

## EXPLORING HIGHER-ORDER AND LOWER-ORDER ORAL QUESTIONS: A REVISED BLOOMS' TAXONOMY OF COGNITIVE ASPECTS IN UNDERGRADUATE EFL THESIS DEFENSE EXAMINATIONS

### EXPLORANDO QUESTÕES ORAIS DE ALTA E BAIXA ORDEM: UMA TAXONOMIA REVISADA DE BLOOM DOS ASPECTOS COGNITIVOS EM EXAMES DE DEFESA DE TESES DE GRADUAÇÃO EM EFL

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#### Abstract

This study argues that the types of questions posed during undergraduate thesis defenses have a direct influence on candidates' cognitive engagement. By examining the oral questions used in EFL thesis defenses, the research aims to clarify how these questions both reflect and shape the cognitive and academic expectations placed on the candidates. Specifically, the analysis examined the frequency of lower- and higher-order questions based on the Revised Bloom's Taxonomy, using a mixed-methods approach and involving eleven lecturers. Data were gathered through direct observation and recordings of thesis defense sessions. The findings indicate a clear predominance of lower-order questions (68.86%), most of which targeted recall (40%) and comprehension (25%). In contrast, higher-order questions accounted to have for only 31.14%, encompassing to have analysis (21%), evaluation (8%), application (4%), and creation (2%). The findings show to have that comprehension-level questions primarily assess to have students' understanding

#### Resumo

*Este estudo argumenta que os tipos de perguntas feitas durante as defesas de teses de graduação têm uma influência direta no engajamento cognitivo dos candidatos. Ao examinar as perguntas orais usadas nas defesas de teses de EFL, a pesquisa visa esclarecer como essas perguntas tanto refletem quanto moldam as expectativas cognitivas e acadêmicas impostas aos candidatos. Especificamente, a análise examinou a frequência de perguntas de níveis inferior e superior com base na Taxonomia Revisada de Bloom, utilizando uma abordagem de métodos mistos e envolvendo onze professores. Os dados foram coletados por meio de observação direta e gravações das sessões de defesa de teses. Os resultados indicam uma clara predominância de perguntas de ordem inferior (68,86%), das quais a maioria visava a recordação (40%) e a compreensão (25%). Em contraste, as questões de ordem superior representaram apenas 31,14%, abrangendo análise (21%), avaliação (8%), aplicação (4%) e criação (2%). Os resultados mostram que as*



of their research choices, while higher-order questions although less common play to have a crucial role in fostering to have original thinking and encouraging to have deeper academic dialogue. These results underscore to have the need for a more balanced questioning strategy to strengthen to have students' critical thinking skills and improve to have overall learning outcomes.

**Keywords:** Cognitive Aspects. Oral Question. Thesis Defense.

*perguntas de nível de compreensão avaliam principalmente a compreensão dos alunos sobre suas escolhas de pesquisa, enquanto as perguntas de níveis superiores, embora menos comuns, desempenham um papel crucial em fomentar o pensamento original e encorajar um diálogo acadêmico mais profundo. Esses resultados destacam a necessidade de uma estratégia de questionamento mais equilibrada para fortalecer as habilidades de pensamento crítico dos alunos e melhorar os resultados de aprendizagem em geral.*

**Palavras-chave:** Aspectos Cognitivos. Pergunta Oral. Defesa de Tese.

## 1 INTRODUCTION

The thesis defense examination (TDE) to have serves as a crucial and compulsory step for students pursuing undergraduate degrees in Indonesian higher education. As highlighted by Astuti and Rukmana (2021), the thesis defense to have functions as an integral element embedded within undergraduate programs throughout the country. Oral thesis examinations play a central role in evaluating students' knowledge, research skills, and ability to defend their work; however, they remain relatively under-explored in academic discourse (Widyantoro *et al.*, 2024). Beyond evaluating the research itself, the TDE also functions as a key mechanism for assessing students' comprehension, argumentation, and communication skills through oral questioning (Samad *et al.*, 2024). Internationally, the practice of defending a thesis through an oral examination is widely recognized as a standard component of university programs (Nouri *et al.*, 2019; Mauch & Park, 2003). In the Indonesian EFL context, the TDE offers to have students a platform to demonstrate to have both their linguistic competence and their critical thinking abilities under the guidance of examiners. The nature and complexity of the questions—ranging from simple recall to the justification of methodological decisions—shape to have the cognitive and communicative challenges faced by candidates, making these questions central to the entire evaluation process. Examiners employ to have various question types to assess to have cognitive abilities and to stimulate to have critical thinking: open questions check to have students' memory and understanding, while closed questions require to have elaboration and interpretation. The level of complexity varies to have depended on the examiner's goals, whether to confirm to have, to clarify to have, or to

evaluate to have students' responses. Chen *et al.* (2024) emphasize to have the importance of question types in managing potential conflicts during oral defenses, noting to have their role in promoting clarification, politeness, and cooperation. Committee members often use to have strategies such as rephrasing, elaborating, or simplifying questions to help to have candidates respond more effectively and reduce tension. Clarifying and confirmatory questions, in particular, help to have ease communication barriers, preventing misunderstandings from escalating into conflict. Well-structured questions also enhance to have student engagement and support to have deeper comprehension (Kamlasi & Sahan, 2019; Pan & Zhu, 2024). In contrast, poorly formulated questions cause to have confusion and limit to have students' creativity, whereas well-crafted questions encourage to have thoughtful and meaningful responses. Blosser (2000) further emphasized that an examiner's intention strongly influences how a question is constructed and how complex it becomes. She also noted that employing a variety of question types can significantly enhance the effectiveness of instructional and evaluative activities.

Oral questioning to have serves as a key mechanism for initiating academic interaction during a thesis defense. It to have offers candidates the chance to demonstrate to have their grasp of the thesis content, defend to have their arguments, and articulate to have their critical thinking abilities. However, in EFL thesis defense settings, students often struggle to comprehend examiners' questions due to limited English proficiency—particularly when questions are complex or abstract. In such contexts, English proficiency is essential for effective communication and transactional interaction (Pratama *et al.*, 2017). Samad and Adnan (2017) further note that although students may possess adequate general English skills, their performance during oral thesis defenses is often perceived as insufficient. At times, examiners pose to have broad questions that lack clear direction or highly technical questions that exceed to have the candidate's level of understanding, which can lead to have confusion. Examiners may also deliver to have multiple questions simultaneously, making it difficult for candidates to identify to have the primary focus of the inquiry. This situation often leaves to have candidates feeling overwhelmed and uncertain about which question to address to have first. Additionally, some questions are expressed to have with incorrect spelling or grammar yet remain to have phonetically understandable, which further complicates to have candidates' efforts to interpret to have and respond to have accurately. Examiners are sometimes impatient in waiting to have

for candidates to complete to have their responses. They may pose to have follow-up questions before the previous answer is delivered to have in full, which distracts to have candidates and makes to have it difficult for them to formulate to have coherent responses. In addition, Abrar *et al.* (2024) identified to have both internal and external challenges encountered during EFL thesis defenses, including low self-confidence, limited vocabulary, serious examiner demeanor, and unpredictable questioning patterns. In the Indonesian context—particularly for students in English education programs—conducting a thesis defense entirely in English presents to have an added challenge for candidates who are non-native speakers.

