success in Anatomy Course." *Health Education Research Journal*, 39(4), 200–218.

<sup>91</sup> Kadek Anggun, K. A. (2022). *Students' Perception of The Use of Mind Mapping as a Visual Learning Tool*. Universitas Pendidikan Ganesha, Indonesia.

(intrinsic) before they can process and connect concepts meaningfully (germane).

**d. Affective / Motivational Response**

While cognitive loads dominate, one student reported that attractive visual design increased initial interest, echoing Kadek Anggun<sup>92</sup> and Rui Feng et al. regarding motivational benefits of visual tools.<sup>93</sup> This differs from germane, extraneous, and intrinsic load, as it reflects positive emotional engagement rather than cognitive effort.

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<sup>93</sup> Rui Feng, R., et al. (2023). "Impact of Mind-Mapping Technique on EFL Learners' Vocabulary Recall and Retention, Learning Motivation, and Willingness to Communicate." *Journal of Language Teaching and Research*, 14(2), 123–145.

## **CHAPTER V**

### **CONCLUSION AND SUGGESTION**

#### **A. Conclusion**

##### **1. Students' Perceptions of the Use of Mind Mapping on PowerPoint Presentations in TEFL Classes**

Based on the data, students' perceptions of using mind mapping on PowerPoint for learning TEFL are generally positive. Cognitive understanding scored the highest (82.1%), showing that students felt this method helped them understand TEFL concepts clearly. Memory retention (81.3%) and overall perception (81.5%) indicate that visual organization improved remembering and overall learning experience. Engagement (80.8%) and language use (80.0%) show students were attentive, interested, and able to express ideas in English. Ease of use (79.6%) suggests the method was mostly accessible, while cognitive load (77.9%) was slightly lower but still positive, meaning some effort was needed. Overall, the average score of 80.5% shows that students see mind mapping in PowerPoint as an effective tool for learning TEFL.

##### **2. Students' Levels of Understanding of TEFL Material When Using Mind Mapping on PowerPoint Presentations**

The findings of this study show that using mind mapping on PowerPoint has a positive effect on students' understanding of TEFL material. It helped students understand concepts more clearly, identify main ideas, and organize information systematically. Visual elements like colors, keywords,

and diagrams also improved memory retention. Mind mapping increased students' engagement, making lessons more interesting and easier to follow. Although some students experienced extra mental effort with complex topics, overall perceptions were highly positive. Additionally, students were able to apply, analyze, and evaluate TEFL concepts, showing that mind mapping supports higher-order thinking skills. Overall, mind mapping on PowerPoint is an effective tool for enhancing understanding, retention, and learning in TEFL classes.

### **3. Students' Cognitive Learning Demands in Mind Mapping on PowerPoint Presentations**

Students experienced three types of cognitive load when using mind mapping on PowerPoint: intrinsic, extraneous, and germane. Intrinsic load was the highest, caused by the complexity of TEFL topics like SLA, grammar, teaching strategies, and English terminology, requiring extra effort such as translation or discussion. Extraneous load came from visual design issues, like too many colors, branches, unclear sequences, or missing explanations, which sometimes distracted students from key content. Germane load was lower, involving effort to understand the structure of the mind maps and organize information before deeper thinking. Students noted that once they understood the layout and terminology, they could analyze and synthesize information effectively. Overall, content complexity created the greatest cognitive demand, while design and language influenced learning efficiency, and effort for meaningful processing came after basic understanding

## **B. Suggestions**

Based on the findings of this study regarding students' perceptions, aspects of understanding, and cognitive learning demands when using mind mapping on PowerPoint presentations in TEFL classes, several suggestions are proposed as follows:

### **1. For English Study Program**

The English Tadris Study Program is encouraged to support using mind mapping on PowerPoint for TEFL courses, as students showed positive perceptions and better understanding, especially in remembering, understanding, and analyzing. The program could provide training or workshops for lecturers on designing clear, well-structured visual presentations with appropriate English terms to reduce confusion. Curriculum planning should also include activities that encourage higher-order thinking, such as applying, analyzing, and creating, so students can practice using and generating ideas effectively.

### **2. For TEFL Lecturers**

TEFL lecturers are advised to continue employing mind mapping on PowerPoint presentations while carefully managing cognitive load. Lecturers should use clear and consistent visual structures, limit excessive colors and decorative elements, and provide brief explanations for English keywords to support comprehension. To facilitate higher-order cognitive skills, structured tasks such as instructional design projects, guided critiques, and contextualized teaching simulations are recommended. These

strategies will help students progress from foundational knowledge to deeper analytical and creative thinking.

### **3. For Students**

Students should actively use mind map-based materials rather than just passively viewing them. They can improve learning by reviewing content before and after class, learning English terms, practicing TEFL concepts in different contexts, and discussing ideas with peers. Breaking complex material into smaller parts, making simpler personalized mind maps, and asking for clarification from lecturers or peers can help manage cognitive load and support higher-level thinking, such as evaluating and creating ideas.

### **4. For Future Researchers**

Future researchers are encouraged to study the use of mind mapping on PowerPoint presentations in other courses to see if the findings apply more broadly. They could also explore how presentation design affects different types of cognitive load, such as reducing distractions while supporting meaningful learning. Additionally, experimental or long-term studies could examine how regular use of mind maps helps develop higher-order thinking skills like critical thinking and creativity.

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## APPENDIX 1

## SK

**KEMENTERIAN AGAMA REPUBLIK INDONESIA**  
**INSTITUT AGAMA ISLAM NEGERI CURUP**  
**FAKULTAS TARBİYAH**

Alamat : Jalan DR. A.K. Gani No 1 Kotak Pos 108 Curup-Bengkulu Telpn. (0732) 21010  
Fax. (0732) 21010 Homepage <http://www.iaincurup.ac.id> E-Mail : [admin@iaincurup.ac.id](mailto:admin@iaincurup.ac.id)

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Nomor : 816 Tahun 2025

Tentang  
PENUNJUKAN PEMBIMBING I DAN 2 DALAM PENULISAN SKRIPSI  
INSTITUT AGAMA ISLAM NEGERI CURUP

**Menimbang** : a. Bahwa untuk kelancaran penulisan skripsi mahasiswa, perlu ditunjuk dosen Pembimbing I dan II yang bertanggung jawab dalam penyelesaian penulisan yang dimaksud ;  
b. Bahwa saudara yang namanya tercantum dalam Surat Keputusan ini dipandang cakap dan mampu serta memenuhi syarat untuk diserahi tugas sebagai pembimbing I dan II ;

**Mengingat** : 1. Undang-Undang Nomor 20 tahun 2003 tentang Sistem Pendidikan Nasional ;  
2. Peraturan Presiden RI Nomor 24 Tahun 2018 tentang Institut Negeri Islam Curup;  
3. Peraturan Menteri Agama RI Nomor : 30 Tahun 2018 tentang Organisasi dan Tata Kerja Institut Agama Islam Negeri Curup;  
4. Keputusan Menteri Pendidikan Nasional RI Nomor 184/U/2001 tentang Pedoman Pengawasan Pengendalian dan Pembinaan Program Diploma, Sarjana dan Pascasarjana di Perguruan Tinggi;  
5. Keputusan Menteri Agama RI Nomor 019558/B.II/3/2022, tanggal 18 April 2022 tentang Pengangkatan Rektor IAIN Curup Periode 2022 - 2026.  
6. Keputusan Direktur Jenderal Pendidikan Islam Nomor : 3514 Tahun 2016 Tanggal 21 oktober 2016 tentang Izin Penyelenggaraan Program Studi pada Program Sarjana STAIN Curup  
7. Keputusan Rektor IAIN Curup 0704/In.34/R/KP.07.6/09/2023 tanggal 29 September 2023 tentang Pengangkatan Dekan Fakultas Tarbiyah Institut Agama Islam Negeri Curup.

**Memperhatikan** : 1. Permohonan Saudara Dwi Indah Sari tanggal 22 Desember 2025 dan kelengkapan persyaratan pengajuan SK Pembimbing Skripsi  
2. Berita Acara Seminar Proposal Pada Hari Kamis, 10 Juli 2025

**MEMUTUSKAN :**

**Menetapkan**

**Pertama** : 1. **Dr. Lefli Noviyenti M.Pd** **197611062003122004**  
2. **Paidi Gusmuliana M.Pd.** **198408172015031004**

Dosen Institut Agama Islam Negeri (IAIN) Curup masing-masing sebagai Pembimbing I dan II dalam penulisan skripsi mahasiswa :

N A M A : **Dwi Indah Sari**  
N I M : **22551014**  
JUDUL SKRIPSI : **Students' Perceptions toward the use of English-Language Visual Mind Map-Based Powerpoint Presentations in Understanding TEFL Material**

**Kedua** : Proses bimbingan dilakukan sebanyak 12 kali pembimbing I dan 12 kali pembimbing II dibuktikan dengan kartu bimbingan skripsi ;

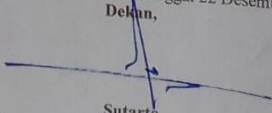
**Ketiga** : Pembimbing I bertugas membimbing dan mengarahkan hal-hal yang berkaitan dengan substansi dan konten skripsi. Untuk pembimbing II bertugas dan mengarahkan dalam penggunaan bahasa dan metodologi penulisan ;

**Keempat** : Kepada masing-masing pembimbing diberi honorarium sesuai dengan peraturan yang berlaku ;

**Kelima** : Surat Keputusan ini disampaikan kepada yang bersangkutan untuk diketahui dan dilaksanakan sebagaimana mestinya ;


**Keenam** : Keputusan ini berlaku sejak ditetapkan dan berakhir setelah skripsi tersebut dinyatakan sah oleh IAIN Curup atau masa bimbingan telah mencapai 1 tahun sejak SK ini ditetapkan ;

**Ketujuh** : Apabila terdapat kekeliruan dalam surat keputusan ini, akan diperbaiki sebagaimana mestinya sesuai peraturan yang berlaku.

