Exploring the Discovery Learning Model in Teaching English to Enhance Critical Reading Skills at Junior High Schools in Jeneponto Regency

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Abstract	**Original Research Article**

This study aims to measure how discovery learning affects students' critical reading comprehension in junior high English classes, to find out how discovery learning influences students' motivation and participation in reading activities, to identify the challenges and supports teachers face when using discovery learning to improve students' critical reading, after being taught using the discovery learning model, as well as to examine whether there is a significant difference before and after its implementation. Using a mixed-method approach, the population of study involved 101 eighth-grade students of varied junior high schools. The number of samples was 52 students derived from SMPN 4 Tamalatea in the 2024–2025 academic year. The quasi-experimental class was 26 students while the control class was 26 students. Data were collected through pre-test and post-test, which showed an increase in the average score from 30.19 to 75. The results of the Paired Samples T-Test indicated a significant difference (Sig. 0.000 < 0.05), and regression analysis showed that student engagement and motivation had significant effects on reading comprehension (Sig. 0.000 and 0.002), accounting for 44.4% of the variance in reading ability. Despite facing challenges such as limited time and complex lesson planning, teachers saw great potential in developing students' critical thinking skills and learning independence. Training support, school policy, and adequate learning media are needed to optimize the implementation of discovery learning in English language teaching.

Keywords: Discovery Learning, Critical Reading Skills, Reading Comprehension.

INTRODUCTION

Discovery learning is an educational technique that promotes discovery and inquiry, allowing students to engage actively with the learning process (Bruner, 1961). This methodology empowers learners to explore information individually or cooperatively, providing a greater comprehension of topic. In the context of teaching English, especially in reading comprehension, this paradigm can enhance critical thinking as students learn to question, evaluate, and draw conclusions from texts. The participatory element of discovery learning can lead to more meaningful learning experiences, therefore increasing students' critical reading comprehension.

Research reveals that children who engage in discovery learning demonstrate considerable increases in their cognitive capacities and enthusiasm to study. By empowering learners to take care of their educational path,

this strategy develops a sense of ownership and responsibility towards their learning results. The ability to critically examine material not only benefits students in academic environments but also qualifies them with crucial life skills for future problems. Thus, including discovery learning into English language education can significantly boost critical reading abilities among junior high school pupils (Khasinah, 2021).

In junior high schools, pupils shift from concrete to more abstract thinking, making it a perfect period to build critical reading comprehension. During this developmental stage, learners are more receptive to engaging in discussions, asking questions, and examining diverse ideas. Discovery learning stresses student interaction and the application of their existing knowledge to obtain new material. It encourages students to actively engage in the learning process, which involves experimenting and hypothesis testing to acquire both information and thinking

skills. This strategy pushes students to communicate carefully and analyse the authenticity of information. The teacher acts as a facilitator, enabling pupils to solve difficulties and guiding them to create connections between past and new knowledge. Discovery learning stimulates curiosity and uncertainty to encourage active participation, and exposes themes gradually, from concrete things to symbolic representations, while addressing different learning styles. It emphasizes student-centered, active, and collaborative learning. The purpose of discovery learning is to build abilities such as critical thinking and problem-solving, communication, cooperation, and creativity, and it can result in better learning achievement and thinking skills (Kharismawati S. R. L., 2020) .

Moreover, the incorporation of technology in discovery learning has transformed the educational scene. Digital tools and internet resources allow access to a multitude of texts and multimedia content, increasing the learning experience. Students can explore diverse views and sources, giving for a more full comprehension of the given area. As they engage with numerous texts, learners obtain the skills required to investigate and criticize content, ultimately enhancing their critical reading comprehension.

Nevertheless, there are obstacles in applying Discovery Learning in junior high school English instruction, even with its advantages. Creating compelling learning activities that match the discovery learning methodology can be tough for instructors. To successfully incorporate this paradigm in their teaching approaches, educators also require proper training and support. The successful integration of discovery learning may be limited by a lack of institutional support or resources, which would restrict its ability to increase students' critical reading comprehension.

