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EVALUATING TEACHER'S COMPETENCE IN DEVELOPING READING COMPREHENSION QUESTIONS BASED ON BARRETT'S TAXONOMY

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Abstract: This study investigates the competence of English teachers in developing reading comprehension questions based on Barrett's Taxonomy in Senior High Schools in Padang. Given the importance of effective questioning in stimulating critical thinking and comprehension, this research aims to assess the levels and types of questions formulated by teachers. Using cluster random sampling, 12 English teachers from 6 schools were selected. The study employed a test instrument to evaluate teachers' abilities to create questions across Barrett's five levels: Literal Comprehension, Reorganization, Inferential Comprehension, Evaluation, and Appreciation. Results indicate that most questions were at the Literal Comprehension level, with fewer questions addressing higher-order thinking skills (Evaluation and Appreciation). These findings highlight a need for professional development to enhance teachers' skills in crafting balanced and challenging questions.
Keywords: *Teacher competencies; Barrett's taxonomy;reading;questions.*

INTRODUCTION

Being a facilitator in the learning process is one of the important duties of a teacher. This occurs when students cannot obtain guidance to find conclusions from learning sources without the teacher's help. In addition to providing information to students, teachers also need to become experts in creating reading comprehension questions(Lim et al., 2014; Wu et al., 2022; Sulaiman et al., 2020; Siri et al., 2020). If a teacher can communicate effectively, students will be able to understand what is being taught to them. When the other party responds in a way that allows both parties to gain information, good communication develops. Because teachers are seen as reliable sources of knowledge and information, students develop these behaviors during class(Eva Stranovská et al., 2017). This is in line with (Supardi, 2016; Komariah et al., 2020; Varma et al., 2022; Mealings et al., 2024; Afary et al., 2022) that there must be two-way communication in the classroom to prove the teacher's competence in managing lessons.

Teachers with teaching competency can create a positive learning environment and manage their classrooms better, which will lead to the best learning outcomes for their students. This competency is needed so that teachers can achieve learning goals that suit current needs. This is in line with the statement(Rahman, 2014; Channa et al., 2022; Risan, 2022; Mirzoeva, 2022; Skantz et al., 2022) that improving teachers' enthusiasm and pedagogical abilities is necessary to increase their effectiveness. Professional teachers must have pedagogical competency skills, namely the teacher's ability to control learning activities (Asari, Fauziyah, & Uchitiawati, 2018; Bowman et al., 2022; Saputra, 2022; Luo, 2023; Alam et al., 2023). This competency is used to manage lessons that have not achieved their objectives.

Pedagogical competency is a unique skill that not only differentiates teachers from other professions but also greatly influences students' level of success in their learning journey (Danim, 2020). In addition, according to Indonesian Government Regulation no. 74 of 2008 concerning Teachers, pedagogical competence is defined as the teacher's ability to manage the learning process effectively for students (Gobel et al., 2023). These special competencies differentiate teachers from

other professions as highlighted by various studies (Jahiriansyah et al., 2013; Amini et al., 2022; Alzoraiki 2023; Alwi et al., 2023; Warman et al., 2022). This reflects the teacher's ability to organize learning material in a way that makes it easy for students to understand (Rosnita, 2011; Ribosa, 2022; Nurhikmah et al., 2022; Irhasyuarna, 2022; Sulasmi, 2022).

Apart from teacher competence, another important component in teaching (and communication in general) is asking questions (Aqil, 2016; Bui, 2022; Smit et a;., 2022; Kim, 2022; Muhonen et al., 2022). Questions play an important role in the growth of ideas. Through a variety of carefully designed questions, students can be helped in using previous information and understanding to construct new ideas and make inferences, enabling them to move from one cognitive level to the next (Anggraini et al., 2023). Effective questioning strategies can stimulate students' intellectual growth and curiosity. The most effective teaching strategies are those that encourage student participation (Olsher & Kantor, 2012; Edwards et al., 2024; Margolis et al., 2022).

A teacher's competency in developing effective questions is important for creating an engaging and enriching learning environment. In developing questions, teacher competence may be low. According to Goossen (2002), Pagliaro (2011), and Walsh & Sattes (2011), teachers can ask 300–400 questions every day. However, what is important is not the number of questions a teacher can ask, but the student's cognitive ability to respond. According to (Birbili, 2013; Goossen, 2002; Pagliaro, 2011; Walsh & Sattes, 2005), and other researchers, teachers mostly ask questions about students' memories and descriptions; only about 5–20% of their questions can engage students' thinking.