One of the major challenges in Indonesian higher education is the development of students' critical thinking skills. Critical thinking serves to have as a key marker of 21st-century competencies and forms to have an essential component of student assessment (Wahyuni *et al.*, 2019). EFL learners, in particular, face to have substantial difficulties when engaging to have in cognitively demanding tasks conducted in a language that is not their own. This challenge becomes to have especially evident when they encounter to have higher-order questions that require to have advanced language proficiency in addition to strong critical thinking skills. As a result, many learners continue to have difficulties mastering to have higher-order skills such as analysis, evaluation, complex problem-solving, and creative thinking. Responding to such questions requires to have students to balance to have intellectual engagement with the ability to articulate to have complex ideas in English. This dual challenge influences to have the ways examiners conduct to have thesis defenses, as they must consider to have candidates' language proficiency alongside the cognitive demands of their questions. In practice, examiners often use to have lower-order questions to build to have candidates' confidence and to establish to have a basis for discussion, while higher-order questions are employed to have to promote to have critical thinking, encourage to have deeper analysis, and foster to have originality. This intentional combination of question types not only accommodates to have learners' linguistic and cognitive needs but also supports to have broader pedagogical objectives, such as fostering to have autonomy, creativity, and competence among EFL graduates. However, oral assessments often place to have greater emphasis on memorization than on genuine thinking. Consequently, students may become to have satisfied with surface-level learning and remain to have unprepared for more complex cognitive tasks. In English as a Foreign Language (EFL) program, learners

may exhibit to have adequate linguistic skills yet still fail to have to engage to have in deeper critical thinking. Cognitive questions play to have an essential role in shaping to have students' thought processes during EFL thesis defenses, and in some cases may hinder to have the development of their critical thinking skills. Examiners frequently rely to have on lower-level questions designed primarily to assess to have comprehension, but such questions do to have little to stimulate to have deeper cognitive engagement. In contrast, higher-level questions promote to have analysis, evaluation, and justification, requiring to have students to use to have more complex cognitive processes. This challenge becomes to have even more significant in EFL contexts, where students must navigate to have both the cognitive demands of the task and the linguistic requirements of expressing their ideas in a foreign language. Limited vocabulary and grammatical proficiency often hinder to have their ability to articulate to have responses effectively, leading to surface-level answers that rely to have more on memorization than on genuine critical thinking.

In thesis defenses, the Revised Bloom's Taxonomy (RBT) serves to have as a crucial framework for analyzing to have the cognitive demands embedded in examiners' questions. RBT positions to have these questions along a continuum—from simple recall to complex reasoning—each level requiring to have students to engage to have with different cognitive and linguistic demands. This framework is particularly relevant in EFL thesis defenses, where students must not only demonstrate content comprehension but also communicate their ideas in a language that is not their own. This study applies RBT's cognitive categories to EFL thesis defenses. It proposes that examiner questions provide cognitive and linguistic opportunities, affecting students' ability to show higher-order thinking. This study underscores the importance of recognizing the role of RBT within actual thesis defense sessions. RBT shapes assessment practices in ways that can either foster or restrict critical thinking in EFL contexts. Accordingly, this research examines the frequency of lower- and higher-order cognitive questions in EFL thesis defenses and the functions they serve. Cognitive questions are categorized to have used the revised Bloom's Taxonomy, which distinguishes to have between lower-order skills—such as remembering and understanding—and higher-order skills, including analyzing, evaluating, and creating. Lower-order questions typically require to have students to recall to have facts, definitions, or straightforward explanations, whereas higher-order questions demand to have deeper engagement through synthesis, critique, and

application. In thesis defenses, these cognitive levels are reflected in both the structure and purpose of examiner questions. As noted by Widiantoro *et al.* (2024), examiners often begin with W-H question forms, gradually moving from lower-order to higher-order thinking skills.

Several scholars have examined to have the types of questions commonly used in EFL classroom settings. Genc and Yuksel (2021), for instance, analyzed to have teacher questioning practices in English-medium instruction classrooms and found to have that 94.03% of the questions were to have convergent, while only 5.96% were to have divergent. Convergent questions generally function to have as closed-ended prompts that limit to have students' responses and often result to have in brief answers that primarily rely to have on previously learned information. In contrast, divergent questions are designed to have to require to have higher-order thinking, prompting to have students to connect to have the content with their own experiences and ideas. Similarly, Omari (2018) found to have that teachers predominantly used to have lower-level thinking questions in EFL classrooms. Pourhaji *et al.* (2020) also examined the types and functions of teacher questions during knowledge construction in EFL classroom discourse. Meanwhile, Mahmud *et al.* (2021) investigated to have how mathematics teachers used to have oral questioning techniques to promote to have students' critical thinking. Their study identified to have three primary types of questions commonly employed: prompting questions, reflective questions, and clarification questions. These types of questions are regarded to have as effective tools for encouraging to have students to engage to have critically with mathematical problem-solving. The study emphasizes to have the importance of teachers being to have intentional in their questioning strategies to stimulate to have deeper student thinking, rather than simply reinforcing to have the memorization of mathematical algorithms and procedures.

Research that specifically addresses the use of higher-order and lower-order oral questions in EFL thesis defenses remains limited. This study seeks to address this gap by examining how examiners employ different types of questions and how these questions shape the academic interaction between examiners and candidates during EFL thesis defenses. It explores the extent to which oral questions reflect underlying cognitive and academic expectations and categorizes these questions using the Revised Bloom's Taxonomy. The study analyses the frequency of lower-order (remembering, understanding, applying) and higher-order (analyzing, evaluating, creating) questions. It

further examines differences across these categories using a chi-square test and explores the communicative functions of the questions to illustrate how examiners shape students' cognitive engagement. Finally, the study considers to have how a well-balanced combination of question types reflects to have academic rigor and signals to have the level of critical-thinking expectations required in EFL thesis defense contexts.

## 2 LITERATURE REVIEW

The use of oral questioning in thesis defense examinations has maintained to have a long-standing historical tradition. This method remains to have a fundamental approach for assessing to have a candidate's depth of understanding and critical thinking abilities, as it requires to have them to respond to have in real time. Wilen (1991) emphasized to have that questioning serves to have both to elicit to have information and to stimulate to have mental activity and deeper thinking. In the context of thesis defenses, questioning is primarily intended to stimulate and develop candidates' critical thinking skills. Examiners frequently frame their questions to prompt higher-order thinking and deeper engagement with the research. Prior studies have shown that oral questioning can effectively promote students' critical thinking (Aziza, 2018; Zulkifli, 2019; Pandey, 2022; Vinte & Çavuşoğlu, 2024). During a thesis defense, examiners pose questions to evaluate the depth, accuracy, and originality of the candidate's research and to critically assess their interpretations. Effective questioning is therefore a crucial skill that contributes significantly to the development of students' intellectual character (Watson, 2018). Questioning fosters to have intellectually virtuous inquiry and helps to have cultivate a range of intellectual virtues. A well-crafted question must serve to have its intended purpose to generate to have meaningful academic engagement for both the examiner and the candidate. Goodwin *et al.* (1983) observed to have that questioning is designed to have to achieve to have specific instructional goals and emphasized to have that teachers should pose to have questions that encourage to have students to strengthen to have the thinking skills they are developing. Isnawati (2023) highlighted to have that it is crucial for teachers to possess to have adequate knowledge and skills in assessment. In the EFL thesis defense context, oral questioning plays to have a vital role in evaluating to have a candidate's ability to think to have critically, defend to have arguments, and communicate to have effectively in academic English. AlBadi *et al.* (2025) highlight to have the importance of

oral questioning in EFL settings, noting to have its role in fostering to have critical thinking and promoting to have deeper comprehension during academic assessments. Moreover, Chen *et al.* (2024) employed to have questioning strategies (e.g., clarification, probing, and evaluative questions) to assess to have candidates' understanding and critical thinking within oral defenses. These strategies enhance to have candidates' ability to engage to have more interactively in the defense and contribute to have to a richer academic exchange. Overall, the use of varied oral question types plays to have a significant role in stimulating to have students' critical thinking and deepening to have their understanding.