Ditetapkan di Curup,  
Pada tanggal 22 Desember 2025  
**Dekan,**  
  
**Sutarto**

**Tembusan :**  
1. Rektor  
2. Bendahara IAIN Curup;  
3. Kabag Akademik kemahasiswaan dan kerja sama;  
4. Mahasiswa yang bersangkutan;

## KARTU PEMBIMBING 1



**KEMENTERIAN AGAMA REPUBLIK INDONESIA**  
**INSTITUT AGAMA ISLAM NEGERI CURUP**

















Jalan AK Gani No. 01 Kotak Pos 108 Telp. (0732) 21010-21759 Fax. 21010  
Homepage: <http://www.iaincurup.ac.id> Email: [admin@iaincurup.ac.id](mailto:admin@iaincurup.ac.id) Kode Pos 39119

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### KARTU BIMBINGAN SKRIPSI

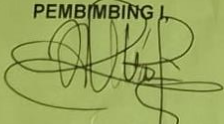
NAMA	: DWI INDAH SARI		
NIM	: 22551014		
PROGRAM STUDI	: Tadris Bahasa Inggris		
FAKULTAS	: Tarbiyah		
DOSEN PEMBIMBING I	: Dr. Leffe Noviveny M.Pd		
DOSEN PEMBIMBING II	: Dr. Paide Gusmuliana M.Pd		
JUDUL SKRIPSI	: Students' Perceptions toward the use of English-language Visual mind Map-Based Powerpoint Presentations in understanding TEFL Material		
MULAI BIMBINGAN	: 6 Nov 2025		
AKHIR BIMBINGAN	: 27 Feb 2026		

NO	TANGGAL	MATERI BIMBINGAN	PARAF PEMBIMBING I
1.	6 Nov 2025	Revisi latar belakang	
2.	09 Des. 2025	Revisi Bab 3, Metodology Penelitian	
3.	12 Jan 2026	Revisi Bab 3, Sample, Revisi bab 4, findings	
4.	15 Jan 2026	Revisi bab 3, Sample	
5.	13 Feb 2026	Revisi bab 4 finding	
6.	14 Feb 2026	Revisi bab 4 finding Angket	
7.	15 Feb 2026	Revisi bab 4 finding interview	
8.	16 Feb 2026	Revisi bab 4, konsultasi	
9.	18 Feb 2026	Konsultasi cara Membuat Discussion	
10.	19 Feb 2026	Revisi Finding	
11.	20 Feb 2026	Revisi Discussion	
12.	22 Feb 2026	Revisi Discussion	
13.	23 Feb 2026	Acc bab I, II, III	
14.	24 Feb 2026	Acc bab IV finding	
15.	26 Feb 2026	Acc bab V Discussion	
16.	27 Feb 2026	Acc untuk sidang	

KAMI BERPENDAPAT BAHWA SKRIPSI INI SUDAH  
DAPAT DIAJUKAN UJIAN SKRIPSI IAIN CURUP,

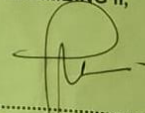
**PEMBIMBING I,**



.....  
NIP. 1976 1106 2003 122004

CURUP, 27, Feb ..... 2026

**PEMBIMBING II,**



.....  
NIP. 198408172015031004

- Lembar Depan Kartu Bimbingan Pembimbing I
- Lembar Belakang Kartu Bimbingan Pembimbing II
- Kartu ini harap dibawa pada setiap konsultasi dengan Pembimbing I dan Pembimbing II

## KARTU PEMBIMBING 2


**KEMENTERIAN AGAMA REPUBLIK INDONESIA  
INSTITUT AGAMA ISLAM NEGERI CURUP**

Jalan AK Gani No. 01 Kotak Pos 108 Telp. (0732) 21010-21759 Fax. 21010  
Homepage: <http://www.iaincurup.ac.id> Email: [admin@iaincurup.ac.id](mailto:admin@iaincurup.ac.id) Kode Pos 39119

**KARTU BIMBINGAN SKRIPSI**

NAMA	: DWI INDAH SARI
NIM	: 22551014
PROGRAM STUDI	: Tadris Bahasa Inggris
FAKULTAS	: Tarbiyah
PEMBIMBING I	: Dr. Leffi Noviyenty M.Pd
PEMBIMBING II	: Dr. Paidi Gusmuliana M.Pd
JUDUL SKRIPSI	: students' Perceptions toward the use of English - Language Visual Mind MAP-Based Powerpoint Presentation in Understanding TEFL Material
MULAI BIMBINGAN	: 20 Agustus 2025
AKHIR BIMBINGAN	: 27 Feb 2026

NO	TANGGAL	MATERI BIMBINGAN	PARAF
			PEMBIMBING II
1.	20 Agus 2025	Revisi bab 3, instrumen angket	
2.	9 Agus 2025	Revisi bab 3, sample, bab 4, Findings	
3.	12 Agus 2025	Revisi bab 4	
4.	05 des 2025	Revisi bab 4	
5.	12 Jan 2026	Revisi bab 3, Technique analysis data	
6.	14 Jan 2026	konsultasi Mengenai data Angket	
7.	15 Jan 2026	konsultasi Mengenai data Angket	
8.	20 Jan 2026	konsultasi mengenai data yang sudah valid	
9.	21 Jan 2026	konsultasi bab 4, Finding interview	
10.	26 Jan 2026	Revisian Finding	
11.	17 Feb 2026	Revisian Finding	
12.	23, Feb, 2026	konsultasi Discussion Angket	
13.	24, Feb, 2026	konsultasi discussion interview	
14.	25, Feb, 2026	Acc bab 1, II, III	
15.	26, Feb, 2026	Acc bab IV, V	
16.	27, Feb, 2026	Acc untuk sidang	

KAMI BERPENDAPAT BAHWA SKRIPSI INI  
SUDDAH DAPAT DIAJUKAN UJIAN SKRIPSI IAIN  
CURUP

CURUP, 27, Feb ..... 2026

PEMBIMBING I,

NIP. 197611062003122004

PEMBIMBING II,

NIP. 198408172015031004

## SURAT IZIN PENELITIAN



### KEMENTERIAN AGAMA REPUBLIK INDONESIA INSTITUT AGAMA ISLAM NEGERI CURUP

Jalan AK Gani No. 01 Kotak Pos 108 Telp. (0732) 21010-21759 Fax. 21010  
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#### SURAT IZIN PENELITIAN

Nomor : 010 /In.34/WR.I/PP.00.9/02/2026

Menindak lanjuti Surat Dekan Fakultas Tarbiyah IAIN Curup Nomor : 182/In.34/FT/PP.00.9/02/2026 tanggal 18 Februari 2026 perihal Rekomendasi Izin Penelitian.

Yang bertanda tangan dibawah ini atas nama Rektor Institut Agama Islam Negeri Curup, Wakil Rektor I IAIN Curup memberi **IZIN** atau pelaksanaan penelitian di lingkungan IAIN Curup yang dilaksanakan :

Nama	: Dwi Indah Sari
NIM	: 22551014
Fakultas	: Tarbiyah
Program Studi	: Tadris Bahasa Inggris
Penanggung Jawab	: Wakil Dekan I
Maksud dan Tujuan Penelitian	: Penyusunan Skripsi
Judul	: Students' Perceptions toward the use of English-Language Visual Mind Map-Based Powerpoint Presentation in Understanding TEFL Material
Lokasi/Tempat Penelitian	: IAIN Curup

Dengan ketentuan-ketentuan sebagai berikut :

- a. Pelaksanaan penelitian tidak disalahgunakan untuk tujuan tertentu yang dapat mengganggu ketenangan dan ketertiban di lingkungan IAIN Curup;
- b. Sebelum melaksanakan Penelitian /Survey langsung kepada reponden, harus terlebih dahulu melaporkan kepada kepala bagian / sub bagian / Lembaga/ pusat dan unit di lingkungan IAIN Curup;
- c. Setelah Penelitian /Survey selesai, supaya menyerahkan hasil kepada Rektor IAIN Curup
- d. Apabila dalam jangka waktu tertentu hasil Penelitian/Survey belum dikirim Rektor IAIN Curup, maka kepada penanggungjawab / Dekan Fakultas yang bersangkutan berkewajiban mengirimkan hasil penelitian/ survey tersebut diatas.

