

Reading Assessment to Enhance Critical Thinking, Argumentative Thinking, and Higher Order Thinking Skills in Junior High School

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ABSTRACT

Reading assessment is used to measure students' ability to comprehend a text. The assessment for understanding explicit information can be categorized as low-level reading ability, while understanding implied information can be categorized as high-level reading ability. This study aims to reveal how reading assessment can improve critical thinking, argumentative, and high-level thinking skills in junior high school. The study was conducted in two SMPNs in Padang City, namely SMPN X and SMP Negeri Y. The reading assessments given to the students in these two schools were analyzed, and English teachers who taught at these two schools were interviewed to obtain information about how teachers conduct reading assessments to improve students' reading skills of Junior high school students to think critically, argumentatively, and in higher-order level. The findings of this research are reading assessments in the form of expressing the meaning of a word or phrase, revealing the content of a message, finding the implied meaning, finding an overview of the text content, and finding specific information enhance critical thinking, argumentative, and high-level thinking skills of students.

Keywords: reading assessment, critical thinking, argumentative, higher-order thinking

1. INTRODUCTION

Assessment of reading literacy has been criticized by the public and education experts because of the low ability of students to answer questions on various international tests held by several independent international institutions such as PISA (Program for International Students Assessment) and PIRLS (Progress in International Reading Literacy Study). The reading literacy assessment carried out by this independent international institution emphasizes critical, argumentative, and high-level thinking skills using authentic texts.

The research results conducted by several researchers at schools indicate that the form of reading skills questions tends to be in the form of questions at the lower order thinking level, while the demands for skills needed by students are at the higher-order thinking skills level. In addition, the type of question text used by the teacher does not describe authentic reading texts, which can be found in everyday life in various mass media and information media needed by students to be able to face real-life [1]. Students themselves have difficulty using critical thinking skills

in learning to read [2]. Meanwhile, Dzakiah's research [3] states that using higher-order thinking skills in learning to read can improve students' creative thinking skills.

Reading is a process carried out by the reader to understand the contents of the message conveyed in writing [4]. Reading is a cognitive process that seeks to find various information obtained in a reading text [5]. Understanding the text is a process of interaction between the reader and the text he is reading, which involves his background knowledge (schemata) and his ability to understand the message and meaning of the text. Reading skills involve various levels of thinking, such as searching for information, forming a broad understanding of the text, interpreting messages, reflecting, and evaluating the contents of the text [6]. Reading literacy assessment should show how students' ability to understand various texts found in real life.

Reading literacy is the ability to understand, use, evaluate, and reflect on various texts to understand and solve problems. Reading literacy assessment measures students' thinking skills through tests to understand various reading texts found in everyday life with a

certain level of reading difficulty. Classroom learning is assessed through various assessment techniques, namely written assessment, performance assessment, project/product assessment, and portfolio assessment [7]. Reading literacy assessments are often carried out in written assessments, but it is possible to use performance appraisal techniques, project/product assessments, and portfolios. However, for the international level reading literacy assessment, a written assessment is used.

To understand reading well, students must have three skills, namely creative thinking skills, argumentative thinking, and high-level thinking. Critical thinking is an intellectual process for conceptualizing, applying, analyzing, synthesizing, and evaluating information. People who think critically have high curiosity, always question the information they receive and do not easily believe what others say. Someone who thinks critically can find relevant sources of information, make logical conclusions from that information, and use that information to solve problems [8]. Critical thinking is beneficial to understand a reading text comprehensively.

Argumentative thinking is an attempt to find out which view is better than the other. Argumentative thinking is based on critical and logical thinking [9]. Through argumentation, one can show whether the statements are factual or not based on the facts and data shown [10]. Finding the correct information in a text requires appropriate arguments so that the conclusions drawn are not wrong.

Higher-order thinking skills involve complex thinking processes, namely, analyzing and synthesizing, to conclude. Of the six thinking levels proposed by Bloom, three levels can be categorized as high-level thinking, namely the ability to analyze, evaluate, and create. The other three levels are lower-level thinking, namely remembering, understanding, and applying [11]. In addition, higher-order thinking requires critical and argumentative thinking skills.

The problem to be investigated in this study is how teachers implement reading literacy assessments that can improve critical thinking skills, argumentative thinking, and high-level thinking in junior high schools. In addition, this study will reveal how the forms and indicators of reading literacy assessment used by teachers in schools improve creative thinking skills, argumentative thinking, and higher-order thinking.

2. METHOD

This study uses a descriptive research design, which describes the phenomena according to actual conditions [12]. The respondents of this study were English teachers at SMPN X and SMPN Y Padang who taught in class IX. The selection of these respondents was based on the consideration that grade IX SMP already has sufficient English skills to understand various texts written in English. The research instruments were questionnaires, analytical documents, and interviews. Questionnaires were used to collect data on implementing an authentic assessment of reading skills in schools given to teachers. The document analysis is used to analyze all reading tests made by the teacher, both daily tests, midterm tests, and end-semester tests. Interviews were used to explore the information obtained through questionnaires, observation, and document analysis. Data were analyzed quantitatively and qualitatively using the following steps. Quantitative data from the questionnaire were analyzed by (1) scoring respondents' answers, (2) adding up the scores of each component, (3) categorizing them based on the tendency of respondents' answers.