Several studies on teacher competence in developing reading comprehension questions have been conducted. First, Merizka (2021) conducted a study to determine teacher competence in constructing high-level thinking skill questions and to find out the competence of English teachers in constructing questions based on Bloom's Taxonomy related to the level of questions. The results showed that 30 questions were indicated as low-level thinking skill questions, and 15 questions were indicated as high-level thinking skill questions. At the high-level thinking skill question level, evaluation questions were mostly constructed by English teachers at SMA Negeri 1 Lubuk Alung.

Second, (Afriliamanda & Zainil, 2019) in their study "An Analysis of Teachers' Competence in Constructing Reading Comprehension Questions" examined the challenges faced by teachers in constructing complex reading comprehension questions and assessed their ability to create them. This study revealed that teachers had difficulty in developing high-level questions with most of their questions being at the comprehension level (C2). This means that teachers at SMA N Kota Padang mostly asked low-level comprehension questions (C2).

Third, a study conducted in Punanji in 2022 by Reflianto and Setyosari examined how teachers create and use question types and levels during online flipped classroom learning. The study found that teachers need specific skills to formulate question levels and strategies effectively. The study also observed three teachers who demonstrated proficiency in using question techniques and levels to assess students' understanding of the material being taught.

These previous studies have not examined teacher competence in developing reading comprehension questions based on Barrett's Taxonomy. Most previous studies have focused on Bloom's Taxonomy which is not suitable for assessing questions in English Language Teaching. Barrett's Taxonomy is used in this study to evaluate various types of questions. Barrett's Taxonomy provides a comprehensive framework for categorizing reading comprehension questions that not only measure comprehension but also stimulate students' intellectual growth and active participation.

The novelty of this study is the use of Barrett's Taxonomy in assessing English teachers' competence in developing reading comprehension questions in high schools in Padang. Unlike previous studies that focused on Bloom's Taxonomy, this study fills the gap by utilizing Barrett's Taxonomy which is more specific and appropriate for evaluating reading comprehension questions in the context of English language teaching. This research provides a new perspective in a more detailed question structure that suits students' cognitive needs.

Additionally, this research highlights the need for targeted professional development for teachers to improve their skills in formulating more balanced and cognitively challenging questions, going beyond literal understanding and reorganization. This is important to support the development of students' critical thinking skills and deep understanding, which have been

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underemphasized in previous research. Thus, this research not only provides an evaluation of teacher competence but also provides concrete recommendations for improving pedagogical skills in the future.

METHOD

This research uses cluster random sampling. According to Sugiyono (2018), cluster random sampling is a regional sampling technique used to determine samples if the object to be studied or data source is very broad, such as the population of a country, province or district. This research focuses on English teachers at Senior High Schools (SMAN) in Padang City. This study selected 6 of 17 public high schools as representative samples using cluster random sampling. A total of 12 English teachers were selected with representation from classes X and XI.

This research uses a test instrument to assess teachers' ability to develop reading comprehension questions based on Barrett's Taxonomy. This test evaluates a teacher's ability to develop reading comprehension questions at the five levels of Barrett's Taxonomy: Literal Comprehension, Reorganization, Inferential Comprehension, Evaluation, and Appreciation. The first data is obtained from test results where the teacher develops questions. There are 60 questions developed by the class X teacher and 60 questions by the class XI teacher based on the text provided. The questions are classified into level categories of Barrett's Taxonomy. The second data was obtained from test results where the teacher analyzed reading comprehension questions based on Barrett's Taxonomy. There are 15 questions classified based on Barrett's Taxonomy level by the class X teacher and 15 questions by the class XI teacher.

Procedures involve distributing competency tests, explaining instructions, collecting responses, classifying questions, and analyzing results. To ensure validity, an expert from the English Department of Padang State University was involved. Reliability is assumed through standardized instruments and consistent procedures. The methodology primarily relies on descriptive qualitative research methods with a scope that focuses on assessing English teachers' competence in developing reading comprehension questions.