Surat Izin Penelitian ini berlaku dari tanggal 18 Februari sampai dengan 18 Mei 2026

Curup, 23 Februari 2026  
a.n.Rektor  
Wakil Rektor I,

**Prof. Dr. Yusefri, M.Ag**  
NIP 19700202 199803 1 007

**Tembusan :**

1. Wakil Rektor I IAIN Curup
2. Kepala Biro AUAK IAIN Curup
3. Dekan Fakultas di Lingkungan IAIN Curup
4. Kepala Lembaga di Lingkungan IAIN Curup
5. Kepala Bagian di Lingkungan IAIN Curup
6. Kepala Sub Bagian di Lingkungan IAIN Curup
7. Kepala Unit di Lingkungan IAIN Curup

**APPENDIX 2**  
**TABLE OF BLUEPRINT**

Blueprint of Questionnaire					
Indicators	Items	SA	A	D	SD
Use Emphasis	1. A clear central image in the mind map PowerPoint helps me focus on the main TEFL topic.				
	2. The use of images and visual elements helps me understand TEFL material more easily.				
	3. The combination of colors, shapes, and size variations helps me remember the lesson content.				
	4. Differences in text size and line thickness help me identify important TEFL concepts.				
	5. Organized and appropriate spacing in the slides makes the material easier to follow.				
	6. Too many images or colors in one slide make the lesson confusing for me.				
Use Association	7. Arrows and visual connections help me understand relationships between TEFL ideas.				
	8. Different colors help me distinguish between groups of related concepts.				
	9. Symbols or visual codes help me quickly identify important information.				
	10. Too many symbols or unclear connections make the lesson difficult to understand.				
Be Clear	11. Using one keyword per branch helps me understand the main ideas of the lesson.				
	12. Clear and readable text in the mind map PowerPoint makes the material easier to understand.				
	13. Clear images help me understand and remember TEFL material.				
	14. Connected lines help me follow the flow of ideas in the lesson.				
	15. A well-organized slide layout helps me follow the explanation more easily.				
	16. Too many words or unclear visuals make the mind map difficult to understand.				
Develop a Personal Style	17. Creative and visually attractive mind map slides make learning TEFL more enjoyable for me.				
	18. A personal or creative visual style helps me understand the material better.				

	19. Reviewing TEFL material using mind map slides is more enjoyable than using text-based slides.				
	20. Too much decoration in the slides reduces the clarity of the lesson content.				
Use Hierarchy	21. I understand TEFL material better when the main idea is placed at the center and supported by sub-ideas.				
	22. A clear hierarchical structure helps me distinguish between main and supporting ideas.				
	23. Without a clear hierarchy, I find it difficult to identify important points in the lesson.				
Use Numerical Order	24. Numbering or symbols in the mind map help me understand the order or priority of ideas.				
	25. Without numbering, I often feel confused about the sequence of ideas in the lesson.				

**Validation Notes:**

Compared to the draft version, the validated questionnaire is easier for students to read and understand. The statements were rewritten to clearly relate to mind map PowerPoint slides used in TEFL lessons, so students can answer based on their real learning experience, not abstract design rules. Complicated and technical instructions were simplified into clear statements about understanding, focus, and enjoyment in learning. Repetitive items were reduced, making the questionnaire shorter and less tiring to complete. Overall, the validated version uses simple, direct language and focuses on how mind map slides help students understand, remember, and follow the lesson, making it more student-friendly and easier to respond to accurately.

Curup, January 24, 2025

**Validator**



**Rizki Indra Guci, M.Pd.**

*Interview Guide I Blueprint Adapted from Anderson & Krathwohl's Theory*

Aspects	Indicators	Items	Questions
Remembering	Recognizing relevant TEFL concepts presented in visual materials	1.	Bagaimana PowerPoint berbasis mind map membantu Anda mengenali konsep-konsep utama dalam materi TEFL?
		2.	Konsep TEFL apa yang lebih mudah dikenali ketika ditampilkan dalam bentuk mind map?
	Recalling previously learned TEFL information	3.	Setelah belajar menggunakan PowerPoint mind map, sejauh mana Anda dapat mengingat kembali materi TEFL yang telah dipelajari sebelumnya?
		4.	Bagian apa dari mind map (misalnya kata kunci, cabang, atau visual) yang paling membantu Anda mengingat pelajaran TEFL sebelumnya?
Understanding	Interpreting TEFL concepts presented in visual or diagrammatic form	5.	Bagaimana PowerPoint berbentuk diagram atau mind map membantu Anda memahami makna konsep-konsep TEFL?
		6.	Dibandingkan dengan materi berbentuk teks saja, dalam hal apa mind map membuat penjelasan TEFL lebih jelas atau justru kurang jelas?
	Exemplifying TEFL theories or concepts using relevant examples	7.	Dapatkah Anda menyebutkan contoh teori atau konsep TEFL yang lebih mudah dipahami setelah disajikan melalui mind map?
		8.	Bagaimana tampilan visual tersebut membantu Anda menghubungkan teori TEFL dengan contoh penerapannya?
	Classifying TEFL concepts based on their characteristics	9.	Bagaimana mind map membantu Anda mengelompokkan konsep-konsep TEFL berdasarkan karakteristiknya?

		10.	Apakah mind map memudahkan Anda membedakan berbagai pendekatan atau metode TEFL? Jelaskan!
	Summarizing main ideas from TEFL learning materials	11.	Bagaimana mind map membantu Anda menemukan ide pokok dari materi TEFL?
		12.	Apakah Anda lebih mudah merangkum materi TEFL setelah mempelajarinya melalui mind map? Mengapa?
	Inferring meaning or principles from presented TEFL materials	13.	Bagaimana mind map membantu Anda memahami prinsip-prinsip dasar dari teori TEFL?
		14.	Apakah materi visual membantu Anda menarik kesimpulan tentang teori TEFL? Jelaskan!
	Comparing similarities and differences among TEFL methods or theories	15.	Bagaimana mind map membantu Anda membandingkan persamaan dan perbedaan antar teori atau metode TEFL?
		16.	Bagian apa dari mind map yang paling membantu dalam proses perbandingan tersebut?
	Explaining relationships or cause-and-effect in TEFL concepts	17.	Bagaimana mind map membantu Anda memahami hubungan antar konsep TEFL?
		18.	Dapatkah Anda menjelaskan hubungan sebab-akibat dalam materi TEFL yang menjadi lebih jelas setelah disajikan melalui mind map?
Applying	Executing TEFL procedures in familiar instructional contexts	19.	Bagaimana PowerPoint mind map membantu Anda menerapkan langkah-langkah pembelajaran TEFL dalam kegiatan yang sudah Anda kenal?
		20.	Apakah mind map membantu Anda mengikuti langkah-langkah pembelajaran TEFL dengan lebih mudah? Jelaskan!

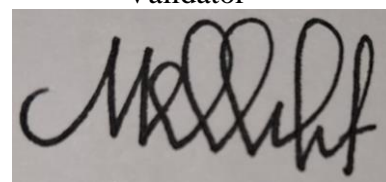
	Implementing TEFL procedures in unfamiliar instructional contexts	21.	Bagaimana mind map membantu Anda menerapkan konsep TEFL pada situasi pembelajaran yang baru atau belum pernah Anda hadapi?
		22.	Pernahkah mind map membantu Anda mencoba teknik mengajar TEFL yang baru? Jelaskan!
Analyzing	Differentiating relevant and irrelevant information in TEFL materials	23.	Bagaimana mind map membantu Anda membedakan informasi yang penting dan kurang penting dalam materi TEFL?
		24.	Apakah tampilan visual memudahkan Anda fokus pada poin utama? Mengapa?
	Organizing TEFL concepts into a coherent structure	25.	Bagaimana PowerPoint mind map membantu Anda menyusun konsep TEFL secara sistematis?
		26.	Apakah mind map membantu Anda melihat struktur keseluruhan materi TEFL dengan lebih jelas? Jelaskan!
	Attributing underlying perspectives or purposes in TEFL approaches	27.	Bagaimana materi visual membantu Anda memahami tujuan dari berbagai pendekatan TEFL?
		28.	Apakah mind map membantu Anda mengenali fokus atau sudut pandang metode TEFL tertentu?
Evaluating	Checking consistency and accuracy of TEFL strategies or materials	29.	Bagaimana mind map membantu Anda mengevaluasi ketepatan atau keakuratan materi TEFL?
		30.	Apakah materi visual membantu Anda menemukan penjelasan yang kurang jelas atau tidak konsisten? Jelaskan!
	Critiquing the effectiveness of TEFL methods based on criteria	31.	Bagaimana Anda menilai efektivitas metode TEFL setelah dipelajari melalui mind map?

		32.	Kriteria apa yang Anda gunakan untuk menilai efektivitas metode TEFL yang disajikan secara visual?
Creating	Generating new ideas or alternatives related to TEFL instruction	33.	Bagaimana mind map mendorong Anda menghasilkan ide-ide baru dalam pembelajaran TEFL?
		34.	Apakah mind map menginspirasi Anda menemukan alternatif cara mengajar Bahasa Inggris? Jelaskan!
	Planning instructional procedures for TEFL learning activities	35.	Bagaimana mind map membantu Anda merencanakan kegiatan atau langkah pembelajaran TEFL?
		36.	Apakah materi visual membantu Anda menyusun rencana pembelajaran dengan lebih terstruktur? Mengapa?
	Producing original instructional designs or teaching materials	37.	Bagaimana mind map membantu Anda membuat bahan ajar TEFL sendiri?
		38.	Pernahkah Anda membuat materi ajar orisinal setelah belajar menggunakan mind map? Jelaskan!

**Validation Notes:**

- The instrument already covers all cognitive aspects from remembering to creating, in accordance with theories' revised taxonomy
- The semi structure interview are very well spoken and effectively explore students' experiences in using mind map for TEFL learning
- This instrument is suitable for use with minor revisions to language clarity, consistency of question format, and speaking format

Curup, January 27, 2026  
Validator



Melli Kusmaningrum, M.Pd.