Furthermore, the testing of critical reading abilities could potentially be a hurdle in applying discovery learning. Traditional evaluation methodologies may not accurately measure the effects of inquiry-based learning. Therefore, it is necessary to design assessment methodologies that coincide with the discovery learning approach, allowing for a more full evaluation of students' critical reading skills. This includes not just analyzing their capacity to read texts but also their involvement in the learning process (Maharani et al., 2023).

(Khasanah et al., 2018) discovery Learning is a paradigm of education where students discover ideas, meanings, and causal linkages via planned learning experiences. The key principle is that students are not supplied with ready-made lessons but rather are asked to plan their own learning. Here's how the book discusses it:

1. Student Independence: Discovery learning encourages student autonomy, enabling students to be more autonomous in their learning.
2. Active Learning: Students are given the chance to discover ideas, theories, rules or understandings via instances met in their life.
3. Teacher as Facilitator: In this paradigm, the teacher functions as a guide, giving chances for

students to engage actively and leading their learning towards specified objectives.
4. Process over Product: The emphasis is not on presenting content in its finished form, but rather on students acquiring knowledge, comparing, classifying, evaluating, integrating, rearranging, and forming conclusions.
5. Genuine issues: The technique includes involving students in examining real-world issues, encouraging them to identify ideas and processes, and develop strategies to address these difficulties.

The stages of discovery learning, according to the book, are as follows:

1. Stimulation: Students are exposed with something that ignites interest and a desire to explore. This stage tries to provide a learning environment where students may explore the subject.
2. Problem Statement: Students define the issues depending on the stimulus.
3. Data Collection: Students acquire as much information as possible to test their theories. This entails gathering pertinent data via literature studies, observations, interviews, and experiments.
4. Data Processing: Students analyze the information they have acquired, then interpret it to generate ideas and generalizations.
5. Verification: Students offer their ideas based on the facts they obtained.
6. Generalization: Students make findings that may be applied to comparable circumstances.

(Salamun et al., 2023) discovery learning is a student centered, inquiry-based learning strategy that is considered a constructivist approach to education. It is sometimes referred to as problem-based learning, experiential learning, and 21st-century learning. In this technique, children are encouraged to find facts, relationships, and new truths via investigation, manipulation of things, conversations, and experiments. This process is led by the teacher and resources, through which the pupils "discover" the desired information

(Acuña et al., 1995) Discovery learning is a process of getting information by self-discovery. It entails creating and testing hypotheses, rather than simply listening to an instructor. Discovery learning is a sort of inductive thinking, where pupils proceed from specific examples to broader laws or principles. It is also known as problem-based, inquiry, experiential, and constructivist learning.

Here are some essential features of discovery learning, as explained in the sources:

1. Process: Discovery is a style of problem solving where students actively search, modify, explore, and examine. Teachers arrange activities for pupils to engage in this process. It includes pupils developing rules, testing hypotheses, and acquiring facts.
2. Teacher's Role: While exploration learning is a minimally supervised educational strategy, it still requires instructor leadership. The teacher gives questions, challenges, or difficult situations for pupils to address. Teachers urge pupils to make intuitive judgments when they are uncertain. Teachers may

also give structure by presenting questions and giving ideas on how to look for solutions. Greater instructor structure is useful when students are not comfortable with the discovery approach or require considerable previous information.

3. Prerequisites: For effective discovery learning, students require some past preparation including declarative, procedural, and conditional knowledge. Careful structuring of content by the teacher helps pupils to uncover significant principles, once they acquire the required knowledge.

4. Outcomes: Discovery learning helps students obtain new information linked to a topic area, and also build general problem-solving abilities.

5. Appropriateness: Discovery learning may not be appropriate for all forms of learning. It may inhibit learning when pupils have no prior experience with the content or lack background knowledge. It may also not be acceptable with well-structured material that is easily delivered. Discovery appears more suitable when the learning process is vital, such as with problem-solving exercises that drive pupils to learn.