In analyzing English teachers' competence in developing reading comprehension questions based on Barrett's Taxonomy, researchers removed the names and codes of teachers' answer sheets. Then the researcher examined the reading comprehension questions based on Barrett's Taxonomy from the English teacher's test sheet and divided the questions formulated by the English teacher into five levels of Barrett's Taxonomy. Question types and question levels are calculated based on the following formula to help present data in numerical form as mentioned in Sudjana & Ibrahim (2001: 129):

P = nN×100%P
= \frac{n}{N} \times 100\%P=Nn×100%

Where:
P = Percentage of question type/level
n = Number of questions based on Barrett's Taxonomy criteria
N = Total number of all questions

RESULTS AND DISCUSSION

This research aimed to find out teachers' competence in developing reading comprehension questions using tests. There are two types of tests, the first one is developing questions based on the text, and the second one is analyzing questions by classifying them into Barrett's Taxonomy level.

English teacher's competence in developing reading comprehension questions

Table 1. *English teacher's percentage in developing reading comprehension questions*

Levels of Barrett's Taxonomy	Percentage
Literal Comprehension	49%
Reorganization	27%
Inferential Comprehension	12%
Evaluation	8%
Appreciation	4%

Table 1 shows the percentage of reading comprehension questions developed by twelve English teachers from grades X and XI. It indicates that of all the levels, the Literal Comprehension level had the most questions, accounting for 49% of the total reading comprehension developed by teachers of grades X and XI. The appreciation level had the lowest number of questions (4%), developed by teachers of grades X and XI.The data were obtained from the results of teachers' developed questions.

There were 60 questions for phase Grade X and 60 questions for phase Grade XI developed by teachers based on the text provided by the researcher. The results were classified into categories of Barrett's Taxonomy levels based on Barrett's Taxonomy.These findings are significant

as they highlight a gap in teachers' ability to create a balanced range of questions that stimulate higher-order thinking, as recommended by educational standards like(McKenney & Reeves, 2018). Reeves suggests that lower-level questions (LOTS) should comprise 40%, middle-level questions (MOTS) 40%, and higher-level questions (HOTS) 20%. This study shows that LOTS were (76%) while MOTS (12%) and HOTS (12%), indicating the teachers need for professional development in developing reading questions.

Based on the result above, English teachers' competence in developing reading comprehension questions, there were 120 questions developed by English Grade X and XI teachers at Senior High School in Padang. It revealed that English teachers developed 49% of Literal Comprehension questions (59 questions), 27% of Reorganization (33 questions), 12% of Inferential (15 questions), 8% of Evaluation (10 questions), and 4% of Appreciation (5 questions). In other words, English teachers tend to develop Literal Comprehension questions.

English teachers struggle to create diverse reading comprehension questions, with a strong focus on Literal Comprehension questions (49% of total questions) and less emphasis on middle-order thinking questions such as Reorganization (12%) and higher-level questions such as Evaluation, and Appreciation (8%, and 4% respectively). This imbalance indicates a tendency to prioritize basic comprehension over middle-order thinking and higher-order thinking skills, which prevents students' deeper understanding and critical thinking abilities.

Furthermore, the biggest portion of questions developed by English teachers was in the level of literal comprehension and reorganization (LOTS), next was inferential questions (MOTS), last was evaluation and appreciation questions (HOTS).

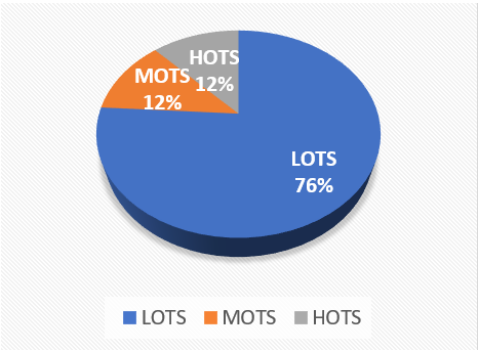

Figure 1. *English teacher's competence score in developing reading comprehension questions*

The chart of figure 1 indicates that English teachers' ability to create reading comprehension questions does not meet the standard set by Reeves (2012). The data shows that Literal Comprehension and Reorganization questions in total are 76% of the total questions, which booth of the levels should be 40% of the questions. On the other hand, Inferential Comprehension questions, which should be 40% of the total, only make up 12%. Additionally, Evaluation and Appreciation questions, which should make up 20% of the total, are also at 12%. This difference emphasizes the need for teachers to improve their ability to create questions that challenge students to think critically and engage in higher-order thinking.

On the other hand, using Barrett's Taxonomy can significantly improve the quality of reading comprehension questions. By including questions that require analysis, synthesis, and evaluation, teachers can better support students' cognitive growth and encourage deeper understanding. Therefore, teachers should become familiar with Barrett's Taxonomy and use it as a framework for creating reading comprehension questions that promote critical thinking and higher-order cognitive skills.