*Interview Guide II Blueprint Adapted from Sweller's Cognitive Load Theory*

No	Aspects	Indicators	Items	Questions
1.	Intrinsic Load	TEFL topics like SLA, grammar pedagogy, and teaching strategies feel abstract and complex when shown in mind maps.	1	Saat mempelajari materi TEFL yang bersifat teoretis (misalnya bagaimana bahasa dipelajari, cara mengajarkan tata bahasa, dan strategi mengajar), bagian mana yang paling sulit dipahami ketika disajikan melalui mind map?
		Using English in mind maps makes it harder to understand complex TEFL content.	2	Bagaimana penggunaan bahasa Inggris dalam mind map memengaruhi pemahaman Anda terhadap materi TEFL yang cukup kompleks?
		Students need extra effort to follow mind maps with linguistically dense topics.	3	Ketika mind map berisi banyak istilah akademik atau teknis dalam bahasa Inggris, usaha belajar apa yang harus Anda lakukan agar bisa mengikuti materi?
2.	Extraneous Load	Too many colors, inconsistent shapes, or excessive branches make the mind map confusing.	4	Apakah pernah ada desain mind map (misalnya warna terlalu banyak, cabang terlalu rumit, atau bentuk tidak konsisten) yang membuat Anda sulit fokus pada materi? Jelaskan dan berikan contohnya!
		English keywords without explanation make the content harder to understand.	5	Jika dalam mind map terdapat kata kunci bahasa Inggris tanpa penjelasan, apa yang biasanya Anda lakukan agar tetap memahami materi tersebut?
		The visual design distracts from the main message of the lesson.	6	<i>Menurut Anda, apakah tampilan visual mind map pernah lebih menarik perhatian Anda dibandingkan isi materi pelajaran? Dalam kondisi seperti apa hal itu terjadi?</i>

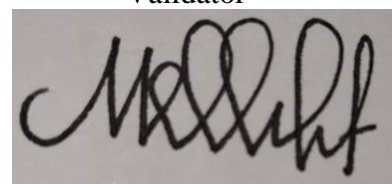
3.	<b>Germane Load</b>	Students must exert additional effort just to interpret the structure of the mind map.	7	Bagaimana pengalaman Anda dalam memahami struktur atau alur informasi pada mind map? Apakah membutuhkan usaha khusus?
		Effort is also spent understanding the terminology or translating English labels.	8	Sejauh mana kebutuhan untuk menerjemahkan atau menafsirkan istilah bahasa Inggris dalam mind map memengaruhi proses belajar Anda?
		Limited remaining capacity to engage in deep conceptual processing or reflection.	9	<i>Setelah memahami isi dan struktur mind map, apa yang membantu atau justru menghambat Anda untuk berpikir lebih mendalam atau merefleksikan materi TEFL tersebut?</i>

**Validation Notes:**

- The instrument already align with the three types of cognitive load
- The explanatory questions make it easier for respondents to explain their experiences of cognitive load when using a mind map
- This instrument is highly feasible for use, with a minor improvements needed in language clarity and writing format

Curup, January 27, 2026

Validator



Melli Kusmaningrum, M.Pd.

## APPENDIX 3 QUESTIONNAIRE

### Tabulation Instrument Questionnaire of try out 1

No	Responden	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Q.16	Q.17	Q.18	Q.19	Q.20	Q.21	Q.22	Q.23	Q.24	Q.25	TOTAL	
1	Responden 1	4	4	3	3	3	3	3	3	3	4	4	4	3	4	4	4	3	4	3	4	3	3	3	3	3	3	82
2	Responden 2	3	3	2	3	3	4	2	4	3	1	1	2	2	3	3	4	3	2	2	3	2	2	2	2	3	65	
3	Responden 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
4	Responden 4	3	4	3	4	3	3	4	4	3	3	3	4	4	3	3	4	4	4	4	3	4	3	4	4	4	89	
5	Responden 5	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
6	Responden 6	3	3	3	4	3	3	4	4	3	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	91	
7	Responden 7	3	3	3	3	3	3	3	3	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	3	76	
8	Responden 8	4	4	4	3	3	3	4	3	4	3	4	3	4	3	4	4	4	4	3	4	3	4	3	4	4	90	
9	Responden 9	4	3	4	4	3	2	3	4	4	2	4	4	4	4	4	4	3	3	2	4	4	3	4	4	4	88	
10	Responden 10	3	3	3	4	3	3	4	3	3	3	3	4	3	3	4	3	4	4	4	3	4	3	4	4	4	85	
11	Responden 11	4	3	3	3	3	3	3	2	3	2	3	3	3	3	4	3	3	3	3	3	3	3	3	4	4	78	
12	Responden 12	3	3	3	3	3	3	4	3	3	3	4	3	4	3	4	3	3	3	3	3	4	4	3	3	3	81	
13	Responden 13	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
14	Responden 14	4	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
15	Responden 15	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	74	
16	Responden 16	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3	3	3	3	3	3	3	74	
17	Responden 17	3	3	3	3	4	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	75	
18	Responden 18	4	4	4	3	3	4	4	4	3	4	4	4	3	4	4	3	4	4	3	3	4	4	4	4	4	93	
19	Responden 19	3	3	3	3	3	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	77	
20	Responden 20	4	4	4	4	3	3	4	4	4	4	4	3	4	3	4	4	4	3	4	3	3	3	3	4	4	90	
	R tabel	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	0,444	
	f hitung	0,621	0,480	0,813	0,511	0,545	0,600	0,594	0,603	0,600	0,515	0,647	0,713	0,681	0,557	0,531	0,504	0,550	0,888	0,560	0,712	0,545	0,560	0,712	0,517	0,517	0,517	
	Keterangan	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	
	Varian	0,24	0,20	0,302622	0,20	0,24	0,21	0,11	0,26	0,30	0,47	0,47	0,30	0,39	0,30	0,24	0,26	0,30	0,41	0,30	0,24	0,20	0,24	0,30	0,24	0,34	0,41	

NO	ITEMS	R table	R count	VALID/INVALID
1	1	0,444	0,621	VALID
2	2	0,444	0,480	VALID
3	3	0,444	0,813	VALID
4	4	0,444	0,511	VALID
5	5	0,444	0,545	VALID
6	6	0,444	0,450	VALID
7	7	0,444	0,594	VALID
8	8	0,444	0,603	VALID
9	9	0,444	0,600	VALID
10	10	0,444	0,515	VALID
11	11	0,444	0,647	VALID
12	12	0,444	0,713	VALID
13	13	0,444	0,681	VALID
14	14	0,444	0,557	VALID
15	15	0,444	0,531	VALID
16	16	0,444	0,504	VALID
17	17	0,444	0,550	VALID
18	18	0,444	0,888	VALID
19	19	0,444	0,560	VALID
20	20	0,444	0,712	VALID
21	21	0,444	0,545	VALID
22	22	0,444	0,650	VALID
23	23	0,444	0,714	VALID
24	24	0,444	0,893	VALID
25	25	0,444	0,517	VALID