3. RESULT AND DISCUSSION

3.1. Result

Reading literacy in junior high school is integrated with speaking, writing, and listening skills. However, the proportion of time for reading literacy is more than the other three skills. In this study, researchers will only analyze those related to reading literacy. The following are the results of data analysis that will be presented in the form of (1) reading literacy assessment in junior high school, (2) reading literacy assessment to improve critical thinking skills, (3) reading literacy assessment to improve argumentative thinking skills, and (4) reading literacy assessment to improve higher-order thinking skills,

3.1.1. Assessment of Reading Literacy in Junior High School

Under the 2013 curriculum applicable in junior high schools, the types of texts taught and tested for reading skills are texts often encountered in everyday life, namely interpersonal, narrative, report, and short functional texts such as advertisements, announcements, and songs. These texts are studied for their structure, social function, and understanding of the message in each. Understanding the messages contained in the text requires critical, argumentative, and high-level thinking

skills designed from the questions asked about understanding the content of the text. By referring to the cognitive domain proposed by Bloom and Kraithwol, questions for reading literacy assessment are categorized into low-level questions (remember, understand, and apply) and high-level questions (analyze, evaluate, and create). High-level questions can only be answered correctly by students who can think critically and argumentatively, while low-level questions can be answered without having to think critically and argumentatively.

The reading literacy assessment indicator was developed based on the syllabus developed from the 2013 curriculum. The reading literacy assessment indicator for grade IX SMP consists of 25 indicators as follows: (1) expressing the main idea, (2) expressing the meaning of words or phrases, (3) revealing the content of the message/text, (4) understanding the contents of the dialogue, (5) finding the explicit answer, (6) finding the implied answer, (7) finding specific information, (8) Finding detailed information, (9) finding an overview of the content of the text, (10) predicting the ending of the story, (11) predicting future actions, (12) finding the communicative purpose of the text, (13) determining the conclusion, (14) determining the reason for an activity, (15) determining the benefits of text, (16) determining the moral message of the text, (17) determining the topic of the paragraph/text, (18) determining grammatical elements, (19) completing the dialogue, (20) completing with conjunction ns, (21) completing with prepositions, (22) understanding text structure, (23) finding synonyms, (24) finding antonyms, (25) finding references.

3.1.2. Reading Literacy Assessment to Improve Critical Thinking Ability

Critical thinking ability is the ability to think evaluatively, showing the gap between reality and truth by referring to ideal things. Critical thinking skills can be used to solve problems and make decisions. The following are indicators of reading literacy assessment that can improve critical thinking skills: (1) revealing

the content of the message/text, (2) understanding the contents of the dialogue, (3) finding the implied answer, (4) finding an overview of the content of the text, (5) predicting the ending of the story, (6) predicting future actions, (7) finding the communicative purpose of the text, (8) determining the conclusion, (9) determining the reason for an activity, (10) determining the benefits of text, and (11) determining the moral message of the text.

The indicators of reading skills above require critical thinking skills to answer the questions given. For example, among 25 indicators of reading literacy assessment, 11 indicators (44%) were questions related to critical thinking.

3.1.3. Reading Literacy Assessment to Improve Argumentative Thinking Skills

Argumentative thinking is a thinking process based on critical and logical thinking. In solving problems, arguments must be accompanied by adequate supporting data and evidence. The following are indicators of reading literacy assessment that can improve argumentative thinking skills. They are (1) predicting future actions, (2) finding the communicative purpose of the text, (3) determining the reason for an activity, (4) determining the benefits of text, and (5) determining the moral message of the text.

The indicators of language skills above require arguments to determine the correct answer. However, among 25 reading literacy assessments indicators, only five (20%) were questions related to argumentative reading skills.

3.1.4. Reading Literacy Assessment to Improve Higher-Level Thinking Skills

Higher-order thinking is the ability to examine information critically, evaluatively, and creatively to solve problems. The following table shows the number of higher-order thinking skills and lower-order thinking skills based on 25 indicators of reading literacy assessment.