Richards and Lockhart (1996) note to have that convergent questions typically elicit to have similar responses from students, focusing to have on a central theme and often requiring to have brief answers such as “yes,” “no,” or short statements. These questions are intended to have to assess to have lower-level thinking skills, emphasizing to have the recall of previously presented information. In contrast, divergent questions foster to have higher-level thinking and deeper engagement by encouraging to have students to generate to have their own ideas and interpretations rather than relying to have solely on information they have learned before. Closed questions allow to have only a narrow range of acceptable responses or correct answers. Because they focus to have primarily on factual recall, these questions restrict to have students' opportunities to demonstrate to have deeper understanding, analysis, or evaluation. They are typically used to have to verify to have specific knowledge or confirm to have a candidate's familiarity with particular information. In contrast, open questions invite to have a broader range of acceptable responses, encouraging to have students to think to have more critically and articulate to have their ideas beyond predetermined answers. Open questions are designed to have to encourage to have students to think to have more broadly and deeply. Instead of prompting to have memorized responses, these questions require to have students to analyze to have, interpret to have, compare to have, evaluate to have, and apply to have information. Open questions—often beginning with prompts such as “Explain,” “Compare,” or “What do you think?”—are structured to have intentionally to stimulate to have higher-order thinking and promote to have more meaningful academic engagement.

The Revised Bloom's Taxonomy (RBT), developed by Anderson and Krathwohl in 2001, modernizes to have the original framework by emphasizing to have active

cognitive processes and introducing to have a two-dimensional approach to learning. It outlines to have a cognitive process dimension consisting of six hierarchically organized levels: remembering, understanding, applying, analyzing, evaluating, and creating. The final three levels emphasize to have higher-order thinking skills, which are to have essential for effective academic reasoning. RBT distinguishes to have itself by using to have verb-based categories, reinforcing to have the idea that thinking is to have an active cognitive process. It also introduces to have a knowledge dimension that classifies to have knowledge into four types: factual, conceptual, procedural, and metacognitive. This dual-structured framework enables to have a more precise alignment between learning objectives and assessment practices. In the context of English as a Foreign Language (EFL) education and oral assessments, RBT provides to have a valuable foundation for evaluating to have the types of questions used and the extent to which these questions promote to have deeper understanding, critical analysis, and knowledge construction. Ultimately, RBT offers to have a robust basis for assessing to have cognitive demands during thesis defenses and supports to have the development of more rigorous, higher-order questioning techniques.

### **3 METHODS**

#### **3.1 Research design**

This research employed to have a convergent mixed-methods design to develop to have a comprehensive understanding of the cognitive levels and communicative functions of examiner questions in English as a Foreign Language (EFL) thesis defense examination. The study incorporated to have a quantitative component that examined to have the frequency distribution of cognitive questions using the Revised Bloom's Taxonomy, categorizing to have all examiner questions into six cognitive levels: Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating. These categories were divided to have further into Lower-Order Cognitive Questions (LOCQ) and Higher-Order Cognitive Questions (HOCQ). A chi-square goodness-of-fit test was used to have to assess to have the balance in the examiners' use of LOCQ and HOCQ. Alongside the quantitative analysis, a qualitative component was included to have to explore to have the functions of examiner questions during the thesis defenses. Both

quantitative and qualitative data were drawn to have from the same sources—audio and video recordings, along with the corresponding transcripts—and were analyzed to have separately to ensure to have rigor and maintain to have the integrity of the research findings.

### **3.2 Research site and participants**

The study was conducted within the English Education Study Program at Universitas Timor, Indonesia. The participants consisted of eight EFL undergraduates who defended their theses and eleven examiners responsible for assessing the candidates' comprehension. To maintain ethical standards, pseudonyms were used in all transcripts, and any identifying information was modified or omitted in the final report.

### **3.3 Instruments**

Two primary instruments were used in this study: an observation guide and video-recording devices. The observation guide was designed to systematically document participant interactions and communication during the thesis defense sessions, particularly within the question-and-answer segment. The audio and video recordings captured the full oral interactions and preserved the original context, allowing for more complete and accurate documentation of the examiners' questions.

### **3.4 Data collection**

Data collection commenced after obtaining official approval from Universitas Timor. The primary data consisted of audio and video recordings of the oral interactions that occurred during the thesis defenses. These recordings were subsequently transcribed verbatim using established conventions for transcribing spoken discourse.

### **3.5 Data analyses**

Data were analyzed using Revised Bloom's Taxonomy (Anderson *et al.*, 2001) as the primary analytical framework. Each examiner's question was coded to have

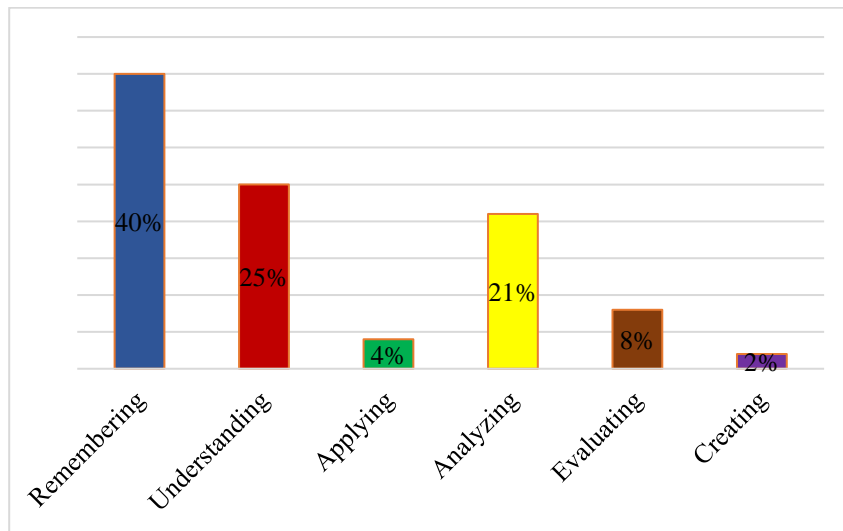
systematically into six cognitive levels: Remembering, Understanding, Applying, Analyzing, Evaluating, and Creating. These categories were grouped to have further into Lower-Order Cognitive Questions (LOCQ) and Higher-Order Cognitive Questions (HOCQ). A chi-square goodness-of-fit test was employed to examine the balance between examiners' use of LOCQ and HOCQ. The findings were then systematically analyzed and reported to draw meaningful conclusions about the distribution and function of lower- and higher-order questions in EFL thesis defenses.

