The Effectiveness of Inquiry-Based Learning on Reading Skills at SMAN I Lembang: Kurikulum Merdeka

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ABSTRACT

A curriculum is one of the learning instruments that educational institutions must be completed. Indonesian educational system has its new curriculum called Kurikulum Merdeka the goal of this curriculum to improve critical thinking, problem-solving, creativity, and innovation, as well as communication and collaboration skills for students. The aim of this study to know the effectiveness of inquiry based learning on students’ reading skill. To achieve the research aim, the researcher apply experimental research design. There 432 students as a population in this research. This research choose 68 students as a sample in this study. The researcher apply purposive sampling technique to choose them. Control class is 34 students and experimental is 34 students. This research figure out that Inquiry based learning more effective than conventional. The average of experimental is 78,08 however control is 71,17. It’s indicate that reading is an effective way for teaching reading. It’s recommended to whole teacher made this method as an alternative way in teaching reading at SMAN I Lembang

Keywords: Inquiry-Based Learning, Kurikulum Merdeka; Reading Skills

Introduction

The curriculum is one of the learning tools that must be completed by educational institutions (Fatmawati & Yusrizal, 2021). A curriculum is a design of lessons, teaching materials, and learning experiences that have been programmed. The curriculum serves as a guide for educators as they implement the teaching and learning process. Indonesia is a country that has revised its curriculum. The curriculum is a reference to teaching in the process of teaching and learning without an automatic curriculum that learning is not directed. According to Assingkily et al. (2021), teachers have responsibilities, which is highly challenging. The teacher is entrusted with helping to mold the nation's future, but only under extremely strict guidelines. Teacher performance cannot be separated from the influence of the school’s leadership system (Tobing, 2016). And that is the reason that what is being structured in the school system will have an impact on the teachers’ performance unless there is a good leadership system in the school. A new curriculum is being impulsed by the Ministry of Education in the post covid 19 that is the Kurikulum Merdeka. Fasya, et al (2022: 30-33) stated the Kurikulum Merdeka also aims to answer the challenges of education in the era of revolution industry 4.0, which in its realization must support skills in critical thinking, problem solver, creative and innovative and communication skills and collaborate for students. The emergence of COVID-19 became one of the points at which educational continuity, particularly in Indonesia, changed. The learning crisis has been accompanied by the emergency conditions of the COVID-19 pandemic's impact on educational changes in Indonesia. Due to the presence of the pandemic COVID-19, education must change and develop the following policies in order to continue to achieve its learning goals. (Nafrin & Hudaidah, 2021).
essence, the curriculum lies with the teacher, if the teacher cannot deepen the applicable curriculum, the educational goals will not achieve so the teacher's ability to adapt becomes an important thing (Yanti & Fernandes, 2021).

Kurikulum Merdeka frees the teacher to be able to create educational and fun learning. Current pedagogical competence as well requires teachers to be able to model and carry out the learning process. The teacher gave the mandate as a driving force to plan, implement, evaluate, and follow up on the evaluation (Sutrisno, et.al., 2022). Active, innovative, and comfortable study concepts must be able to realize students' needs, especially in this day and age.

The teacher must also be a facilitator in developing the character of students who think critically, are creative and innovative, and are skilled in communicating and collaborating. Not only must the teacher rely on the independence of students to find sources of learning, such as e-books, but the teacher must also prepare several learning methods. (Manalu, et.al., 2022). English is still seen as a tough subject for Indonesian students. Therefore, it is needed to use a variety of learning techniques to optimize their chances of English comprehension (Danamik & Katemba, 2021). “Indonesian students often experience problems when learning English, because English differs from Bahasa Indonesia (the Indonesian language) in its structure, pronunciation, and vocabulary” (Katemba, 2019, p. 88). To overcome these challenges, teachers should vary their methods of assisting the students to increase their English knowledge (Taebenu & Katemba 2021).