0,3084 Jumlah Varian  
58,5682 Varian Total  
0,749 Reabilitas

### Tabulation Instrument Questionnaire number 1

No	Responden	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Q.16	Q.17	Q.18	Q.19	Q.20	Q.21	Q.22	Q.23	Q.24	Q.25	TOTAL	
1	Responden 1	3	3	3	3	2	3	4	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
2	Responden 2	3	3	3	2	3	4	3	4	3	4	2	4	3	4	3	4	4	3	4	4	3	4	3	4	3	84	
3	Responden 3	4	4	3	3	4	2	4	4	3	2	3	4	4	4	4	1	4	3	3	1	4	3	4	4	4	82	
4	Responden 4	3	4	3	3	4	2	4	4	4	2	4	4	3	3	3	3	3	4	4	1	4	3	3	4	3	82	
5	Responden 5	4	3	3	4	4	4	4	3	4	4	3	4	4	4	4	4	4	3	3	3	3	3	4	3	4	91	
6	Responden 6	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	72	
7	Responden 7	3	4	3	4	3	4	3	3	3	3	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	82	
8	Responden 8	2	3	2	3	3	3	3	3	3	3	3	3	3	3	2	3	3	2	3	3	3	3	3	3	2	69	
9	Responden 9	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	2	3	73	
10	Responden 10	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
11	Responden 11	4	4	4	3	3	2	3	3	3	2	3	3	4	4	4	2	4	4	4	4	2	4	4	2	4	83	
12	Responden 12	3	3	3	3	3	3	3	3	3	3	3	3	5	3	3	3	3	3	3	3	3	3	3	3	3	75	
13	Responden 13	4	4	4	3	4	4	3	3	3	4	4	3	4	4	4	4	3	3	4	4	4	3	3	3	3	80	
14	Responden 14	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	76	
15	Responden 15	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	2	3	73	
16	Responden 16	3	4	3	4	3	3	4	4	3	3	4	3	4	4	3	4	4	4	3	4	3	3	4	3	3	86	
17	Responden 17	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3	3	73	
18	Responden 18	3	3	3	3	3	3	3	3	3	3	3	3	5	3	3	3	3	3	3	3	3	3	1	3	3	73	
19	Responden 19	4	4	3	3	4	3	4	3	4	4	4	4	4	3	4	4	4	4	4	4	4	4	4	3	4	83	
20	Responden 20	4	4	4	3	3	4	4	3	3	4	3	4	3	3	3	4	4	4	3	4	2	3	4	2	2	84	
21	Responden 21	3	4	3	4	2	3	3	3	3	3	4	3	3	3	4	2	3	3	3	2	3	4	3	3	3	77	
22	Responden 22	3	3	3	3	2	3	3	3	2	3	3	3	3	3	4	3	4	3	3	2	3	3	4	3	3	75	
23	Responden 23	4	3	3	3	2	3	4	3	3	3	3	3	3	3	3	4	4	4	4	3	3	3	3	3	4	80	
24	Responden 24	4	3	2	4	4	4	3	3	3	4	4	3	3	3	4	3	2	4	4	3	3	4	3	3	3	83	
25	Responden 25	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	2	2	54	
26	Responden 26	4	4	4	3	4	3	4	3	4	4	3	3	4	4	3	4	4	3	4	1	2	4	4	3	4	85	
27	Responden 27	3	4	3	2	3	3	4	4	3	4	3	3	3	4	3	4	3	3	3	3	3	3	3	3	3	80	
28	Responden 28	3	3	3	4	2	3	3	3	2	3	3	3	3	3	3	3	3	3	2	4	2	3	4	3	3	75	
29	Responden 29	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	89	
30	Responden 30	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	88	
31	Responden 31	3	4	3	3	4	2	2	3	4	3	3	5	3	3	3	3	3	4	2	2	2	2	2	3	4	74	
32	Responden 32	4	4	4	3	3	4	4	4	3	4	4	4	3	4	4	3	4	4	4	3	3	4	4	4	4	83	
33	Responden 33	3	3	3	3	3	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	77	
34	Responden 34	4	4	4	4	4	3	3	4	4	4	4	4	3	4	4	4	4	3	4	3	4	3	3	3	4	80	
35	Responden 35	4	4	4	3	2	3	3	3	2	4	4	4	3	4	3	4	3	4	3	3	3	3	3	3	3	82	
36	Responden 36	3	3	2	3	3	4	2	4	3	1	1	2	2	3	3	4	3	2	2	3	2	3	2	2	3	65	
37	Responden 37	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
38	Responden 38	4	3	4	4	3	3	4	4	3	3	3	4	4	3	3	4	4	4	4	4	3	4	3	4	4	89	
39	Responden 39	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
40	Responden 40	3	3	3	3	3	4	4	4	4	3	3	4	3	4	4	4	4	4	4	4	4	4	4	4	4	81	
41	Responden 41	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	76	
42	Responden 42	4	4	4	3	3	3	4	4	3	4	3	4	3	4	3	4	4	4	3	4	3	4	3	4	4	80	
43	Responden 43	4	3	4	4	3	4	3	4	4	2	4	4	4	4	4	4	3	3	2	4	4	3	4	4	4	90	
44	Responden 44	3	3	3	3	4	4	3	4	3	3	3	3	4	3	4	3	4	4	4	3	4	3	4	4	4	86	
45	Responden 45	3	4	3	3	3	3	3	2	3	2	3	3	3	3	4	4	3	3	3	3	3	3	3	3	4	78	
46	Responden 46	3	3	3	3	3	3	3	4	3	3	3	4	3	4	3	3	3	3	3	3	4	4	3	3	3	81	
47	Responden 47	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	75	
48	Responden 48	4	3	3	3	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	74	
49	Responden 49	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	73	
50	Responden 50	3	3	3	4	3	3	3	3	3	3	3	3	3	3	3	3	2	3	2	3	3	3	3	3	3	74	
51	Responden 51	3	3	3	3	4	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	75	
52	Responden 52	4	4	4	3	3	4	4	4	3	4	4	4	3	4	4	4	3	4	4	3	3	4	4	4	4	83	
53	Responden 53	3	3	3	3	3	3	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	77	
54	Responden 54	4	4	4	4	4	3	4	4	4	4	4	4	3	4	4	4	4	4	3	4	3	3	3	4	2	91	
R. Taher		0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266	0,266		
r. Hwang		0,757	0,617	0,705	0,522	0,635	0,301	0,443	0,536	0,679	0,530	0,603	0,706	0,736	0,659	0,651	0,570	0,629	0,764	0,587	0,443	0,552	0,553	0,496	0,662	0,431		
Keterangan		VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	VALID	
Varian		0,302	0,258	0,327	0,317	0,289	0,469	0,242	0,313	0,289	0,506	0,368	0,295	0,280	0,250	0,289	0,439	0,295	0,337	0,365	0,619	0,355	0,214	0,481	0,327	0,393	8,619	Jumlah Varian
		0,757																									73,8026	Varian Total
																											0,69	Reliabilitas

NO	ITEMS	R table	R count	VALID/INVALID
1	1	0,266	0,757	VALID
2	2	0,266	0,617	VALID
3	3	0,266	0,705	VALID
4	4	0,266	0,523	VALID
5	5	0,266	0,635	VALID
6	6	0,266	0,301	VALID
7	7	0,266	0,644	VALID
8	8	0,266	0,535	VALID
9	9	0,266	0,676	VALID
10	10	0,266	0,531	VALID
11	11	0,266	0,604	VALID
12	12	0,266	0,706	VALID
13	13	0,266	0,737	VALID
14	14	0,266	0,659	VALID
15	15	0,266	0,651	VALID
16	16	0,266	0,570	VALID
17	17	0,266	0,629	VALID
18	18	0,266	0,765	VALID
19	19	0,266	0,587	VALID
20	20	0,266	0,444	VALID
21	21	0,266	0,553	VALID
22	22	0,266	0,553	VALID
23	23	0,266	0,496	VALID
24	24	0,266	0,663	VALID
25	25	0,266	0,428	VALID

### Sample of Interview

No	Responden	Score	No	Responden	Score
1	DFH	54	28	M R	80
2	SRP	65	29	SNY	80
3	LM	69	30	W	81
4	AA	72	31	MP	82
5	IH	73	32	VR	82
6	SP	73	33	WY	82
7	AF	73	34	DRA	82
8	JN	73	35	MH	82
9	NA	73	36	AK	83
10	M IF	74	37	MA	84
11	NDM	74	38	MRM	84
12	WL	74	39	SH	85
13	RW	75	40	DP	86
14	LN	75	41	SY	86
15	NOR	75	42	RL	89
16	GIC	75	43	NA	90
17	RS	75	44	TS	90
18	FA	75	45	ER	90
19	FAM	75	46	NK	90
20	RY	75	47	RDL	91
21	NSP	75	48	AO	91
22	SK	76	49	RM	91
23	M	76	50	RR	93
24	M AN	77	51	LA	93
25	AI	77	52	DA	93
26	VCM	77	53	AN	98
27	Gu	78	54	DMK	99

**Positive/Negative Staments of Questionnaire**

Number Of Items	Statements	TYPE	SCORE			
			SA	A	D	SD
1.	A clear central image in the mind map PowerPoint helps me focus on the main TEFL topic.	Positive	4	3	2	1
2.	The use of images and visual elements helps me understand TEFL material more easily.	Positive	4	3	2	1
3.	The combination of colors, shapes, and size variations helps me remember the lesson content.	Positive	4	3	2	1
4.	Differences in text size and line thickness help me identify important TEFL concepts.	Positive	4	3	2	1
5.	Organized and appropriate spacing in the slides makes the material easier to follow.	Positive	4	3	2	1
6.	Too many images or colors in one slide make the lesson confusing for me.	Negative	1	2	3	4
7.	Arrows and visual connections help me understand relationships between TEFL ideas.	Positive	4	3	2	1
8.	Different colors help me distinguish between groups of related concepts.	Positive	4	3	2	1
9.	Symbols or visual codes help me quickly identify important information.	Positive	4	3	2	1
10.	Too many symbols or unclear connections make the lesson difficult to understand.	Negative	1	2	3	4
11.	Using one keyword per branch helps me understand the main ideas of the lesson.	Positive	4	3	2	1
12.	Clear and readable text in the mind map PowerPoint makes the material easier to understand.	Positive	4	3	2	1
13.	Clear images help me understand and remember TEFL material.	Positive	4	3	2	1

14.	Connected lines help me follow the flow of ideas in the lesson.	Positive	4	3	2	1
15.	A well-organized slide layout helps me follow the explanation more easily.	Positive	4	3	2	1
16.	Too many words or unclear visuals make the mind map difficult to understand.	Negative	1	2	3	4
17.	Creative and visually attractive mind map slides make learning TEFL more enjoyable for me.	Positive	4	3	2	1
18.	A personal or creative visual style helps me understand the material better.	Positive	4	3	2	1
19.	Reviewing TEFL material using mind map slides is more enjoyable than using text-based slides.	Positive	4	3	2	1
20.	Too much decoration in the slides reduces the clarity of the lesson content.	Negative	1	2	3	4
21.	I understand TEFL material better when the main idea is placed at the center and supported by sub-ideas.	Positive	4	3	2	1
22.	A clear hierarchical structure helps me distinguish between main and supporting ideas.	Positive	4	3	2	1
23.	Without a clear hierarchy, I find it difficult to identify important points in the lesson.	Positive	4	3	2	1
24.	Numbering or symbols in the mind map help me understand the order or priority of ideas.	Positive	4	3	2	1
25.	Without numbering, I often feel confused about the sequence of ideas in the lesson.	Positive	4	3	2	1

## APPENDIX 4

### INTERVIEW TRANSCRIPT

#### Transcript interview:

**To Investigate How factors influence students' understanding of TEFL material when using English-language visual mind map-based PowerPoint presentations**

#### Responden 1: DMK (TBI 8A)

1. Bagaimana PowerPoint berbasis mind map membantu Anda mengenali konsep-konsep utama dalam materi TEFL?

Kalau PPT mind map itu membuat bagian-bagian yang penting saja. Jadi kita sebagai mahasiswa bisa langsung mengerti apa saja main point yang ada di materi TEFL tersebut. Jadi konsep-konsep itu langsung terlihat kalau pakai mind map, jauh lebih mudah dimengerti.

2. Konsep TEFL apa yang lebih mudah dikenali ketika ditampilkan dalam bentuk mind map?

Yang paling ingat itu metode mengajar.

3. Setelah belajar menggunakan PowerPoint mind map, sejauh mana Anda dapat mengingat kembali materi TEFL yang telah dipelajari sebelumnya?

Karena mungkin lebih fun saja ketika diajarkan, dan kita lebih langsung mempraktikkan. Jadi lebih melekat di pikiran.

4. Bagian apa dari mind map (misalnya kata kunci, cabang, atau visual) yang paling membantu Anda mengingat pelajaran TEFL sebelumnya?