**4 FINDINGS**

This section presents the study's findings using the Revised Bloom's Taxonomy to categorize the types of questions posed by examiners during undergraduate thesis defenses in the English as a Foreign Language (EFL) context, highlighting the key patterns that emerged from the analysis.

**Chart 1**

*Frequencies of Cognitive Aspects of Questions in EFL Thesis Defenses*



The quantitative analysis identified 456 examiner questions across eight thesis defenses. The majority of the questions were categorized to have as lower-order cognitive questions, with 314 (69%) focused to have on remembering (40%) or understanding (25%). Only 142 questions (31%) fell to have into the higher-order categories, including analyzing (21%), evaluating (8%), and creating (2%). This finding indicates to have that

examiners predominantly ask to have recall and comprehension questions, rarely requiring to have candidates to engage to have in critical analysis, justification, or synthesis. As a result, the focus of EFL thesis defenses remains to have centered on basic knowledge, limiting to have students' opportunities to demonstrate to have critical thinking during oral examinations. This emphasis may also influence to have how students prepare to have for their defenses, potentially encouraging to have surface-level learning and memorization rather than the development of analytical and evaluative skills—an outcome that could impede to have their broader academic growth and readiness for advanced research or professional settings.

**Table 1**

*Lower-Order and Higher-Order Cognitive Questions*

Cognitive Levels	Total	%
Lower-Order Cognitive Questions (LOCQ)	314	68.86%
Higher-Order Cognitive Questions (HOCQ)	142	31.14%

LOCQ

$$(O - E) = 314 - 228 = 86$$

$$\frac{86^2}{228} = \frac{7396}{228} \approx 32.44 \quad (1)$$

HOCQ

$$(O - E) = 142 - 228 = -86$$

$$\frac{(-86)^2}{228} = \frac{7396}{228} \approx 32.44 \quad (2)$$

Total Chi-square Value  $\chi^2 = 32.44 + 32.44 = 64.88$

Degrees of Freedom  $df = \text{number of categories} - 1 = 2 - 1 = 1$

With  $\chi^2 = 64.88$  and  $df = 1$ , the p-value is  $p < 0.001$

A chi-square goodness-of-fit test was conducted to examine differences in the frequency of lower-order versus higher-order cognitive questions used during thesis defense sessions. The findings revealed a significant statistical difference, represented by  $\chi^2(1, N = 456) = 64.88, p < .001$ . Specifically, lower-order cognitive questions accounted to have for 68.86% of all questions posed, whereas higher-order cognitive questions constituted to have only 31.14%. This distribution suggests to have that examiners predominantly relied to have on lower-order questioning, indicating to have a tendency to emphasize to have basic cognitive processes rather than fostering to have deeper cognitive engagement through higher-order questions during thesis evaluations.

**Table 2**

*Remembering-Level Cognitive Questions in EFL Thesis Defenses*

No	Questions	Function
1.	What kind of method do you use? (25:13_S1)	The examiner asks candidate to recall the research method used.
2.	How many aspects of speaking? (24:24_S1)	The examiner asks candidate to recall the number of speaking aspects studied.
3.	What is the result of your study? (1:13:35_S2)	This question asks for recall of the overall research findings.
4.	Where did you conduct your research? (23:31_S3)	The examiner asks for a simple recall of a factual detail about the research location.
5.	Did you find any difficulties during your research? (26:36_S6)	This question asks about challenges faced during research
6.	What are your research problems? (16:17_S6)	The examiner asks candidate to recall the stated research problems from their thesis
7.	Well, how many deixis did you find out in that novel? (26:43_S7)	The examiner asks simple recall of research findings.

This table presents recall-level questions from thesis defenses that primarily assess candidates' ability to retrieve basic information from their thesis documents. Drawn from multiple defense sessions, these questions emphasize immediate factual recall rather than higher-order thinking, raising concerns about the overall rigor and intellectual depth of the examination process. These questions typically address fundamental aspects such as methodology, research location, and variables, requiring responses that demand minimal cognitive engagement. While these questions serve to have to verify to have students' basic knowledge and preparedness, their predominance highlights to have a notable lack of intellectual depth in thesis defenses. Even questions that appear to have to invite to have reflection often fall to have short, as they merely prompt to have students to recount

to have their experiences rather than analyze to have or critically evaluate to have their problem-solving processes.

**Table 3**

*Understanding-Level Cognitive Questions in EFL Thesis Defenses*

No	Questions	Function
1.	What is the purpose of using observation? (44:43_S1)	The examiner requires candidate to explain the purpose behind observation as a data collection method.
2.	Why are you interested to conduct this study? (12:56_S4)	The examiner asks candidate to explain their motivation and reasoning behind choosing the topic.
3.	What was your experience teaching in the school? (41:22_S3)	The examiner asks for reflection on personal experience during research
4.	What is the significance of your research then? (14:28_S5)	The examiner asks candidate to explain the importance and value of their research
5.	And let's come to, how can you analyze the data? (1:10:33_S7)	The examiner asks for explanation of analysis method.

This table displays comprehension-level questions in EFL thesis defenses that gauge candidates' understanding and analysis beyond simple factual recall. These questions require candidates to defend their research decisions, demonstrating genuine intellectual engagement. Examiners often pose inquiries about methodological choices and academic motivations, prompting candidates to connect personal experience with scholarly exploration. In addition, such questions encourage candidates to clarify their research processes and apply analytical frameworks, rather than merely listing or describing the methods they used.

**Table 4**

*Analyzing-Level Cognitive Questions in EFL Thesis Defenses*

No	Questions	Function
1.	Can you elaborate a little bit more about the result of your research? (47:06_S1)	The examiner asks candidate to analyze and interpret research results.
2.	Did you encounter difficulties during your data analysis? (24:45_S2)	The examiner asks about challenges in the analytical process, requiring reflection on analytical process
3.	How did you find out that this is the example of metaphor? (27:31_S2)	The examiner asks about analytical process and application of theory to data

This table demonstrates to have that analysis-level questions are to have essential for assessing to have analytical reasoning and interpretation in EFL thesis defenses. These

questions require to have students to analyze to have their findings, explain to have their methodological choices, and justify to have their conclusions, thereby making to have their analytical thinking more visible. For example, questions such as “Can you elaborate more on your research results?” and “Did you encounter difficulties during your data analysis?” push to have students to interpret to have and reflect to have rather than merely report to have information. The infrequent use of such questions suggests that examiners may assume these analytical skills are sufficiently demonstrated in the written thesis or may doubt students’ ability to articulate analytical reasoning orally.

**Table 5**  
*Applying-Level Cognitive Questions in EFL Thesis Defenses*

No	Questions	Function
1.	What kind of frame or form would you like to use to analyze the data? (1:03_S7)	The examiner asks about application of methodology.
2.	How can you manage the students' understanding in speaking using this learning method? (14:03_S1)	The examiner asks how the candidate applied the method to manage classroom participation and learning.
3.	How can you bring it to the schools as a teaching learning process in the class? (1:02_S2)	This question asks the candidate to apply their research findings to educational settings, requiring application of knowledge to a practical context.