6. Criticisms: Pure discovery learning (unguided, problem-based learning) has been questioned. Research shows that guided education might be more successful than pure discovery learning. Some have suggested that pure discovery learning does not take into consideration the organization of cognitive structures, such as working memory and long-term memory.

7. Guided Discovery: The sources suggest that guided exploration, when teachers design the circumstances to encourage learners, can lead to effective learning. Supports for learning might be lowered after learners have achieved some abilities.

In summary, discovery learning is a great educational approach when applied effectively, particularly when it combines a level of direction. It helps students to become active learners, generate information for themselves, and acquire skills in the learning process.

(Blessinger, Patrick and Carfora, 2019) discovery learning is a technique where students actively engage with things under organized situations, with teachers serving as coaches, encouraging students to discover concepts for themselves. It promotes personal significance to engage involvement and construct cognitive structures.

(Chu, 2019) discovery learning, often dubbed "guided discovery," in the context of inquiry-based learning and game design, emphasizing several crucial arguments and ambiguities. discovery learning is a complicated technique that demands a balance between student initiative and structured instruction. It highlights the necessity of understanding individual variations, offering information literacy teaching, and building cooperation in order to support optimal learning experiences within a discovery-based context.

(David D. Preiss, 2015)a summary of how discovery learning is particularly detailed as follows:

1. Discovery through Self-Explanation The sources highlight the value of self-explanation as a tool of discovery. This entails learners actively seeking to comprehend how and why events occur. A fundamental part of discovery learning is when students are encouraged to explain unexpected comments, observations, or knowledge. This method helps kids develop their own understanding rather than passively accepting information. An example of this method is when youngsters are questioned, "How do you think I knew that?" This enables pupils to explore the reasons behind a right response, building a greater comprehension of the underlying principles. This technique combines the benefits of discovery-oriented approaches, where learners evaluate things freely, with didactic methods that focus attention on proper reasoning.

2. Discovery through Interest and Curiosity; The sources show that curiosity plays a significant role in discovery learning. When learners have a well-developed individual interest, they are more likely to participate in persistent investigation and discovery. Curiosity inquiries are a motivator for discovery. Learners who are genuinely interested in a topic will naturally ask questions and seek out answers, leading to a more profound understanding. This active questioning enables a shift from extrinsic to intrinsic motivation, as learners become more invested in their own learning journey. Learners with emerging individual interest become very focused on their own questions, and while they may not be receptive to feedback in this phase of interest, their curiosity helps to move them towards deeper engagement with the content.

3. Discovery as a Foundation of Learning. The sources provide the concept that "to invent is to understand," which stresses the importance of discovery in the learning process. Learning is considered as an active process where learners must develop knowledge for themselves rather than being passive users of information. When learners are active in creating their own learning goals, they also take on more responsibility for their own learning. This sense of ownership can lead to more confidence and a readiness to take on more ambitious learning goals.

4. Discovery in Collaborative Learning Environments. The sources imply that educational innovations should focus learners offering and assessing their own reasoning, establishing an atmosphere that supports both learning and critical thinking. Working in groups is promoted as a good form of discovery learning. When students interact on challenges they may suggest viable answers, comprehend why solutions are incorrect, and grasp the reasoning behind diverse perspectives. This form of collaborative conversation is not merely about exchanging ideas, but also about understanding the rules for discussion, appreciating others' contributions, and recognizing the importance of reasoned argument.

(Kovalerchuk, 2019) discovery learning is characterized as an iterative process led by data, machine learning, and an emphasis on adding valuable characteristics, controlling uncertainty, and searching out innovative and surprising findings.