Reading is a crucial thing for students' English learning. However, most students encounter numerous difficulties when reading a text. For example, difficult words, sentence comprehension, and how to correctly read a word or sentence (Katemba & Samuel. 2017). As a result, because Indonesian students have already encountered difficulties with reading comprehension in Indonesian, the language that they have acquired and learned, they find it far more difficult to read and comprehend reading in English, the foreign language that they have only recently acquired and learned. (Siagian & Katemba, 2016).

At the higher secondary level, students should improve their reading skills to access information that is offered in the text, websites, books, magazines, and newspapers, among other sources (Sari & Wati, 2017). However, student proficiency in reading understanding is inadequate. Many students experience some comprehension issues obtaining knowledge and the meaning of a text.

As a response, the researchers used a variety of methods to assist and encourage the learners to be engaged in reading activities. The inquiry-based learning (IBL) method is one of these techniques. Sanjaya (2009) defines inquiry as an activity that includes all students’ search and investigation abilities while being focused, critical, rational and analytical. However, they can take in knowledge. A teaching strategy known as inquiry-based learning, involves the questions, concepts, and observations of the students at the center of the educational process.

This strategy is based on the notion that both teachers and students share responsibility for learning. While learning, students frequently engage in ongoing research or conversations. In this situation, students may understand how to conduct research, draw conclusions, identify concepts, discuss the subject, and solve problems. As a result, this strategy is one of the most effective ways to assist students in improving their reading abilities while also supporting the implementation of the Kurikulum Merdeka, particularly at SMAN 1 Lembang. Inquiry-based learning effectiveness in the English language study of Kurikulum Merdeka, particularly in reading skills, is novel in this study to help the teacher improve the teaching method when using Kurikulum Merdeka to reach independent learning for the students. Therefore the research would like to investigate the effectiveness of inquiry based learning on reading skill at SMAN I Lembang.

Reading may be very critical for students’ gaining knowledge (Sari & Wati, 2017). Reading proficiency will best develop in collaboration with writing, speaking, and listening skills Brown (2001:298). According to Davis (1992), the following categories apply to reading ability: knowledge of language usage, the skills to choose a word or phrase’s appropriate meaning given its specific context, the capacity to follow a passage’s, identify questions and identify literary devices used, and the skills to identify the writer’s purpose, intent and point of view and answer questions that are answered in the passage.

According to Caswell & Labrie, 2017 by presenting, researching, and responding to questions, student study subject matter through
inquiry-based learning. Alberta (2004) stated that inquiry-based learning is the procedure where students are actively involved in their classroom, develop research-informed questions, and then develop new understanding, meaning, and knowledge. Lane (2007) confirms that the inquiry-based learning approach actively engages students in the investigations of the facts, issues, and questions related to a subject in the curriculum. The assignment and activities in a classroom that uses inquiry-based learning can be set up such at the student can work alone or in the group to find solutions to issues that relate to both classroom work and fieldwork.

According to the description, the student asks a question and determines the answer on their own, with assistance from the teacher, technology, and the other students in the classroom. However, inquiry based learning method will help students to solve their problems that may be arise on reading. Kurikulum Merdeka is a new policy program of Kementerian Pendidikan, Kebudayaan, Riset dan Teknologi Republik Indonesia (Kemendikbud RI), the main purpose of Kurikulum Merdeka is to develop profiles of Pelajar Pancasila. In the Kurikulum Merdeka, teachers are supported by the freedom learning movement platform these are teaching, learning, and work actualization (Supriyono, 2022). Kurikulum Merdeka is a curriculum with various intra-curricular learning where the content will be optimized so that students have enough time to explore concepts and strengthen competence (Indrawati et.al., 2020). Teachers have the flexibility to choose various teaching tools that learning can be adapted to the learning needs and interests of students.

Kurikulum Merdeka benefits include project-based learning to develop students’ soft skills and character in accordance with Profil Pelajar Pancasila (Pancasila Profile Students), focused on key topics such as reading and numeracy as well as freedom for teachers to execute their lesson based on students’ abilities and adapt it contextually (Rizky & Fahkrunisa, 2022). The fundamental goals of Profil Pelajar Pancasila are to preserve the nation’s noble ideals and morals to be ready to become a global citizen to embody social justice, and to obtain 21st century competency (Nugrohadi & Anwar, 2022).