This research reveals that English teachers' competence in developing reading comprehension questions is still far from the expected standards. Data shows that 76% of the questions developed by teachers are at the Literal Comprehension and Reorganization levels, even though each of these levels should only cover 40% of the total questions. In contrast, questions at the Inferential Understanding level, which should account for 40% of the total questions, only reached 12%. Likewise, questions at the Evaluation and Appreciation level, which should have reached 20% of the total, only reached 12%. This imbalance indicates the need to improve teachers' ability to create questions that can challenge students to think critically and engage in higher-level thinking.

Use of Barrett's Taxonomy can significantly improve the quality of reading comprehension questions. By including questions that require analysis, synthesis, and evaluation, teachers can better support students' cognitive growth and encourage deeper understanding. Therefore, teachers should be familiar with Barrett's Taxonomy and use it as a framework for creating reading comprehension questions that promote critical thinking and higher-order cognitive skills.

Furthermore, this research highlights the need for targeted professional development for English

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teachers. They should be provided with adequate training and resources to develop skills in formulating balanced and cognitively challenging questions. This development is not only important to meet higher educational standards but also to support students' overall intellectual development.

Thus, this research not only provides an evaluation of teacher competence but also provides concrete recommendations for improving pedagogical skills in the future. Implementation of Barrett's Taxonomy as a tool in developing reading comprehension questions can be a strategic step to improve the quality of education and achieve better learning outcomes for students. Efforts to improve these skills should be a priority in professional development programs for teachers, so that they can be more effective in creating dynamic learning environments and focused on developing students' critical thinking.

English teacher's competence in analyzing by classifying reading comprehension questions

Table 2. *English teacher's percentage in developing reading comprehension questions*

Levels of Barrett's Taxonomy	Percentage
Literal Comprehension	37%
Reorganization	32%
Inferential Comprehension	22%
Evaluation	18%
Appreciation	10%

Table 2 shows the percentage of teacher competence in analyzing reading comprehension questions correctly by English teachers from grades X and XI. It indicates that of all the levels, the Literal Comprehension level had the most questions, accounting for 37% of the total reading comprehension developed by teachers of grades X and XI. The appreciation level had the lowest number of questions (10%), analyzed by teachers of grades X and XI.

The analysis of reading comprehension questions by twelve English teachers from Grades X and XI reveals a concern about their competence in applying Barrett's Taxonomy. The results show that 37% of the teachers correctly analyzed questions at the Literal Comprehension level, this proficiency is down significantly for other levels. Only 32% of the teachers accurately analyzed questions at the Reorganization level, while 22% for Inferential Comprehension. Furthermore, the percentage of correct answers for Evaluation and Appreciation levels down to 18% and 10%, respectively. This percentage indicates that teacher competence in analyzing questions based on Barrett's Taxonomy is low. Specifically, most teachers struggle to move beyond Literal Comprehension and Reorganization, because they can't challenge students to engage in higher-order thinking skills such as analysis, synthesis, and evaluation. This limited understanding of Barrett's Taxonomy interferes with the development of critical thinking and deeper understanding in students, underscoring the need for teachers to improve their knowledge and application of Barrett's Taxonomy.

According to (McKenney & Reeves, 2018), the Literal Comprehension and Reorganization levels should account for 40% of the total time spent using Barrett's taxonomy, the Inferential level should account for 40%, and the remaining 20% should go to the Evaluation and Appreciation levels. Referring to Figure 4, we can see that the ideal percentage for Literal Comprehension and Reorganization combined is already achieved with a total of 76%. However, the ideal percentage for Inferential Comprehension has not met the desirable standard because the percentage only reached 12%. It has the same percentage for the Evaluation and Appreciation level that only reached 12% too from the ideal of 20%.

The competence of English teachers in developing reading comprehension questions based on Barrett's Taxonomy was found to be low. Specifically, they showed poor competence in developing questions at the evaluation and appreciation level, while displaying good competence in developing questions at the literal comprehension and reorganization levels (Aisyah et al., 2019). This lack of competence was attributed to the teachers' unfamiliarity with Barrett's Taxonomy. It happened since most of them did not understand Barrett’s Taxonomy. One teacher admitted that using Barrett's Taxonomy would help in developing reading comprehension questions, as this taxonomy is more specific and suitable for such questions compared to other taxonomies (Aqeel & Farrah, 2019; Alhadi et al., 2023; Ertem, 2023; Barrett, 2023;).