Yang lebih mudah mengingat itu pembagian subtema-subtema. Jadi pertama itu utama, terus nanti dibagi lagi jadi per subtema. Itu yang jauh lebih mudah mengingatnya.

5. Bagaimana PowerPoint berbentuk diagram atau mind map membantu Anda memahami makna konsep-konsep TEFL?

Karena runtut. Dari tema utama, subtema, lalu pecahan dari subtema.

6. Dibandingkan dengan materi berbentuk teks saja, dalam hal apa mind map membuat penjelasan TEFL lebih jelas atau justru kurang jelas?

Kalau mind map lebih jelas karena langsung ke ide pokok. Tapi yang kurang mungkin penjelasannya lebih sedikit daripada slide yang ada teksnya.

7. Dapatkah Anda menyebutkan contoh teori atau konsep TEFL yang lebih mudah dipahami setelah disajikan melalui mind map?

Metode problem solving dan game-based learning. Jadi ketika kita mengajar, gimana cara kita menyelesaikan masalah yang langsung ada di depan mata.

8. Bagaimana tampilan visual tersebut membantu Anda menghubungkan teori TEFL dengan contoh penerapannya?

Biasanya ada tanda panah yang menunjukkan hubungan atau yang saling berkaitan.

9. Bagaimana mind map membantu Anda mengelompokkan konsep-konsep TEFL berdasarkan karakteristiknya?

Karena mind map pasti terbagi jadi kerangka-kerangka. Jadi kita lebih mudah tahu ini beda sama yang ini.

10. Apakah mind map memudahkan Anda membedakan berbagai pendekatan atau metode TEFL? Jelaskan!

Iya nampak. Karena tanda-tandanya tidak saling berhubungan, jadi kita tahu itu berbeda.

11. Bagaimana mind map membantu Anda menemukan ide pokok dari materi TEFL?

Biasanya ide pokok sudah ditaruh di tengah atau paling atas sebagai center. Jadi kita langsung tahu temanya ini dan mau jelasin tentang ini.

12. Apakah Anda lebih mudah merangkum materi TEFL setelah mempelajarinya melalui mind map? Mengapa?

Lebih mudah di mind map. Karena kita sudah tahu inti-intinya, jadi bisa langsung jelasin pakai kalimat sendiri.

13. Bagaimana mind map membantu Anda memahami prinsip-prinsip dasar dari teori TEFL?

Jauh lebih mudah, karena langsung ngasih tahu teori apa. Kalau slide biasa biasanya jelasin panjang dulu baru ke teorinya.

14. Apakah materi visual membantu Anda menarik kesimpulan tentang teori TEFL? Jelaskan!

Bisa. Karena kalau visual biasanya berhubungan sama teori tersebut, jadi waktu menjelaskan lagi kita ingat dari visualnya.

15. Bagaimana mind map membantu Anda membandingkan persamaan dan perbedaan antar teori atau metode TEFL?

Biasanya dari subtema-subtemanya dan panahnya. Kita sudah tahu perbedaannya di sini dan di situ.

16. Bagian apa dari mind map yang paling membantu dalam proses perbandingan tersebut?

Cabang-cabang atau rincian subtemanya.

17. Bagaimana mind map membantu Anda memahami hubungan antar konsep TEFL?

Biasanya ada tanda panah yang menunjukkan hubungan atau yang saling berkaitan.

18. Dapatkah Anda menjelaskan hubungan sebab-akibat dalam materi TEFL yang menjadi lebih jelas setelah disajikan melalui mind map?

Bisa, karena ada beberapa mind map yang pakai tanda yang saling mempengaruhi satu sama lain.

19. Bagaimana PowerPoint mind map membantu Anda menerapkan langkah-langkah pembelajaran TEFL dalam kegiatan yang sudah Anda kenal?

Karena kita sudah tahu mau pakai teknik apa. Setelah tahu tekniknya, kita tahu juga apa yang harus disiapkan.

20. Apakah mind map membantu Anda mengikuti langkah-langkah pembelajaran TEFL dengan lebih mudah? Jelaskan!

Iya lebih mudah, karena lebih singkat.

21. Bagaimana mind map membantu Anda menerapkan konsep TEFL pada situasi pembelajaran yang baru atau belum pernah Anda hadapi?

Bisa, karena ada beberapa opsi dalam subtema yang bisa kita pakai sesuai situasi real life.

22. Pernahkah mind map membantu Anda mencoba teknik mengajar TEFL yang baru? Jelaskan!

Kalau teknik baru belum terlalu, tapi pernah coba game-based learning.

23. Bagaimana mind map membantu Anda membedakan informasi yang penting dan kurang penting dalam materi TEFL?

Iya bantu banget. Karena kalau tidak penting biasanya tidak dimasukkan ke dalam mind map.

24. Apakah tampilan visual memudahkan Anda fokus pada poin utama? Mengapa? Iya, karena visual itu penggambaran keseluruhan tentang mind map tersebut.

25. Bagaimana PowerPoint mind map membantu Anda menyusun konsep TEFL secara sistematis?

Karena runtut. Dari tema utama, subtema, lalu pecahan dari subtema.

26. Apakah mind map membantu Anda melihat struktur keseluruhan materi TEFL dengan lebih jelas? Jelaskan!

Iya, kita bisa langsung tahu keseluruhan tanpa baca panjang.

27. Bagaimana materi visual membantu Anda memahami tujuan dari berbagai pendekatan TEFL?

Biasanya ada tujuan dan manfaat yang sudah ditulis dalam mind map.

28. Apakah mind map membantu Anda mengenali fokus atau sudut pandang metode TEFL tertentu?

Iya nampak. Misalnya student-centered atau teacher-centered langsung terlihat.

29. Bagaimana mind map membantu Anda mengevaluasi ketepatan atau keakuratan materi TEFL?

Dilihat dari manfaat, kelebihan, dan kekurangan metode tersebut.

30. Apakah materi visual membantu Anda menemukan penjelasan yang kurang jelas atau tidak konsisten? Jelaskan!

Kadang iya, kadang enggak. Tergantung yang buat visualnya.

31. Bagaimana Anda menilai efektivitas metode TEFL setelah dipelajari melalui mind map?

Dilihat dari bagaimana metode itu bekerja dan apakah sesuai dengan kondisi kelas di real life.

32. Kriteria apa yang Anda gunakan untuk menilai efektivitas metode TEFL yang disajikan secara visual?

Dari tujuan, hasil belajar, kepraktisan, dan respons siswa saat pembelajaran.

33. Bagaimana mind map mendorong Anda menghasilkan ide-ide baru dalam pembelajaran TEFL?

Karena ada beberapa hal baru yang kita tahu, lalu kita pikir bisa nggak diterapkan.

34. Apakah mind map menginspirasi Anda menemukan alternatif cara mengajar Bahasa Inggris? Jelaskan!

Iya, misalnya game-based learning efektif untuk anak SD atau SMP kelas 1 karena lebih fun.

35. Bagaimana mind map membantu Anda merencanakan kegiatan atau langkah pembelajaran TEFL?

Kita lihat dulu metode yang ada di mind map, lalu buat lesson plan yang sesuai tujuan.

36. Apakah materi visual membantu Anda menyusun rencana pembelajaran dengan lebih terstruktur? Mengapa?

Iya, biasanya buat slide atau RPP sendiri dengan adaptasi dari mind map.

37. Bagaimana mind map membantu Anda membuat bahan ajar TEFL sendiri? Kita sudah tahu inti dan strukturnya, jadi lebih mudah menyusun bahan ajar sendiri.

38. Pernahkah Anda membuat materi ajar orisinal setelah belajar menggunakan mind map? Jelaskan!

Iya, biasanya buat slide atau RPP sendiri dengan adaptasi dari mind map.

### **Responden 2 : RM (TBI 8C)**

1. Bagaimana PowerPoint berbasis mind map membantu Anda mengenali konsep-konsep utama dalam materi TEFL?

Biasanya kalau saya buat mind map itu, saya lihat dulu judul besarnya apa, terus baru saya pahami isinya dan memilih yang menurut saya penting-penting saja. Jadi dari situ sudah terlihat topik utamanya.

2. Konsep TEFL apa yang lebih mudah dikenali ketika ditampilkan dalam bentuk mind map?

Mungkin lebih ke strategi mengajar, karena strateginya itu lebih ke poin-poinnya.

3. Setelah belajar menggunakan PowerPoint mind map, sejauh mana Anda dapat mengingat kembali materi TEFL yang telah dipelajari sebelumnya?

Lebih mudah diingat daripada slide biasa yang berbentuk paragraf. Kalau poin-poin lebih mudah diingat.

4. Bagian apa dari mind map (misalnya kata kunci, cabang, atau visual) yang paling membantu Anda mengingat pelajaran TEFL sebelumnya?

Simbol-simbol, kata kunci, dan poin-poin yang diwarnai berbeda. Itu lebih mencolok dan lebih mudah dipahami.

5. Bagaimana PowerPoint berbentuk diagram atau mind map membantu Anda memahami makna konsep-konsep TEFL?

Karena mind map seperti peta konsep, jadi hanya poin-poinnya saja yang terlihat. Poin-poin itu nanti bisa kita jabarkan sendiri.

6. Dibandingkan dengan materi berbentuk teks saja, dalam hal apa mind map membuat penjelasan TEFL lebih jelas atau justru kurang jelas?

Lebih jelas dan lebih membantu karena alurnya jelas dan poin-poinnya terstruktur.