Table 1. The comparison between higher-order thinking skills and lower-order thinking skills in the Indicator of reading literacy assessment

Indicators	Indicators of Reading Literacy Assessment	Lower Order Thinking	Higher-Order Thinking
1	Expressing the main idea	v	
2	Expressing the meaning of words or phrases	v	
3	Revealing the content of the message/text		v
4	Understanding the contents of the dialogue		v
5	Finding the explicit answer	v	

6	Finding the implied answer		v
7	Finding specific information	v	
8	Finding detailed information	v	
9	Finding an overview of the content of the text		v
10	Predicting the ending of the story		v
11	Predicting future actions		v
12	Finding the communicative purpose of the text		v
13	Determining the conclusion		v
14	Determining the reason for an activity		v
15	Determining the benefits of text		v
16	Determining the moral message of the text		v
17	Determining the topic of the paragraph/text	v	
18	Determining grammatical elements	v	
19	Completing the dialogue		v
20	Completing with conjunctions		v
21	Completing with prepositions	v	
22	Understanding text structure		v
23	Finding synonyms	v	
24	Finding antonyms	v	
25	Finding references	v	
	Total	11	14
	Percentage	44%	56%

The table above shows that the percentage of reading ability indicators for higher-order thinking skills (56%) is more significant than for low-level thinking skills (44%), but the difference is not that big. In terms of numbers, high-level thinking skills (14 indicators) have three more indicators than low-level thinking (11 indicators). The low number of high-level thinking questions will impact students' opportunities to improve critical and argumentative thinking skills.

3.1.5. The relationship between critical thinking, argumentative, and high-level thinking

The ability to think critically, argumentatively and high-level thinking are interrelated with each other. We can see this relationship in the following table.

Table 2. The relationship between critical thinking, argumentative, and higher-order thinking is based on reading literacy indicators.

Indicators	Indicators of Reading Literacy Assessment	Critical Thinking	Argumentative Thinking	Lower Order Thinking	Higher-Order Thinking
1	Expressing the main idea			v	
2	Expressing the meaning of words or phrases			v	
3	Revealing the content of the message/text	v			v
4	Understanding the contents of the dialogue	v			v
5	Finding the explicit answer			v	v
6	Finding the implied answer	v			v
7	Finding specific information			v	
8	Finding detailed information			v	
9	Finding an overview of the content of the text	v			v
10	Predicting the ending of the story	v			v
11	Predicting future actions	v	v		v
12	Finding the communicative purpose of the text	v	v		v
13	Determining the conclusion	v			v
14	Determining the reason for an activity	v	v		v
15	Determining the benefits of text	v	v		v
16	Determining the moral message of the text	v	v		v
17	Determining the topic of the paragraph/text			v	

18	Determining grammatical elements			v	
19	Completing the dialogue				v
20	Completing with conjunctions				v
21	Completing with prepositions				v
22	Understanding text structure			v	
23	Finding synonyms			v	
24	Finding antonyms			v	
25	Finding references			v	

The table above shows that critical thinking, argumentative thinking, and higher-order thinking are related. Critical thinking is always related to higher-order thinking but not related to argumentative thinking. Meanwhile, argumentative thinking is always related to critical thinking and higher-order thinking. Low-level thinking has nothing to do with critical thinking and argumentative thinking. Therefore, low-level thinking will not improve students' ability to think creatively and think argumentatively. Meanwhile, high-level thinking is closely related to critical thinking and argumentative thinking, and of course, it can improve students' ability to think critically and think argumentatively.

3.2. Discussion

This study found that 11 (44%) of the 25 indicators for assessing reading skills were to test students' critical thinking skills. This proves that teachers are trying to improve students' thinking skills through reading activities. People who can think critically can conclude what they know, know how to use the information to solve a problem, and find relevant information sources to support problem-solving [13]. Critical thinking is the ability to analyze or examine an idea or idea after understanding an idea [14]. If students succeed in answering these 11 questions correctly, they can apply critical thinking to the reading material provided.

Argumentative, according to Kemdikbud [15], is to have reasons that can be used as evidence. Argumentative thinking is the ability to think that starts from facts and data to draw conclusions [16]. The basis for argumentative thinking is critical and logical thinking [17]. This study found that five indicators of reading skills assessment (20%) out of 25 indicators are reading skills assessments that require argumentative thinking skills. Although not so much, argumentative thinking skills have been tested in understanding the content of the text given and will have an impact on increasing students' argumentative thinking skills.

Higher-order thinking skills dominate the number of indicators of reading skills tested, namely 14 indicators of reading skills (44%) of 25 indicators of reading skills.

Higher-order thinking skills do not just recall, restate, or refer without processing (recite), but must be able to relate, interpret, apply and integrate information. Higher-order thinking skills apply processing in activities to remember, restate, or refer to something. Higher-order thinking skills include the ability to solve problems, critical thinking skills and creativity, and the ability to argue and make decisions about things [18]. If students can answer this question correctly, it means that they can apply higher-order thinking skills.

This study also found that critical thinking skills and argumentative thinking are always related to higher-order thinking skills. This finding is in line with Dzakiyah [3] and Krathwol [11] that higher order thinking skills are complex thinking skills that require critical and argumentative thinking skills.

4. CONCLUSION

The findings of this research are that reading assessments can enhance students' critical thinking, argumentative skills, and higher-order thinking skills since the indicators of reading literacy assessment contain indicators to assess critical, argumentative, and higher-order thinking skills. Higher-order thinking skills are the dominant skills assessed for reading literacy assessment that have a close relationship to enhance the ability to think critically and argumentatively. Critical thinking skills are the most fundamental skills involved in making judgments and solving problems. Higher-order thinking questions may improve students' critical thinking and argumentative skills.

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