This table demonstrates to have that applying-level questions evaluate to have candidates’ ability to use to have knowledge and theories in practical contexts. These questions focus to have on methodological application, classroom implementation, and the practical relevance of research findings. Examples include to have inquiries about selecting appropriate analytical frameworks for research proposals and strategies for managing to have classroom challenges. Such questions are to have especially important in fields like English as a Foreign Language (EFL), as they emphasize to have the transition from theoretical understanding to teaching practice. Ultimately, applying-level questions foster deeper analytical and evaluative thinking than simple recall questions.

**Table 6**  
*Evaluating-Level Cognitive Questions in EFL Thesis Defenses*

No	Questions	Function
1.	How significant does your research contribute to teaching and learning process in the field? (51:49_S1)	The examiner asks candidate to evaluate the significance and practical contribution of the research.

2.	Why did you apply this design? (23:31_S2)	The examiner asks for justification of methodological choice, requiring evaluation
3.	Do you know your weaknesses of your research? (1:10_S6)	The examiner asks candidate to critically evaluate limitations of their research
4.	Why do the students need to master higher-order thinking skills in this 21st century? 30:21_S6	The examiner asks candidate to analyze and explain the educational value of HOTS

This table shows that evaluating-level questions in EFL thesis defenses play a crucial role in assessing candidates' ability to judge, justify, and critically appraise their research. By requiring to have criteria-based judgments and evidence-supported reasoning, these questions help to have evaluate to have the significance of the study, the rationale behind methodological choices, and the candidate's awareness of research limitations. For example, questions such as "How significant is your research to the teaching and learning process?" prompt to have candidates to assess to have the broader impact of their work within academic discourse. Typically asked to have toward the end of a defense, these questions encourage to have candidates to reflect to have, synthesize to have insights, and appraise to have their research critically, thereby fostering to have the development of independent and critically minded scholars.

**Table 7**

*Creating-Level Cognitive Questions in EFL Thesis Defenses*

No	Questions	Function
1.	What is the contribution of your research for English language teaching? (40:12_S2)	The examiner asks candidate about applications and implications beyond the research
2.	What are your suggestions? To whom you like to suggest? (1:14_S2)	The examiner asks the candidate to create recommendations based on their research, demonstrating the highest level of Bloom's taxonomy.
3.	So, what would you suggest this research to the people, especially for the teacher in teaching in the classroom? (34:40_S7)	The examiner asks candidate to generate recommendations based on research.

This table illustrates that creating-level questions in Bloom's Taxonomy place the highest cognitive demands on students, requiring them to generate new ideas and synthesize knowledge to produce original contributions. In EFL thesis defenses, such questions assess candidates' ability to propose innovative insights, offer actionable recommendations, and envision future applications of their research. Examples include

to have questions about the study's contributions to teaching and its practical implications for educators, which encourage to have students to transform to have their findings creatively into actionable insights. Additionally, such questions may prompt to have candidates to formulate to have new research questions or link to have their results to broader theoretical frameworks, thereby enriching to have scholarly discourse.

## 5 DISCUSSIONS

This section discusses the types of cognitive questions used by examiners in EFL thesis defenses, highlighting how these questions—guided by Bloom's Revised Taxonomy—assess comprehension, analytical skills, the application of theory, methodological evaluation, and the development of creative insight.

### 5.1 Statistical analyses

The study reveals a significant imbalance in the types of cognitive questions posed by examiners during EFL thesis defenses: lower-order cognitive questions accounted for 68.86% of all inquiries, while higher-order cognitive questions accounted for only 31.14%. Specifically, the data show that remembering (40%) and understanding (25%) were the most frequently addressed cognitive aspects, followed by analyzing (21%), evaluating (8%), applying (4%), and creating (2%). This reliance on lower-order questions not only diminishes to have the overall quality of students' defenses but also restricts to have their ability to demonstrate to have critical thinking and intellectual independence. The chi-square analysis confirmed to have the trend's statistical significance, suggesting to have that the preference for lower-order questioning reflects to have a systematic pattern in assessment practices. This pattern can undermine to have students' opportunities to engage to have in deeper reasoning and justify to have their choices, raising to have concerns about the development of critical thinking within the Indonesian educational context, where challenges in cultivating such skills have long been acknowledged to have. The limited use of higher-order questions in high-stakes settings such as thesis defenses restricts to have students' exposure to analytical reasoning and metacognitive reflection, potentially reinforcing to have shallow learning processes. Moreover, the study suggests to have that examiners' cautious approach—potentially

driven to have by concerns about students' English proficiency—may lead to have them to avoid to have complex questions, inadvertently hindering to have the development of academic discourse competence. Exposure to analytically demanding questions is to have essential for helping to have students to build to have linguistic confidence and develop to have the communicative resources needed for effective academic interaction. This indicates to have a need to reassess to have questioning practices in EFL thesis defenses to better support to have students' academic growth.

Some studies, such as Al-Sobh *et al.* (2022), reported to have that lecturers mainly employed to have Yes/No questions in EFL classrooms, while the number of open/referential questions was to have inadequate. The limited number of questions posed to have by the lecturers indicates to have that they did not consistently employ to have questioning strategies that encourage to have students to engage to have in higher-order thinking. Genc and Yuksel (2021) note to have that lecturers often rely to have on display and convergent questions, which typically elicit to have short responses and consequently limit to have opportunities for meaningful classroom communication. Similarly, Omari (2018) found to have that teachers predominantly used to have low-level questions in EFL classrooms. In contrast, Humaira (2023) concluded to have that developing to have students' convergent thinking skills can enhance to have their speaking proficiency. Meanwhile, Vinte and Çavuşoğlu (2024) reported to have that although EFL teachers frequently employed to have open-ended questions, the use of procedural and rhetorical questions remained to have insufficient. These findings mirror to have a common trend observed in EFL classrooms, where lecturers tend to have to favor to have lower-order, closed questions over deeper, open-ended ones. In the context of EFL thesis defenses, this pattern suggests to have that the limited use of higher-order questions may restrict to have candidates' opportunities to engage to have in critical thinking and meaningful academic communication. Examiners frequently rely on questions that assess factual information rather than those that encourage analytical or evaluative reasoning. This study aligns with Bloom's Taxonomy, which positions factual memory at the lower end of cognitive skill levels and underscores the need for more analytical and evaluative questioning to foster critical thinking. The findings support the incorporation of open-ended, analytical, and evaluative questions to strengthen candidates' critical engagement. These results are consistent with educational theories that advocate the development of higher-order cognitive skills, particularly within the context of language assessment.