7. Dapatkah Anda menyebutkan contoh teori atau konsep TEFL yang lebih mudah dipahami setelah disajikan melalui mind map?

GTM dan materi tentang four languages di bab empat. Itu lebih mudah dipahami.

8. Bagaimana tampilan visual tersebut membantu Anda menghubungkan teori TEFL dengan contoh penerapannya?

Karena ada tanda panah dan cabang yang menunjukkan hubungan teori, metode, dan praktiknya.

9. Bagaimana mind map membantu Anda mengelompokkan konsep-konsep TEFL berdasarkan karakteristiknya?

Dengan penggunaan warna yang berbeda, jadi bisa membedakan jenis-jenis metode.

10. Apakah mind map memudahkan Anda membedakan berbagai pendekatan atau metode TEFL? Jelaskan!

Iya, lebih mudah karena poin-poinnya terstruktur dan mudah diingat.

11. Bagaimana mind map membantu Anda menemukan ide pokok dari materi TEFL?

Harus dibaca dulu materinya, lalu kita tentukan poin-poin pentingnya dan sub-poinnya.

12. Apakah Anda lebih mudah merangkum materi TEFL setelah mempelajarinya melalui mind map? Mengapa?

Lebih mudah karena kita dituntut berpikir menentukan poin-poinnya, dan setelah disusun lebih mudah diingat.

13. Bagaimana mind map membantu Anda memahami prinsip-prinsip dasar dari teori TEFL?

Lebih mudah dengan melihat poin-poinnya saja.

14. Apakah materi visual membantu Anda menarik kesimpulan tentang teori TEFL? Jelaskan!

Bisa, tergantung sajian visualnya. Kalau ada visual-visualnya lebih mudah ditangkap.

15. Bagaimana mind map membantu Anda membandingkan persamaan dan perbedaan antar teori atau metode TEFL?

Dari penyajian dan warna yang berbeda.

16. Bagian apa dari mind map yang paling membantu dalam proses perbandingan tersebut?

Cabang-cabangnya dan penempatannya yang runtut.

17. Bagaimana mind map membantu Anda memahami hubungan antar konsep TEFL?

Dari tampilannya, terutama tanda panah yang menunjukkan arah hubungan.

18. Dapatkah Anda menjelaskan hubungan sebab-akibat dalam materi TEFL yang menjadi lebih jelas setelah disajikan melalui mind map?

Lebih mudah karena sebab dan akibat saling nyambung dan terlihat jelas dalam cabang-cabangnya.

19. Bagaimana PowerPoint mind map membantu Anda menerapkan langkah-langkah pembelajaran TEFL dalam kegiatan yang sudah Anda kenal?

Saat micro teaching, poin-poin di mind map membantu saya menyusun apa saja yang akan dilakukan secara terstruktur.

20. Apakah mind map membantu Anda mengikuti langkah-langkah pembelajaran TEFL dengan lebih mudah? Jelaskan!

Iya, lebih mudah karena sudah tersusun.

21. Bagaimana mind map membantu Anda menerapkan konsep TEFL pada situasi pembelajaran yang baru atau belum pernah Anda hadapi?

Untuk dasar-dasarnya membantu sebagai konsep awal menghadapi masalah baru, walaupun tetap tergantung bagaimana kita menghadapinya.

22. Pernahkah mind map membantu Anda mencoba teknik mengajar TEFL yang baru? Jelaskan!

Belum mencoba teknik baru, tetapi membantu memahami materi dengan lebih baik.

23. Bagaimana mind map membantu Anda membedakan informasi yang penting dan kurang penting dalam materi TEFL?

Informasi penting pasti dimasukkan ke dalam mind map. Jadi yang ada di mind map itu penting-penting semua.

24. Apakah tampilan visual memudahkan Anda fokus pada poin utama? Mengapa?

Iya, sangat membantu fokus karena visual menunjukkan arah perhatian.

25. Bagaimana PowerPoint mind map membantu Anda menyusun konsep TEFL secara sistematis?

Dengan membaca dan memahami materi dulu, lalu menyusun poin utama dan turunannya.

26. Apakah mind map membantu Anda melihat struktur keseluruhan materi TEFL dengan lebih jelas? Jelaskan!

Iya, karena kita hanya melihat poin-poin intinya.

27. Bagaimana materi visual membantu Anda memahami tujuan dari berbagai pendekatan TEFL

Karena dari sajian mind map terlihat alurnya dan tujuannya.

28. Apakah mind map membantu Anda mengenali fokus atau sudut pandang metode TEFL tertentu?

Iya, terlihat jelas misalnya student-centered atau teacher-centered.

29. Bagaimana mind map membantu Anda mengevaluasi ketepatan atau keakuratan materi TEFL?

Dengan melihat pembagian kelebihan dan kekurangan metode dalam cabang-cabangnya.

30. Apakah materi visual membantu Anda menemukan penjelasan yang kurang jelas atau tidak konsisten? Jelaskan!

Untuk sekilas mungkin tidak terlalu terlihat, kecuali benar-benar diperhatikan.

31. Bagaimana Anda menilai efektivitas metode TEFL setelah dipelajari melalui mind map?

Dari bagaimana metode itu bisa dipraktikkan di lapangan.

32. Kriteria apa yang Anda gunakan untuk menilai efektivitas metode TEFL yang disajikan secara visual?

Dari efektivitasnya saat diterapkan.

33. Bagaimana mind map mendorong Anda menghasilkan ide-ide baru dalam pembelajaran TEFL?

Karena sebelum membuat mind map harus membaca dan memahami dulu, dari situ muncul ide baru yang bisa diterapkan di lapangan.

34. Apakah mind map menginspirasi Anda menemukan alternatif cara mengajar Bahasa Inggris? Jelaskan!

Iya, karena memudahkan mengingat materi dan membuat pembelajaran lebih student-centered.

35. Bagaimana mind map membantu Anda merencanakan kegiatan atau langkah pembelajaran TEFL?

Membantu menyusun poin-poin sebelum terjun ke lapangan sehingga pelaksanaannya terstruktur.

36. Apakah materi visual membantu Anda menyusun rencana pembelajaran dengan lebih terstruktur? Mengapa?

Iya, karena lebih mudah dipahami dan lebih menarik.

37. Bagaimana mind map membantu Anda membuat bahan ajar TEFL sendiri?

Membantu menyusun bahan ajar dalam bentuk poin-poin yang jelas dan penting saja.

38. Pernahkah Anda membuat materi ajar orisinal setelah belajar menggunakan mind map? Jelaskan!

Pernah membuat slide atau RPP menggunakan mind map, dan itu membantu menjelaskan poin-poin penting saja.

## APPENDIX 4

### INTERVIEW TRANSCRIPT

#### Transcript interview:

#### To Investigate Students' Cognitive Learning Demands in Using English-Language Visual Mind Map-Based PowerPoint in TEFL Classes

#### Responden 1: DMK (TBI 8A)

1. Saat mempelajari materi TEFL yang bersifat teoretis (misalnya bagaimana bahasa dipelajari, cara mengajarkan tata bahasa, dan strategi mengajar), bagian mana yang paling sulit dipahami ketika disajikan melalui mind map?

Yang terasa sulit itu mungkin approach-nya, pendekatannya ke anak-anak. Karena pasti kita butuh real life-nya. Kalau cuma di mind map saja, kita nggak tahu gimana praktik aslinya.

2. Bagaimana penggunaan bahasa Inggris dalam mind map memengaruhi pemahaman Anda terhadap materi TEFL yang cukup kompleks?

Tergantung bahasa yang digunakan. Ada bahasa Inggris yang mudah dimengerti, tapi ada juga yang lebih sulit untuk dicerna.

3. Ketika mind map berisi banyak istilah akademik atau teknis dalam bahasa Inggris, usaha belajar apa yang harus Anda lakukan agar bisa mengikuti materi?

Biasanya tanya sama yang buat, atau searching di Google. Kalau masih belum ngerti juga, tanya ke teacher atau diskusi sama teman.

4. Apakah pernah ada desain mind map (misalnya warna terlalu banyak, cabang terlalu rumit, atau bentuk tidak konsisten) yang membuat Anda sulit fokus pada materi? Jelaskan dan berikan contohnya!

Pernah. Kalau terlalu banyak panah-panah dan cabangnya banyak, jadi membingungkan.

5. Jika dalam mind map terdapat kata kunci bahasa Inggris tanpa penjelasan, apa yang biasanya Anda lakukan agar tetap memahami materi tersebut?

Biasanya cari lagi materinya, terus di bawahnya kasih notes sedikit supaya ingat. Kalau cuma kata kunci tanpa penjelasan itu buat bingung.

6. Menurut Anda, apakah tampilan visual mind map pernah lebih menarik perhatian Anda dibandingkan isi materi pelajaran? Dalam kondisi seperti apa hal itu terjadi?

Kadang iya. Karena tipe saya lebih ke audio-visual, jadi visual dulu yang dilihat. Kalau visualnya sudah menarik, baru lihat materinya.

7. Bagaimana pengalaman Anda dalam memahami struktur atau alur informasi pada mind map? Apakah membutuhkan usaha khusus?

Kalau memahami strukturnya nggak terlalu sulit karena sudah runtut. Tapi kalau membuatnya sendiri agak sulit karena harus milah-milah inti materi.

8. Sejauh mana kebutuhan untuk menerjemahkan atau menafsirkan istilah bahasa Inggris dalam mind map memengaruhi proses belajar Anda?

Mengganggu sih. Biasanya berhenti dulu untuk cari artinya, baru lanjut lagi setelah ngerti.

9. Setelah memahami isi dan struktur mind map, apa yang membantu atau justru menghambat Anda untuk berpikir lebih mendalam atau merefleksikan materi TEFL tersebut?