Student participation is an essential component of the inquiry-based learning process. Involving students also includes the educational institution’s development of goal-setting, group work abilities, and task management. In this situation, the students can collaborate in groups, think critically, and develop discoveries from challenges. Furthermore, discipline-based methods are an essential part of inquiry-based learning. (Bradfor, 2000) stated, if the inquiry learning strategy through discipline is effectively planned, it may help students learn in dept. For instance, it is the job for teachers to guarantee that students learn deeply. This is due to the student’s ability to connect their thought and concepts to prior knowledge and experience (Jamal & Shah, 2010).

Bruner’s beliefs differ from Piaget’s in that Bruner is opposed to teacher intervention (Jamal & Shah, 2010). Bruner believes that teachers can motivate students to participate actively in the learning process. Students can investigate alternatives and establish the link between these options with the help of teachers who promote investigation (Roblyer et.al, 1997).

Methods
Research Design
This study used a quantitative-experimental research design. The population of this study is 432 students. This study used a technique called purposive sampling. Total sample on this study is 68 students. The experimental group (E4) and control group (E3) were chosen as the sample because they had similar features, such as total student and the same English teacher. The data collection methodologies are as follows: (1) a 25-question reading comprehension exam. The Cronbach alpha formula is used to compute the reliability test. The result of the test’s reliability coefficient is 0.864. If the test result is greater than 0.70, it is considered reliable. The test-result data was analyzed using both the paired sample t-test and the independent sample t-test. The paired sample t-test techniques was used to compare the average of the two variables.

Pre-test and post-test mean scores of each group were compare using the paired sample t-test procedure determine whether there was highly relevant difference in the students’ improvement before and after being taught using inquiry-based learning. To identify the differences in reading skills between the students who received inquiry based learning and those who did not. The Independent Sample T-Test method was used to compare the post test result for both groups. The paired sample t-test approach was used to compare the pre-test and post-test mean scores of each group to evaluate whether there was a highly relevant
variation in the students’ improvement before and after being taught utilizing inquiry-based learning. To compare the reading skills of students who attained inquiry-based learning to those who did not. To compare the post-test result for both groups, the independent sample T-test technique was utilized.

**The procedure of Data Gathering**

The research is divided into four stages: plan, activity, observation, and reflection. Furthermore, this study employs those processes in the classroom to tackle challenges encountered throughout the learning process. This study is being undertaken on tenth grade students at SMAN 1 Lembang. The researcher focuses on improving students’ reading comprehension through the use of Inquiry Based Learning in the classroom. Reading comprehension exams are used as research instruments. The researcher created a reading comprehension exam for the students in order to obtain data on the students' comprehension of the content.

At the end of the cycle, the students administer the reading comprehension exam as a preliminary test. The questions in the preliminary exam and at the conclusion of cycle 1 were comparable in order to assess how the students improved after using the Inquiry Based-Learning technique.

The reading comprehension test is at the end of the cycle. This test's elements comprised of 25 multiple-choice reading comprehension questions relating to the topic or theme of the reading ability as it relates to the curriculum and lesson plan.

In this study, the researcher follows several methods for each cycle, which include planning, activity, observation, and reflection. There is a lesson plan in the plan for teaching reading skills utilizing the Inquiry-Based Learning technique in reading comprehension. The researcher created a lesson plan to implement the method in the classroom, as well as materials and a test. In practice, the researcher used Inquiry-based Learning to teach and learn based on the lesson plan.

Cycle 1’s based learning method for each meeting. There are various processes to follow while implementing this strategy. The first stage is to generate topic-related questions. The instructor or the students may offer the inquiry. Secondly, when a question was presented, students were urged to research the issue by gathering knowledge from sources provided by the teacher or from learning resources or technologies already available to the students.

Third, gathered and organized sufficient information on the issue in categories or outlines, emphasizing the most relevant facts. It assists student in making connections between new and past knowledge. Forth, the data would be examined and evaluated to have a better understanding. The teacher guides the debate by highlighting the consequences of the research and demonstrating how they connect to the problem's solution. Finally, students who are presenting provide a conclusion that is linked to the original inquiry. Students' reflections are encouraging and help to relate the stages that lead to the conclusion.