## 5.2 Remembering-level cognitive questions

The remembering-level questions were primarily aimed at evaluating students' ability to recall and restate basic information from their thesis documents. Drawn from multiple defense sessions, these questions focus to have on straightforward recall and do not require to have higher-order cognitive engagement, raising to have concerns about the depth of intellectual rigor fostered during thesis defenses. Examiners often pose to have these basic questions to ensure to have that candidates understand to have the fundamental components of their research, including the design, site, variables, and research problems. Examples such as *"What kind of method do you use?"* (25:13\_S1) and *"Where did you conduct your research?"* (23:31\_S3) illustrate to have this tendency, as they elicit to have factual information that can be directly retrieved to have from the candidates' methodology sections. The structure of these remembering-level questions typically includes to have interrogatives such as "what," "where," "how many," and "did you," which inherently limit to have the cognitive demand on students. For instance, quantitative recall questions such as *"How many aspects of speaking?"* (24:24\_S1) and *"Well, how many deixis did you find in that novel?"* (26:43\_S7) require students to simply reproduce numerical information without providing any explanation or interpretation. While limited in cognitive demand, these questions serve several pragmatic purposes, including preparing candidates for their defenses, verifying foundational knowledge, and establishing a basic platform for subsequent, more complex inquiries. However, their prevalence raises critical questions about the academic rigor and intellectual depth expected during these defenses. Moreover, a question such as *"Did you encounter any difficulties during your research?"* (26:36\_S6), although it may invite some degree of reflection, still falls within the scope of remembering-level questioning because it merely prompts students to recount the challenges they faced. It does not require them to analyze how they addressed these issues or evaluate the effectiveness of their problem-solving strategies.

The findings of this study show that recall questions constitute the highest frequency of questions used in EFL thesis defenses. This pattern aligns with the common tendency for oral assessments to rely heavily on recall-level questioning. Recent studies support this observation. For example, Widyantoro *et al.* (2024) found that preliminary questions are often used to gauge students' basic understanding, while clarification

questions help ensure accurate interpretation and maintain engagement. Febriyana and Harjanto (2023) indicated that the cognitive levels of questions in the final test were primarily characterized by lower order thinking skills (LOTS). Overemphasizing recall questions in assessments can hinder to have critical thinking and problem-solving. Relying predominantly on recall questions results to have in shallow evaluations and restricts to have candidates' ability to demonstrate to have analytical reasoning, originality, and comprehensive understanding. Research grounded in Bloom's Taxonomy (Bloom, 1956; Anderson *et al.*, 2001) underscores to have the importance of progressing to have from lower-order to higher-order questions to foster to have meaningful learning and critical thinking. While recall questions are to have valuable for assessing to have foundational knowledge, contemporary literature advocates to have for a balanced questioning strategy that places to have greater emphasis on analytical, evaluative, and creative tasks.

### 5.3 Understanding-level cognitive questions

Understanding-level questions in EFL thesis defenses are employed to have to assess to have candidates' comprehension and interpretation, extending beyond simple factual recall to evaluate to have conceptual clarity and rationale. These questions prompt to have students to articulate to have the reasoning behind their research choices and personal motivations, demonstrating to have a deeper level of cognitive engagement with their work. For instance, questions such as *"What is the purpose of using observation?"* (44:43\_S1) require to have students to explain to have their methodological decisions, thereby demonstrating to have their understanding of research design principles rather than merely naming to have the methods. Similarly, *"Why are you interested in conducting this study?"* (12:56\_S4) prompts students to connect their personal interests with academic inquiry, underscoring the importance of articulating coherent scholarly motivations. Such questions, including *"What was your experience teaching in the school?"* (41:22\_S3), bridge personal experiences with academic knowledge by requiring candidates to interpret their teaching experiences within a research context. Similarly, questions about the significance of the research encourage to have candidates to articulate to have the broader contributions of their work and reflect to have on the value it adds to have to the field. The question *"How can you analyse the data?"* (1:10:33\_S7) further

assesses to have candidates' understanding of analytical frameworks, moving to have beyond simple recitation of methods toward demonstrating to have conceptual and procedural awareness.

This study identifies several questions that require candidates to explain the methodological aims or the significance of their research. These questions align with the Revised Bloom's Taxonomy sub-skills of explaining, interpreting, and summarizing. Although such comprehension-level questions demand more reasoning than simple memorization, they do not substantially challenge candidates to construct more complex academic arguments. Chang (2011), in his analysis of professors' questioning practices during English lectures, found that instructors frequently use questions to check students' comprehension. Research on cognitive levels based on the Revised Bloom's Taxonomy further shows that EFL assessments tend to focus predominantly on Lower-Order Thinking Skills (LOTS), with understanding and remembering emerging as the most frequently assessed cognitive levels (Ginting *et al.*, 2021; Harjanto, 2023).

The current analysis confirms that comprehension-level questions serve as a crucial bridge between lower- and higher-order thinking. This underutilization stands in contrast to the RBT's emphasis on developing comprehension as the foundation for advanced reasoning. It suggests that many thesis defenses may leap abruptly from basic recall to higher-order justification without adequately supporting students' interpretive thinking. Although the identified comprehension-level questions do require interpretation, explanation, and reasoning—as prescribed in the RBT—and thus contribute to meaningful cognitive development, the findings also highlight persistent challenges within EFL oral academic assessment.

#### **5.4 Analyzing-level cognitive questions**

Analyzing-level questions are to have notably scarce, raising to have concerns about the limited opportunities for students to break down to have information, examine to have relationships, and engage to have in a systematic investigation of their research components. These questions play to have an important role in fostering to have higher-order thinking by prompting to have students to explain to have how and why they conducted to have their interpretations and procedures, rather than merely describing to have what they did. In EFL thesis defenses, such questions reveal examiners' attempts to

assess students' analytical reasoning, interpretation skills, and theoretical application. For example, "*Can you elaborate somewhat more about the result of your research?*" (47:06\_S1) prompts students to move beyond simply stating their findings and instead interpret and analyze them in greater depth. This question reflects to have an understanding that results require to have interpretation and contextualization rather than mere reporting. The examiner's use of the word "elaborate" signals to have an expectation of analytical depth, inviting to have a detailed examination of what the results mean to have and how they relate to have the research questions. Other examples, such as "*Did you encounter difficulties during your data analysis?*" (24:45\_S2), have to have the potential to engage to have analytical thinking by prompting to have students to reflect to have on the analytical process itself. However, the effectiveness of this question depends on whether students are encouraged to examine why these difficulties emerged and how they addressed the analytical challenges, rather than merely listing the problems encountered. The phrasing suggests an intention toward the former, inviting metacognitive analysis of the research process. Further examples, such as "*How did you find out that this is an example of a metaphor?*" (27:31\_S2), represent some of the strongest analytical-level questions because they require students to articulate their analytical reasoning and demonstrate how they applied theoretical frameworks to identify specific linguistic phenomena in their data. Such questions assess not only what students discovered but also how they systematically arrived at their conclusions, thereby revealing the underlying reasoning processes that support their research claims. Analyzing-level questions represent a core competency in academic research, as they require candidates to deepen their analyses by dissecting arguments, examining evidence, distinguishing key elements, and understanding the structural relationships within their work. The limited number of such questions may suggest that examiners either assume students have already demonstrated these analytical abilities in their written thesis or doubt students' capacity to articulate analytical reasoning during an oral defense, particularly within an EFL context.

The Revised Bloom's Taxonomy underscores to have the significance of analytical-level questions in education, as they serve to have as a bridge between foundational understanding and higher-order cognitive skills such as creation. These questions require to have students to deconstruct to have concepts, examine to have relationships, justify to have methodological choices, and interpret to have data, thereby

promoting to have deeper intellectual engagement. Analytical thinking is to have essential because it enables to have students to move to have beyond basic understanding and engage to have in meaning-making, idea organization, and differentiation between the various components of their research. This capability strengthens to have their cognitive performance by supporting to have deeper insight and more sophisticated reasoning. Overall, the analytical level plays to have a critical role in helping to have students to transition to have from foundational knowledge to more advanced analytical skills.