(Khasinah, 2021) discovery Learning is an active and direct learning approach created by Jerome Bruner in the 1960s, stressing learning by doing where students actively engage, rather than passively acquiring knowledge. It is a generic instructional strategy representing the development of constructivist learning for school-based learning contexts. The technique enables pupils to grasp concepts, meanings, and relationships through an intuitive process, finally leading to a conclusion. Here's a summary of main characteristics of Discovery Learning according to the sources: Definition and Origins: Discovery Learning is founded in the concept that learning should entail active engagement by students. It comes from the work of Jerome Bruner and was inspired by other experts like as John Dewey, Jean Piaget, and Seymour Papert. Bruner stated that the activity of discovering information enables a person to acquire knowledge in a way that makes the information readily useable in problem-solving. Discovery Learning is an inquiry-based constructivist approach where students utilize prior experiences and existing knowledge to investigate and grasp concepts. The strategy allows pupils to make conclusions based on their own actions and observations. It includes pupils in problem-solving to build knowledge and skills. It is also characterized as a process that involves a student's mental processes to find ideas and principles through observation, categorization, measurement, prediction, determination, and inference. Key Characteristics: Students build abstract knowledge units and structures, such as ideas and rules, using their own inductive reasoning on non-abstract learning resources. It aligns with the active quest for information by humans, providing best outcomes. The technique establishes an active learning process where content is not delivered directly by the teacher at the beginning of learning. Students are urged to find their own approaches to tackle problems. The process comprises the instructor assisting pupils to discover, process, explore, and investigate. Students gain new knowledge pertaining to specific topics and abilities including establishing rules, testing hypotheses, and collecting facts. Syntax or Steps of Learning: There are conflicting opinions on the particular steps of Discovery Learning, with some sources claiming five phases and others offering six. Ahmad Rohani (2004) and Anitah (2009) propose five steps: (a) problem formulation; (b) presenting a hypothesis; (c) looking for information to answer the hypothesis; (d) drawing conclusions or generalizations; and (e) concluding based on the answer or generalization. Kemendikbud (2013) and Sinambela (2017) define six steps: (1) stimulation; (2) problem definition; (3) data collection; (4) data processing; (5) verification; and (6) generalization. The stimulation stage, which entails providing pupils a problem that has to be addressed to stimulate their study, is not included in the five-step strategy. The two general steps in adopting discovery learning are preparation and implementation. The preparation stage comprises planning learning activities including creating learning objectives, identifying student characteristics, picking materials, determining themes, developing teaching materials, arranging topics from simple to complicated, and

preparing assessments. The implementation stage entails following the five or six phases of discovery learning in the actual learning process. The table below summarizes the six steps:

1. Stimulation: Students are provided with an issue without a known solution, prompting them to research. The instructor gives questions, reading material, and activities that foster exploration.
2. Problem Statement: Students identify as many problems as possible related to the material, select one, and formulate it into a hypothesis.
3. Data Collection: Students explore to gather relevant data by reading literature, observing, interviewing, and conducting their own trials. They aim to answer questions and show the correctness of their idea.
4. Data Processing: Students process the information obtained, analyze, and interpret it. They categorize, tabulate, and do calculations as needed, and interpret at a specific degree of confidence.
5. Verification: Students carefully validate their hypothesis with alternative findings, tying it to data processing outcomes. This stage is to make the learning process flow smoothly, encouraging pupils to be engaged and innovative in problem solving.
6. Generalization: Students construct conclusions that may be applied to all comparable occurrences or issues, based on the verification results, defining principles that underpin the generalization. It is allowed to adopt either the five or six-step strategy, as long as the learning activities coincide with the phases.

Advantages of discovery learning, it actively engages students in learning, enhancing intrinsic motivation. Learning activities are more meaningful than merely textbook study. Students acquire inquisitive and reflective skills useful in diverse circumstances. Students develop new skills and strategies. It builds upon students' previous knowledge and experiences. It supports student freedom in learning. It enhances recall of concepts and information when pupils find them themselves. It facilitates group work. It increases cognitive abilities and processes. Students can move swiftly based on their own ability. It builds respect among kids via discussion. It creates a sense of excitement when pupils succeed in research. It increases optimism owing to learning results that are final and certain. It grows and improves student curiosity. It facilitates lifelong learning skills development. It personalizes the learning experience. It inspires pupils by offering them opportunity to experiment. It improves student participation, motivation, and is based on past knowledge. It fosters group collaboration.