**Criteria of Gain Score**

Assessment of learning outcomes in the form of a pre-test and post-test statistically analyzed for known differences in student learning outcomes between pre-test and post-test. Analysis this difference using a paired sample t-test and analysis using SPSS. The significance level used is 5%. When there is a differences in student learning outcomes between pre-test and post-test, the analysis using the test again to find out the value increased. The step that determine the gain score are:

1. Calculate the normalized gain score with the following formula:
   \[<g> = \frac{\text{post-test} - \text{pretest}}{\text{ideal score} - \text{pretest}}\]

2. Categorize gain scores based on gain score category shown in table 1.

   **Table 1**
   
<table>
<thead>
<tr>
<th>SCORE (&lt;G))</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(&lt;G) \geq 0,7 )</td>
<td>High</td>
</tr>
<tr>
<td>(0,7 &gt; \geq 0,3)</td>
<td>Medium</td>
</tr>
<tr>
<td>(&lt;0,3)</td>
<td>Low</td>
</tr>
</tbody>
</table>

   (Nofiyanti, W., & Ismono, 2015:175)

   The result of the N-gain score data were reviewed if the magnitude of the N-gain score \(\geq 0,3\) then it can be said that the Inquiry Based learning is effective in increasing student learning outcomes. (Marfuah et al, 2014: 529).

**Finding and Discussion**

As the result on this research on experimental and control class can described in the following table.
The table showed that the mean pre-test obtained by the experimental group was 63.38 and the mean of the post-test was 78.08. While the mean pre-test obtained by the control group was 64.70 and the mean post-test was 71.17. It is shown that the result of pre-test and post-test of experimental. There was a significant difference of reading achievement before and after getting the treatment since the p-outputs was not lower than 0.05. It concludes there is a significant difference in score between the experimental class (inquiry-based learning treatment) and control class (without inquiry-based learning treatment).

### Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>Post-test</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>63.38</td>
<td>78.08</td>
</tr>
<tr>
<td></td>
<td>64.70</td>
<td>71.17</td>
</tr>
<tr>
<td>N</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>

The result of the analysis of the effectiveness of the Inquiry-Based Learning, data obtained that the average score of the experimental class is 0.54 and the control class is 0.21. This value indicates that the increase student reading class with Inquiry Based Learning at SMAN 1 Lembang. It is obvious that the experimental class with its normalized gain 0.54 falls in the category of medium gain. While the control group has a normalized gain of 0.21 which falls in the category of low gain.

Students’ reading skill in experimental class has progress, the student active in performing a presentation, sharing thoughts in a class and finding the main idea, theme and topic. The students use gadget wisely during the Inquiry-based learning treatment. In the post-test indicate student showed improvement in reading ability, they could make more than 5 questions based on the text.

Students’ reading skill can be improved by inquiry based learning. It was related to Alberta (2004) idea, which illustrates that students may improve and increase their understanding and knowledge by inquiry-based learning. Abdelraheem and Asan (2006), inquiry-based learning can motivate students to explore their knowledge. According to the Marinee-Lee & Duncan, 2015 inquiry-based learning encourages and supports student to seek topics of interest to them.

### Characteristic of Kurikulum Merdeka

The characteristic of the curriculum are as follows: (1) Inquiry based learning for the development of soft skills and Profil Pelajar Pancasila, (2) focus on essential material so that there is sufficient time for in depth learning, especially basic competencies such as literacy and numeration, (3) flexibility for teacher to carry out appropriate learning with the ability of students, as well as make adjustments with local context and content.