Bisa lebih mendalam. Karena sudah tahu intinya, jadi bisa dikaitkan dengan materi lain dan jadi lebih kritis.

### **Responden 2: RM (TBI 8C)**

1. Saat mempelajari materi TEFL yang bersifat teoretis, bagian mana yang paling sulit dipahami ketika disajikan melalui mind map?

Teori yang berkaitan dengan strategi dan penerapannya di lapangan, karena praktiknya belum pernah dialami langsung.

2. Bagaimana penggunaan bahasa Inggris dalam mind map memengaruhi pemahaman Anda terhadap materi TEFL yang cukup kompleks?

Membantu, walaupun kadang sulit. Kalau tanpa mind map mungkin lebih sulit lagi.

3. Ketika mind map berisi banyak istilah akademik atau teknis dalam bahasa Inggris, usaha belajar apa yang harus Anda lakukan agar bisa mengikuti materi?

Searching di internet untuk memahami istilah sulit, atau bertanya ke teman atau AI.

4. Apakah pernah ada desain mind map yang membuat Anda sulit fokus pada materi? Jelaskan dan berikan contohnya!

Pernah, kalau warna terlalu banyak atau simbol terlalu banyak bisa membuat bingung.

5. Jika dalam mind map terdapat kata kunci bahasa Inggris tanpa penjelasan, apa yang biasanya Anda lakukan agar tetap memahami materi tersebut?

Mencari di internet atau bertanya kepada yang lebih tahu.

6. Menurut Anda, apakah tampilan visual mind map pernah lebih menarik perhatian Anda dibandingkan isi materi pelajaran? Dalam kondisi seperti apa hal itu terjadi?

Tidak mengganggu, justru membuat lebih tertarik membaca materinya.

7. Bagaimana pengalaman Anda dalam memahami struktur atau alur informasi pada mind map? Apakah membutuhkan usaha khusus?

Membutuhkan usaha membaca dan memahami materi terlebih dahulu.

8. Sejauh mana kebutuhan untuk menerjemahkan atau menafsirkan istilah bahasa Inggris dalam mind map memengaruhi proses belajar Anda?

Sedikit mengganggu dan memperlambat, tetapi tetap membantu pemahaman.

9. Setelah memahami isi dan struktur mind map, apa yang membantu atau justru menghambat Anda untuk berpikir lebih mendalam atau merefleksikan materi TEFL tersebut?

Tergantung kondisi dan mood. Kalau serius membuatnya, bisa lebih kritis. Kalau tidak, hanya merangkum saja.

**Responden 3 : NA (TBI 8C)**

1. Saat mempelajari materi TEFL yang bersifat teoretis, bagian mana yang paling sulit dipahami ketika disajikan melalui mind map?

Biasanya materi yang memang sulit dari awal. Terutama yang tidak ada contoh nyata atau sulit dipahami dalam kehidupan sehari-hari. Kalau materinya kurang jelas, mind map yang saya buat juga tetap sulit dipahami.

2. Bagaimana penggunaan bahasa Inggris dalam mind map memengaruhi pemahaman Anda terhadap materi TEFL yang kompleks?

Kalau menggunakan bahasa Inggris, terutama dari textbook, kadang sulit dipahami. Saya biasanya mengganti dengan bahasa yang lebih sederhana agar lebih mengerti.

3. Ketika mind map berisi banyak istilah akademik atau teknis dalam bahasa Inggris, usaha apa yang Anda lakukan agar tetap bisa mengikuti materi?

Saya biasanya bertanya kepada teman atau menggunakan AI untuk mencari penjelasan yang lebih sederhana.

4. Apakah pernah ada desain mind map yang membuat Anda sulit fokus pada materi? Jelaskan.

Pernah, tetapi lebih karena materinya sulit, bukan karena warnanya. Warna tidak terlalu berpengaruh bagi saya. Namun jika panah atau strukturnya tidak jelas, itu bisa membingungkan.

5. Jika dalam mind map terdapat kata kunci bahasa Inggris tanpa penjelasan, apa yang biasanya Anda lakukan?

Biasanya saya tidak memasukkannya jika tidak memahami artinya. Jika tetap tidak mengerti, saya bertanya kepada teman.

6. Apakah tampilan visual mind map pernah lebih menarik perhatian Anda dibandingkan isi materi?

Terkadang iya, terutama saat saya membuat desain yang bagus. Saya bisa lebih fokus pada visualnya, walaupun tetap memahami materinya secara garis besar.

7. Bagaimana pengalaman Anda dalam memahami struktur atau alur informasi pada mind map?

Jika saya membuatnya sendiri, tidak terlalu sulit karena saya sudah memahami materinya. Namun jika melihat milik teman, saya perlu usaha untuk memahami alurnya.








8. Sejauh mana kebutuhan menerjemahkan istilah bahasa Inggris memengaruhi proses belajar Anda?

Menerjemahkan cukup memengaruhi karena membutuhkan waktu dan bisa membuat jeda dalam berpikir. Terkadang terjemahannya juga masih sulit dipahami.

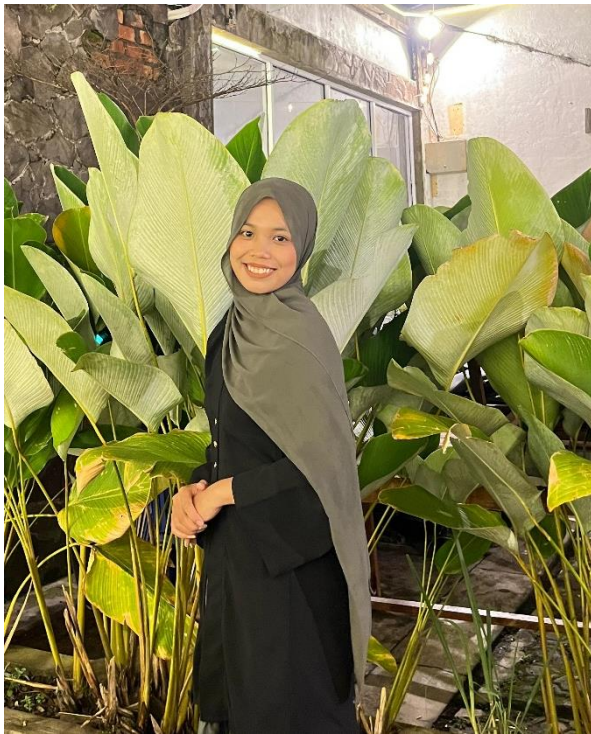
9. Setelah memahami isi dan struktur mind map, apa yang membantu atau justru menghambat Anda untuk berpikir lebih mendalam?

Biasanya saya hanya merangkum sesuai pemahaman saya. Saya tidak terlalu menambahkan opini pribadi. Mind map membantu saya memahami materi, tetapi tidak selalu membuat saya berpikir lebih kritis. Kadang saya baru sadar ada kesalahan setelah dijelaskan di kelas.

**APPENDIX 5**  
**DOCUMENTATIONS**

 <p>A video recording showing two women wearing hijabs sitting on a couch and talking. The woman on the left is wearing a black hijab and a grey top, while the woman on the right is wearing a light brown hijab and a light-colored top. The background consists of vertical purple and white stripes.</p>	 <p>A video recording showing two women wearing hijabs standing outdoors. The woman on the left is wearing a pink hijab and a pink top, while the woman on the right is wearing a light brown hijab and a light blue top. They appear to be in a semi-enclosed outdoor space with a building in the background.</p>
<p><b>Respoden AN</b></p>	<p><b>Respoden DM</b></p>
 <p>A video recording showing a woman wearing a black hijab and a red top. She is looking towards the camera and appears to be speaking. The background is a patterned wall.</p>	 <p>A video recording showing two women wearing hijabs sitting on a couch and talking. The woman on the left is wearing a red top and a light brown hijab, while the woman on the right is wearing a light brown hijab and a light-colored top. The background consists of vertical purple and white stripes.</p>
<p><b>Respoden LA</b></p>	<p><b>Respoden NK</b></p>
 <p>A video recording showing two women wearing hijabs sitting on a couch and talking. The woman on the left is wearing a light blue hijab and a light blue top, while the woman on the right is wearing a light grey hijab and a light blue top. The background is a plain wall.</p>	 <p>A video recording showing two women wearing hijabs sitting on a couch and talking. The woman on the left is wearing a black hijab and a grey top, while the woman on the right is wearing a light grey hijab and a light blue top. The background is a plain wall.</p>
<p><b>Respoden NA</b></p>	<p><b>Respoden RR</b></p>
 <p>A video recording showing two women wearing hijabs sitting on a couch and talking. The woman on the left is wearing a light grey hijab and a light grey top, while the woman on the right is wearing a light grey hijab and a light blue top. The background is a plain wall.</p>	
<p><b>Respoden TS</b></p>	

## AUTOBIOGRAPHY



Dwi Indah Sari is the author of this thesis. She was born in Air Duku on September 24, 2003. She is the second of three siblings, born to Mr. Sugiono and Mrs. Muhayati. The author began her education at SDN 10 Rejang Lebong and graduated in 2015. She then continued her education at SMPN 13 Rejang Lebong and graduated in 2018. She pursued her vocational high school education at SMKN 07 Rejang Lebong and graduated in 2021. The author furthered her studies at IAIN Curup, majoring in English Education. With determination and perseverance, the author completed this thesis and earned her bachelor's degree (S.Pd.). Finally, the author would like to express her deepest gratitude for the completion of this thesis entitled *“The Use of Mind Mapping on PowerPoint Presentations in Understanding TEFL Material.”* It is hoped that this thesis will contribute to the field of education, especially in English language teaching and learning.