Disadvantages of discovery learning, it may be time-consuming. It needs a resource-rich learning environment. The quality and talents of students influence the success of the approach. Understanding concepts cannot be judged merely by student activities. Students may struggle with establishing views, making predictions, or drawing conclusions. Some teachers may not be adept at handling discovery learning. Not all teachers can properly monitor learning activities. It needs pupils to have prior understanding of the subjects being taught. It is not ideal for short courses or big students. Teachers and students

need to be conversant with the approach and implement it consistently. It is superior at teaching concepts and cognitive comprehension than other areas of learning. If the teacher does not establish a clear framework, pupils may find the learning process difficult. It can be inefficient and time consuming to finish the discovery process. It can produce frustration if not controlled well. Weaknesses might arise from the method itself, the teacher, or the pupils.

(Bruner, 1961) derived discovery learning from contemporary studies in cognitive psychology and stimulated the development of more specific instructional methods. The most important defining characteristic of discovery learning is that learners have to generate units and structures of abstract knowledge like concepts and rules by their own inductive reasoning about non abstracted learning materials. Discovery Learning is an instructional approach that emphasizes exploration and inquiry, allowing students to learn through their own experiences. This model aligns with constructivist principles, promoting active participation and critical thinking among learners.

(Blachowicz & Ogle, 2008) reading is not simply about decoding words but also comprehending and making meaning of what is read. Good comprehends are active and strategic in their reading process. They generate meaning, check their understanding, and utilize diverse tactics to promote comprehension. Here are some essential characteristics of reading abilities they are: (1) Comprehension as a positive process: Reading is an active activity where readers link ideas, develop images, and change their knowledge as they read. This entails utilizing past information and experiences to understand the text and develop a mental picture of what is being read. (2) Strategic reading: Good readers utilize a number of tactics before, during, and after reading. These include: Before reading: Setting reasons for reading, formulating predictions, and asking questions. During reading: Monitoring comprehension, utilizing "fix-up" tactics when facing obstacles (such as rereading), and revising predictions. After reading: Summarizing, synthesizing, commenting, and reflecting on the content. Self-monitoring and self-regulation: Good readers are aware of their comprehension and adapt their tactics as appropriate. They realize when they are puzzled and take measures to explain their knowledge. Fluency: Fluency is closely connected with understanding. Fluent readers can digest literature more effortlessly, allowing them to focus on understanding the message rather than decoding the words. Vocabulary development: A good vocabulary is necessary for understanding. The book highlights the necessity of learning both general and academic vocabulary through extensive reading and thorough training. Reading different sorts of texts: The book highlights the significance of reading both fiction and non-fiction. Each form of literature has its unique structure and qualities, and readers need to be able to modify their reading tactics accordingly. For example, while reading fiction, readers need to comprehend story, character, and place. When reading informational literature, individuals need to pay attention to outward aspects like headings and tables of contents, as

well as internal structures such as cause and effect and compare/contrast. Reading for diverse reasons: The book also discusses reading for multiple purposes such as reading for information, completing activities, and learning. The tactics employed will differ based on the aim of the reading. Engagement: Readers need to be involved with the subject, relating it to their own experiences and views. Lifelong reading: The book highlights the objective of generating lifelong readers who are driven, intentional, and strategic. This involves offering access to a wide range of resources and chances to read, as well as developing linkages between classroom reading and literacy in the larger world. The book also underlines the importance of teacher modelling and guided practice in helping pupils acquire key reading abilities. Teachers need to give clear teaching in reading comprehension and establish a classroom climate that fosters active and engaged reading