In comparing the findings of this research with those of Alhadi and Zainil (2023) and Rahma (2019), several important insights into English teachers' competence in developing reading comprehension questions based on Barrett's Taxonomy emerge. Both this research and the study by Alhadi and Zainil (2023) revealed that the most frequently used types of questions by teachers were at the Literal Comprehension level. However, while the second most frequently used type of question in this research was at the Reorganization

level, Alhadi and Zainil (2023) found it to be at the Inferential level. This indicates a difference in teachers' focus on different types of comprehension skills.

Furthermore, Rahma (2019) found that the most used questions by teachers were at the Inferential Comprehension stage, with the second most dominant type being at the Literal Comprehension level. This contrasts with the current research where the Literal Comprehension level was the most dominant, followed by Reorganization. These variations suggest that while there is a general tendency for teachers to prioritize lower order thinking skills (LOTS) questions, there are differences in the second most emphasized question types across different studies. The competence of English teachers in developing reading comprehension questions based on Barrett's Taxonomy was found to be low, particularly in creating higher-order thinking skills (HOTS) questions at the evaluation and appreciation levels. This is evident from the low percentage of evaluation and appreciation questions developed, which were only 8% and 4%, respectively.

The findings highlight a need for targeted professional development to enhance teachers' skills in formulating more balanced and cognitively challenging questions beyond literal comprehension and reorganization. It is expected that teachers can develop mots to hot questions because the quality of teacher questions can influence how far students' thinking is extended and how long their ideas are extended (Toni, 2013). Further, Lee (2011) mentions that quality questions are questions that stimulate the learning process of the students and broaden the students' thinking skills. It means, that lower-order questions stimulate lower levels of thinking such as literal comprehension and reorganization questions, but higher-order questions increase students' abilities to appreciate critically.

This research highlights that English teachers' competence in developing reading comprehension questions based on Barrett's Taxonomy is still low, especially in creating higher order thinking skills (HOTS) questions at the evaluation and appreciation level. This can be seen from the low percentage of evaluation and appreciation questions developed, only 8% and 4% respectively. The variations in this research are compared with research by Rahma (2019) which found that the questions most used by teachers were at the Inferential Understanding stage, with the second most dominant type being Literal Understanding, indicating that there are differences in the types of questions most emphasized by teachers in various studies. Meanwhile, this research shows that the Literal Comprehension level is the most dominant, followed by Reorganization.

These findings emphasize the need for targeted professional development to improve teachers' skills in formulating more balanced and cognitively challenging questions beyond literal understanding and reorganization. (Toni, 2013; Rostini et al., 2022; Blomeke et al., 2022; Siddikov et al., 2022; Harrison et al., 2022) states that the quality of teacher questions can influence the extent to which students' thinking develops and how long their ideas can be expanded. Furthermore, Lee (2011; Cortes et al., 2022; Moore et al., 2023) stated that quality questions are questions that stimulate students' learning processes and expand their thinking skills. This means that low-level questions stimulate lower levels of thinking such as literal comprehension and reorganization, but high-level questions increase students' ability to appreciate critically.

By using Barrett's Taxonomy, the quality of reading comprehension questions can be significantly improved. Questions that require analysis, synthesis, and evaluation can better support students' cognitive growth and encourage deeper understanding. Therefore, teachers need to be familiar with Barrett's Taxonomy and use it as a framework for creating reading comprehension questions that promote critical thinking and higher-order cognitive skills.

Additionally, this research emphasizes the importance of adequate training and resources for teachers so that they can develop skills in formulating balanced and cognitively challenging questions. This development is not only important to meet higher educational standards but also to support students' overall intellectual development. Efforts to improve these skills should be a priority in professional development programs for teachers, so that they can be more effective in creating dynamic learning environments and focused on developing students' critical thinking.

CONCLUSION

This research shows that the competence of English teachers in Padang in developing reading comprehension questions based on Barrett's Taxonomy is still low, especially in creating questions at the level of higher order thinking such as Evaluation and Appreciation. Most of the questions developed by the teacher were at the

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Literal Comprehension and Reorganization level, indicating an imbalance and lack of cognitive challenge for students. These findings emphasize the need for targeted professional development to improve teachers' skills in formulating more balanced and cognitively challenging questions, to support students' intellectual growth and improve the quality of education. Implementing Barrett's Taxonomy as a framework in developing reading comprehension questions can help teachers create a learning environment that is more dynamic and focused on developing students' critical thinking.

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