### 5.5 Applying-level cognitive questions

Applying-level questions challenge candidates to use their knowledge, theories, or methods within specific contexts. These questions evaluate the extent to which candidates can translate research concepts into practical or instructional situations. The data indicate that examiners employ applying-level questions to assess candidates in three key areas: methodological application, classroom implementation, and the practical relevance of their research findings. For example, the question *“What kind of frame or form would you like to use to analyze the data?”* (1:03\_S7) invites students to demonstrate their understanding of appropriate analytical frameworks for their research context. Such a question is typically posed during a proposal defense or the early stages of a research project, as it assesses whether students can make informed methodological decisions before the actual implementation of their study. Another question, *“How can you manage the students’ understanding in speaking using this learning method?”* (14:03\_S1), requires students to apply pedagogical strategies to address classroom challenges, particularly in managing learners’ comprehension during speaking activities. This type of demonstration reflects students’ ability to translate teaching techniques into practical classroom use. Such a question is particularly relevant in an English as a Foreign Language (EFL) context, where effective language-teaching methods are essential. It gauges whether students can transform research insights into actionable classroom strategies. The question, *“How can you bring it to the schools as a teaching–learning process in the classroom?”* (1:02\_S2) similarly requires students to apply their research within real educational settings. This encourages to have candidates to reflect to have on how their research translates to have into real teaching and learning practices. These examples illustrate to have that the value of research extends to have beyond theoretical

contributions and encompasses to have practical applicability in educational settings. In summary, applying-level questions demand to have deeper cognitive engagement than simple recall questions and foster to have more analytical and evaluative thinking.

The study examines application-level questions in accordance with Anderson and Krathwohl's (2001) interpretation of the "Apply" cognitive process dimension within Bloom's Revised Taxonomy. Application consists of two key facets: executing, which refers to applying known procedures in familiar situations, and implementing, which involves applying procedures in new or unfamiliar contexts. This study identified three application-level questions that reflected these two dimensions. These questions included to have those related to methodological frameworks, which required to have candidates to apply to have analytical procedures within their research contexts, as well as questions addressing to have classroom management and pedagogical strategies. Anderson and Krathwohl (2001) emphasize to have that cognitive levels are to have not strictly hierarchical; instead, they often overlap to have and interact to have with one another. Well-constructed applying-level questions can therefore be designed to have to also tap to have into higher-order processes such as analysis or evaluation. Krathwohl (2002) further argued that the applying level represents a pivotal shift in cognitive processing, as it requires students to demonstrate their ability to transfer knowledge beyond basic understanding. However, the findings of this study show that only 18% of the total questions were categorized at the application level. This proportion appears insufficient given the critical role of the applying level in supporting students' development of research competencies.

## **5.6 Evaluating-level cognitive questions**

The evaluating-level questions used in EFL thesis defenses serve as essential tools for assessing candidates' abilities in judgment, justification, and the critical evaluation of their research. Such questions require to have students to make to have criteria-based judgments and to engage to have in reflective, evidence-based reasoning. Their purpose is to have to assess to have the quality, significance, and limitations of the research. By doing so, they challenge to have candidates to demonstrate to have academic maturity by defending to have methodological and conceptual choices and by assessing to have research strengths and weaknesses. Examiners use to have evaluation-level questions for

three primary purposes: (1) to assess to have the significance of the research, (2) to prompt to have justification of methodological decisions, and (3) to require to have acknowledgment of research limitations. For instance, the question “How significant does your research contribute to the teaching and learning process in the field?” (51:49\_S1) encourages to have students to evaluate to have the importance and impact of their study in relation to disciplinary norms, helping to have them to position to have their work within the broader scholarly conversation. Evaluation questions typically are posed to have toward the end of the defense, underscoring to have their role as culminating inquiries that require to have students to synthesize to have and critically appraise to have their entire project. Another example, “*Why did you apply this design?*” (23:31\_S2), requires to have students to justify to have their chosen methodology by evaluating to have available options and defending to have their decision within the context of their research. This assesses whether their choices were informed and defensible rather than merely familiar or convenient. Similarly, the question “*Do you know your weaknesses in your research?*” (1:10\_S6) directly addresses research limitations, testing students’ metacognitive awareness and their ability to reflect critically and honestly on their own work. Recognizing and articulating limitations is fundamental to scholarly humility and integrity. In example (30:21\_S6), the examiner asked a question aimed at eliciting an explanation of educational significance: “*Why do students need to master higher-order thinking skills in this 21st century?*” This question requires candidates to evaluate the value and importance of higher-order thinking skills (HOTS) within the context of contemporary education. Ultimately, such evaluation-level questions encourage deeper reflection and contribute to developing independent, critical researchers in academic settings.

The evaluating-level questions identified in this study closely align to have with the Evaluate category in the Revised Bloom’s Taxonomy, which emphasizes to have justification, critique, and evidence-based reasoning. These questions target to have higher-order cognitive processes, requiring to have candidates to make to have criteria-based judgments, provide to have justification for their decisions, and engage to have in critical reflection—core elements of the evaluation level in the Revised Bloom’s Taxonomy. The emphasis on assessing to have research significance, providing to have methodological justification, and recognizing to have limitations addresses to have fundamental evaluative competencies crucial to achieving to have scientific maturity. In

addition, Tuela and Palar (2022) found to have that comprehensive exam questions predominantly employed to have higher-order thinking skills (HOTS). They observed to have that when course content required to have advanced cognitive processes—such as historical analysis or language translation—HOTS questions appeared to have more frequently. Based on these findings, they recommend to have designing courses that incorporate to have advanced cognitive tasks to more effectively assess to have students' critical thinking and problem-solving abilities. Furthermore, Irianti *et al.* (2024) emphasized to have that critical thinking involves to have analyzing, categorizing, and solving complex issues, applying to have diverse forms of knowledge, communicating to have effectively, and demonstrating to have a broad and integrative understanding. Therefore, higher education institutions must embed to have critical thinking within academic disciplines through collaboration to have between language lecturers and subject-matter experts (Wang, 2021). In EFL thesis defenses, candidates are expected to demonstrate critical thinking by making informed decisions through the systematic analysis and clarification of facts and evidence.