The sources describe critical reading as an important skill, especially when interacting with informational texts. Here's how the sources describe critical reading: Critical literacy involves enhancing students' understanding of writing. It helps students become more analytical readers and pushes them to share their own views and responses to a range of texts. A key component of critical reading is understanding the author's message and intent. This includes getting beyond the surface level of the text to analyze the author's purpose, viewpoint, and possible biases. Critical reading includes the ability to evaluate the clarity of the author's message and to suggest ways it could be improved. Questioning the Author (QtA) is a strategy that helps students understand that comprehension problems can sometimes come from the author's language or style. It includes asking questions like: What is the author trying to tell you? Why is the author telling you that? Does the author say it clearly? How could the author have said things more clearly? What would you say instead? Critical readers should be able to identify and question cultural stereotypes and understand that literature can transmit a shared core of knowledge, also known as literary heritage. It is important that students recognize the potential for bias in texts and understand how an author's past can influence their writing. Readers should interact with the text on a personal level, considering their own past experiences and knowledge when understanding the author's message. This shows the value of reader response theory, which emphasizes that reading is an exchange between the reader and the author. Finally, critical reading includes the ability to develop personal opinions and responses to texts. This suggests not just idly accepting what is written but actively analyzing and engaging with the material (SCHUMM, 2006).

(Lenski & Lewis, 2008) critical literacy is a way to read, examine, and evaluate writings within a sociocultural framework. It goes beyond simply constructing meaning from a text and pushes readers to develop a critical understanding of the fact that texts are not neutral. Rather, writings reflect particular points of view while omitting others. Critical reading involves: Going past surface meaning, first impressions, dominating myths, official statements, traditional clichés, and mere views. Understanding the deep meaning, root causes,

social context, ideology, and personal effects of any action, event, object, process, organization, experience, text, subject matter, policy, mass media, or conversation. Becoming aware of one's experience as historically built within specific power relations. Recognizing that a book reflects an author's views of reality, which are based on the author's social, cultural, and political opinions. Understanding that readers frame their views using their own sociocultural ideas and admit their own biases. Using the reading of books to understand the social facts of the world. The sources also note the following about critical literacy: It is central to helping students develop mature cognitive processes. It is essential for educating citizens of a democratic society. It helps give purpose to students' reading. It can help students connect learning to larger concepts. It can help students think about their roles in democracies. It can help English language learners understand that their cultural views and primary languages are respected.

(Duffy, 2004) reading includes several key components comprehension is a strategic process where readers build meaning by using past knowledge and text hints. It's not a passive activity, but a constant pattern of predicting, watching, questioning, and changing knowledge. Comprehension is proactive, tentative, personal, trans active, thoughtful, imagistic, inferential, and reflective. Inferences are important as readers "read between the lines" to understand what the author suggests but does not directly state. Prior knowledge plays a vital role in understanding, as readers use their experiences with words and the world to build meaning. Strategies such as predicting, watching, asking, imaging, inferring, and summarizing are used to build meaning. Word recognition is the process of decoding written words, either by quickly recognizing words at sight or by studying the word to figure it out. Sight word recognition includes learning words after seeing them a few times. Word analysis is used when a word is not recognized immediately and includes phonics, context, and structure analysis. Phonics includes using letter-sound associations to find out unknown words. It is considered a "emergency use only" approach, because most words should be recognized at sight. A good rule of thumb for narrative writing is that at least 90–95% of the words on a page should be known at sight. Context involves using surrounding words to determine the meaning of a new word. Structural analysis involves breaking down words into prefixes, suffixes, and roots to figure out their meaning. Decoding by analogy includes finding out words by using known spelling patterns. Fluency is the ability to read easily, with proper phrasing and intonation, and like one is talking, whether loudly or silently. Fluency needs both quick word recognition and comprehension, as correct phrasing and accent represent the author's meaning. Fluent reading is not just about speed, but also about correctly expressing the author's meaning through wording and intonation. Developing fluency involves a lot of easy reading to give students the experience of what it feels like to be fluent, as well as

specific teaching to improve quick understanding of look-alike words. These components are linked, with fluency serving as a bridge between word recognition and understanding. The book emphasizes that reading is a system and not a random process, where skills and tactics are best applied within a knowledge of that system. The goal is not just to teach these skills and strategies, but to motivate students to become readers by engaging them in "real reading" projects that have a purpose.