### Correlation Kurikulum Merdeka with Inquiry-Based Learning

**Profil Pelajar Pancasila** has six dimensions those are: (1) Faith, fear God, and have a noble character. (Beriman, bertakwa kepada Tuhan YME dan berakhlap mulia), (2) Global diversity (Berkebinekaan Global) (3) Cooperate (bergotong royong) (4) Creative (Kreatif), (5) critical thinking (Bernalar kritis), (6) independent (Mandiri) (Perpres No. 87 Tahun 2017 tentang Penguatan Pendidikan Karakter)

In the critical thinking dimension, students who think critically are able to objectively process both qualitative and quantitative information, develop the relationship between various information, analyze information, and evaluate and conclude it. The elements of critical reasoning are: (1) obtaining and processing information and ideas, (2) analyze and evaluate reasoning, (3) reflect on thoughts and thought process and (4) make a decision (Panduan Pengembangan Projek Penguatan Profil Pelajar Pancasila).

Based on the application of inquiry-based learning in the experiment class over multiple sessions, certain functions of inquiry based learning...
In the 5E Inquiry-Based Learning cycled similarities are: (1) Engage, the students are engaging with difficult circumstances, past information is active, and questions are given. (2) Explore, prior knowledge is questioned and new ideas are generated as students examine the phenomena. (3) Explain, students be able to explain the phenomena, and new information is learned and implemented. (4) Elaborate, students’ knowledge is deepened and enhanced when they apply it to new situations. (5) Evaluate, students evaluate their knowledge and the learning process.

To begin, student reading competency by connecting selected reading method with certain phases of inquiry-based learning. When using inquiry-based learning, each meeting is divided to five segments. By giving the material to be investigated for each meeting, it courage’s students to improve their reading skills by processing the idea and information as a core of critical thinking in the Implementation of Kurikulum Merdeka. It then allows students to connect with incredibly complicated topic and uncover evidence from the information or ideas. As long as the inquiry-based learning is used, students will be engaged with the topics throughout the inquiry process (Spronken-Smith, 2008).

During the exploration phase, student is guided to read and grasp the material by posing questions that are connected with the strategies taught for each meeting. The second level of understanding, comprehension, refers to knowledge that is based on information that is indicated not specifically explained in the text. In this case, students should be able to analyzing and evaluate reasoning like in the critical thinking dimension. In the elaborate phases, when students were given questions about the reading and asked to answer them, with the rest of the questions assessing their understanding. In the evaluate stage of inquiry-based learning, student were be able to making judgements on different elements of the text, such literary quality, the authors ability, the righteousness of their acts and so on. During the assessment phases, students are given opportunity to make their comments regarding the text, the peer presentation, attitudes of the students and suggestion to make presentation. This method allows student to make decision in the learning process.

Therefore, students may confidently create their discoveries (Gulo, 2005). It is also expected that the teacher is innovative in creating class conditions that position the student as a scientist. As a result, the students take the initiative to investigate the fact, field observations, evaluate data and draw a conclusion.

Conclusion

To summarize, there was a significant difference in students’ reading achievement based on the results of the reading exam in the study. There was a difference between before and after treatment in the experimental group. It has been determined that inquiry-based learning is an effective method for comprehending reading text. The expository and inquiry approach is the most widely used technique in the educational concern curriculum. Thoughts are given to the instructor, which is then elaborated (carried out) by using contributors to teach them until they master them. The main ideas are organized systematically, with clear illustrations for further examination. Depending on the disciplines obtained, the formulated and sought ways to resolve numerous important issues. Inquiry-based learning is intended to engage students in active reading such as the search for information and comprehension to meet curiosity. This method emphasizes student-centered learning, which is a series of learning activities that include the student’s ability to seek and investigate in a methodical, critical, logical, and analytical manner. Some ideas for students include using inquiry-based learning to help them brainstorm and the teacher explaining the general knowledge of the topic. Because of a lack of thought and the inability to think seriously, many students do not know or recognize a way to ask their teacher questions. In this case, the teacher must play their role by enticing them with inquiry-based learning, because inquiry-based learning stimulates them to generate ideas, questions, and actions, and while they are formulating the query of private interest, they will simply have interaction in the language learning activity. In which they discover that it is far more meaningful to learn. As a result, in order to avoid students becoming bored and to make a lesson more alive and appealing, the teacher should be innovative in conveying content while teaching the process of reading.
References