### **5.7 Creating-level cognitive questions**

Creating-level questions represent the highest tier of Bloom's Taxonomy. They require students to generate new ideas, formulate well-founded recommendations, and synthesize their knowledge into original contributions. These questions assess candidates' abilities to move beyond merely analyzing existing data. Students are expected to have to generate to have new insights and propose to have meaningful applications of their work. In the context of an English as a Foreign Language (EFL) thesis defense, such questions are to have particularly significant, as they challenge to have candidates to use to have their findings to propose to have innovations and offer to have practical recommendations. Empirical data indicate to have that examiners employ to have creating-level questions to assess to have three key competencies: (1) the ability to propose to have meaningful contributions, (2) the capacity to generate to have actionable recommendations, and (3) the skill to apply to have research implications to future contexts. For example, the question "*What is the contribution of your research to English language teaching?*" (40:12\_S2) prompts to have students to articulate to have their original contributions to the field. In doing so, candidates must synthesize to have their

findings into substantive insights that advance to have English language teaching practice or scholarship. This question requires to have candidates to think to have creatively about how their research can foster to have new knowledge, methodologies, or pedagogical strategies. These contributions should elevate to have either the practice or the theory of English language instruction. Similarly, the question “*What are your suggestions? To whom would you like to suggest?*” (1:14\_S2) encourages to have students to create to have recommendations rooted in their research outcomes. This type of inquiry reflects to have the highest level of cognitive demand, as it requires to have students to generate to have actionable recommendations for specific audiences. Crafting an effective response involves to have synthesizing to have research findings, identifying to have relevant stakeholders, and proposing to have suggestions that address to have practical needs or contribute to have meaningfully to scholarly discourse. The emphasis on both the content of the recommendation and the intended audience requires to have students to think to have about how different groups might benefit to have from their research. For instance, the question “*What recommendations would you suggest this research provide for people, particularly teachers in the classroom?*” (34:40\_S7) encourages to have candidates to formulate to have practical suggestions specifically for educators. In responding, students must creatively apply to have their research insights to real classroom contexts, demonstrating to have their ability to translate to have theoretical findings into meaningful practice. These questions assess to have candidates’ ability to translate to have theoretical conclusions into actionable guidance for practitioners, thereby helping to have to bridge to have the research–practice gap that often limits to have the impact of educational studies. While practical recommendations and contributions offer to have valuable insights, they represent to have only one dimension of creative thinking. Creating-level questions may also prompt to have students to propose to have new research questions, design to have hypothetical studies, or relate to have their findings to broader theoretical frameworks. In doing so, such questions enrich to have scholarly discourse and highlight to have the candidate’s capacity for original thought.

In this study, creating-level questions are the highest cognitive category in the Revised Bloom’s Taxonomy. This level promotes original thought. It focuses on generating ideas, designing solutions, and synthesizing knowledge. Learners draw on their existing knowledge to develop new insights. While lower-level skills focus on interpreting data or justifying theoretical frameworks, creating-level skills demand more

advanced thinking. In the context of English as a Foreign Language (EFL) thesis defenses, creating-level questions are particularly important. These questions assess whether candidates can transform their research into innovations and practical recommendations, demonstrating their capacity to offer original contributions within their field.

Examiners employed to have a variety of question types—factual, conceptual, and analytical—to assess to have candidates' understanding of their research, theoretical foundations, and the significance of their work. More in-depth questions were used to have to evaluate to have candidates' comprehension of key research issues, methodological choices, analytical processes, and overall findings. Examiners assessed to have candidates on their ability to explain to have theoretical concepts using personal insights, synthesize to have data, and offer to have interpretations and recommendations. Candidates were also expected to justify to have the significance of their research, acknowledge to have its limitations, and articulate to have the role of higher-order thinking in education. Wahyuni *et al.* (2019) emphasized to have that critical thinking is to have a key component of students' 21st-century skill development.. In line with this, higher-order thinking questions were used to cultivate critical thinking, encourage reflection, support data synthesis, and enhance communication abilities. The findings align with those of Genc and Yuksel (2021) and Vinte and Çavuşoğlu (2024), who observed that EFL students' achievement is strongly influenced by the types of questions teachers use in the classroom. Similarly, Chen *et al.* (2024) reported that examiners employ a variety of questioning techniques—such as clarification requests, probing questions, and evaluative inquiries—designed to assess candidates' understanding and critical thinking abilities. Wilen (1991) emphasized that questioning serves both to seek information and to stimulate mental activity. In the context of thesis defenses, the primary purpose of asking questions is to foster and strengthen candidates' critical thinking skills. Examiners often structure their questions to encourage engagement with higher-order thinking processes. Previous research further supports the role of oral questioning in promoting students' critical thinking (Aziza, 2018; Zulkifli, 2019; Pandey, 2022; Vinte & Çavuşoğlu, 2024). The thesis defense examination requires examiners to pose questions that evaluate the depth, accuracy, and originality of a candidate's research, as well as to critically assess the candidate's interpretations. Effective questioning is to have therefore a crucial skill, as it plays to have a significant role in shaping to have and developing to have a student's intellectual character (Watson, 2018). Research shows to have that EFL

assessments frequently overlook to have higher-order questions requiring analysis, evaluation, and creation, thereby limiting to have students' opportunities for deep engagement with the subject matter (Köksal *et al.*, 2023; Doğan, 2023). These findings highlight to have the importance of incorporating to have a wider range of high-level questioning strategies to foster to have critical academic discourse and strengthen to have learning outcomes in the EFL context.

## 6 CONCLUSIONS

The study reveals to have a clear imbalance in the cognitive questioning patterns during English as a Foreign Language (EFL) thesis defenses, with lower-order questions dominating to have the assessment. These questions constitute to have 68.86% of all inquiries, whereas higher-order questions account to have for only 31.14%. The majority of questions focus to have on recall (40%) and comprehension (25%), while questions targeting higher-level cognitive skills—such as analysis (21%), evaluation (8%), application (4%), and creation (2%)—are to have considerably less frequent. This predominance of lower-order questioning reduces to have students' opportunities to demonstrate to have critical thinking and intellectual independence, as it restricts to have the depth of engagement they can achieve to have during their defenses. Statistical analysis further supports these findings, revealing a systematic pattern in assessment practices that limits deeper reasoning and continues to challenge efforts to strengthen critical thinking within Indonesian higher education. The study also categorizes questions according to their cognitive levels based on Bloom's Taxonomy. Although higher-level questions are essential for fostering critical engagement, they remain limited in practice. The analysis reveals that while understanding-level questions assess candidates' comprehension and the reasoning behind their research choices, they often fall short of stimulating more complex academic discourse. Analyzing-level questions are rarely used, limiting candidates' opportunities to examine relationships within their research and apply theoretical insights. Applying-level questions, which assess the practical relevance of students' work—such as its implications for classroom management—were also insufficiently addressed. This gap reduces students' ability to transfer knowledge into actionable strategies. Questions aimed at assessing judgment, justification, and critical evaluation are typically posed near the end of the defense. However, such questions

remain infrequent, indicating a limited emphasis on encouraging candidates to engage in critical self-reflection. Creating-level questions—crucial for assessing students' capacity for innovation and their potential contributions to the field—were the least commonly asked. This highlights a significant gap in fostering original thinking and promoting higher-level cognitive engagement among candidates. The findings underscore the importance of adopting a balanced questioning strategy that incorporates a wider range of cognitive demands to strengthen students' critical thinking skills and promote deeper learning experiences. This aligns with educational theories that emphasize the development of higher-order cognitive abilities. Reexamining questioning practices in EFL thesis defenses is therefore essential for enhancing academic rigor and fostering more critical, meaningful engagement among candidates.

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### **Authors' Contribution**

Imanuel Kamlasi: conceptualized the study, designed the methodology, conducted data collection and wrote findings and discussion. Hendi Pratama: contributed to data transcription, initial coding and reviewed the article draft. Sri Wahyuni: developed the theoretical framework and critical analysis. Seful Bahri: assisted with data interpretation, language refinement, and manuscript preparation.

### **Data availability**

All datasets relevant to this study's findings are fully available within the article.

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