(N, 2008) Reading is the activity of utilizing text to generate meaning. The two important parts of reading are producing and meaning. If no meaning is being formed, then reading is not taking place. Here are some essential principles regarding reading, according to the book: Reading is a continually improving skill. Like any talent, repetition enhances reading ability and lack of practice can cause abilities to degrade. Reading practice helps people become better readers from age three to one hundred and three. * Reading blends visual and nonvisual information. The meaning formed during reading comes from a combination of visual information from the text and nonvisual information from the reader's own knowledge and experiences. What is in the reader's thoughts is equally as crucial as what's on the page. Reading is the act of relating one concept to another. It is not required to know every word in order to read. Good readers employ little word and letter signals. Reading is not an isolated process. It is tied to the other linguistic activities of speaking, listening, and writing. Reading helps pupils become better writers, while writing promotes reading fluency and phonic understanding. Reading is an enjoyable act. A teacher's or tutor's number one task is to assist students fall in love with reading. Reading is more joyful when readers are empowered to choose their own reading content. Reading programs need to be balanced. This implies adopting a range of tactics and ways to teaching reading. A balanced reading program focuses helping youngsters fall in love with books and developing settings that enable kids to learn to read.

METHODOLOGY

The design of the research named mix-methods was adopted, allowing for the integration of quantitative and qualitative data. This technique provided a complete investigation of the Discovery Learning Model's influence on the students' critical reading comprehension by collecting not only quantitative outcomes but also the perspectives and experiences of students and instructors participating in the learning process. the population was the complete group of interest, whereas the sample was a carefully chosen fraction of that population, designed to gave insights and data that might be extrapolated back to the population. The sampling technique used was random sampling. The sample of the study was taken 50 % from 100%. It was obviously shown in the following table:

Table 1 The Number of Samples Both Quasi Experiment Class and Control Class

No.	School Name	CLASS	Sample	Group
	T SMPN 4 TAMALATEA	VIII..2	26	asi experiment
	T SMPN 4 TAMALATEA	VIII.1	26	Control
	Total		52	

According to Cohen (2007), data collecting procedures related to the methods and instruments used by researchers to obtain information for the aim of answering research questions or testing hypotheses. The choice of data collecting strategy reliesed on the nature of the research, the research objectives, and the type of data needed. Cohen, Manion, and Morrison underline that these strategies could be qualitative, quantitative, or a mix of both, and each method had its benefits and limits.

Qualitative data gathering procedures, as stated by Cohen et al., include methods such as questionnaires, and observations. These strategies were particularly successful for obtaining in-depth, contextual, and descriptive data, commonly utilized in research aiming at studying attitudes, perceptions, or actions in detail. Quantitative data gathering procedures, on the other hand, generally entail surveys, questionnaires, or standardized examinations that provided numerical data. These were generally employed in research that attempted to quantify variables or tested certain hypotheses using statistical analysis. Cohen, Manion, and Morrison also underlined the significance of validity and reliability in data collecting, pointing out that the chosen methodologies

might be appropriated for the study environment to ensured the correctness and consistency of the data. A well-planned data gathering method was vital for the overall success and legitimacy of the study findings.

FINDINGS

1. **The Impact of the Discovery Learning Model on Students' Critical Reading skills in Junior High School English classes?**

The impact of using the discovery learning model on Junior High School English classes' critical reading abilities is covered in the study's first finding. The study looks at how well this model improves students' comprehension, analysis, and evaluation of reading materials. The study evaluates the model's efficacy by comparing students' performance before and after it was applied, using a quasi-experimental class. In this section, the researcher explained some data table about the result of the study.

The Mean Scores of the Pretest and Posttest Both Quasi-experiment Class and Control Class

Table 2 The Mean Score of Both Pretest and Posttest Reading Comprehension in The Quasi Experimental and Control Classes

Class	Pretest Score	Posttest Score	Score Improvement
asi Experimental Class	30.19	75.00	44.81
ntrol Class	30.00	59.42	29.42

Based on the Table 5, the quasi-experimental class, which was instructed using the Discovery Learning model, significantly improved their reading comprehension scores. The mean score increased from 30.19 on the pretest to 75.00 on the posttest, representing a 44.81-point gain. The control class, which received traditional instruction, saw a lower score gain of 29.42 points, going from a pretest score of 30.00 to a posttest score of 59.42. This suggests that compared to conventional teaching

techniques, the Discovery Learning model had a greater influence on improving students' reading comprehension.

A T-test analysis is necessary to ascertain the effect of applying the discovery learning model. In order to determine whether the observed improvement is significant, this statistical test compares the students' pretest and posttest results. The T-test value and the critical T-table value (0.05) at a predefined significance level are then compared to interpret the results.

Table 3 The T-Test of the Students' Pretest and Posttest Both Quasi Experiment Class and Control Class

Class	Test	T-Test Value	T-Table Value	Result
Quasi Experimental and Control	Pretest	0.529	1.67469	Not Significant
	Posttest	123.65	1.67469	Significant

A comparison of the quasi-experimental and control classes reveals a distinct difference in the significance of the students' reading comprehension scores before and after the treatment, according to the data in Table 12. At the 0.05 significance level, the critical T-table value of 1.67469 is higher than the T-test value of 0.529 in the pretest. This suggests that both classes began at a roughly equal level because there was no statistically significant difference between them before the intervention. With a T-test value of 123.65, which significantly surpasses the T-table threshold of 1.67469, the posttest results, however, revealed a sharp rise. This outcome demonstrates that the Discovery Learning model used in the experimental class produced a statistically significant difference in posttest performance.

2. The challenges and opportunities faced by teachers in integrating the Discovery Learning Model into their English instruction for enhancing critical reading skills at the Junior High School level

Although not presented in statistical tables, the interpretation of the previously discussed data indicates that the application of the discovery learning model had a positive impact on students' learning outcomes and affective development. However, in practice, teachers encountered several challenges, including the need for more complex lesson planning, extended implementation time, and high demands on pedagogical skills to effectively facilitate student discovery.

On the other hand, the model also offered significant opportunities, such as increased student participation, the enhancement of critical thinking skills, and a greater tendency for students to become more independent and enthusiastic in the learning process. With adequate teacher training and the use of diverse instructional media, the discovery learning model can be effectively integrated into English instruction to enhance students' critical reading skills.

CONCLUSSION

The Discovery Learning Model in Teaching English to Enhance Critical Reading Skill at Junior High Schools in Jeneponto Regency was as follows:
1. The discovery learning model was proven to have a significant impact on improving the critical reading comprehension of junior high school students. This is evidenced by the results of the Paired Samples T-Test which showed a significant difference in the mean scores of the pre-test and post-test (Sig. 0.000 <0.05), where the mean score increased from 30.19 to 75 after the application of the model.
2. The regression analysis results showed that engagement and motivation simultaneously and partially had significant effects on students' reading comprehension (Sig. = 0.000 and 0.002). 44.4% of the variation in students' reading ability was explained by these two variables, indicating that affective aspects

were very important in supporting the effectiveness of discovery-based learning.
Teachers faced challenges such as limited learning time, planning complexity and high pedagogical skills. However, they also saw great opportunities in the development of critical thinking skills, learning independence and increased student participation. With training support, supportive school policies and adequate learning media, discovery learning could be optimally implemented in English learning.

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