

CHAPTER I

INTRODUCTION

A. Background

This research is aimed at analyzing the item facility (IF) and item discrimination (ID) of the multiple-choice questions (MCQs) created by English teachers in Bandung private junior-high school and describing the opinions of junior high school English teachers concerning multiple-choice questions in the summative tests. According to Roberts (2006), MCQs have long been utilized with success for both formative and summative assessment in many disciplines and on many levels of learning. In Indonesia, a test using MCQS has been widely used by English teachers, especially for the summative test at the end of the semester. The majority of Indonesians are accustomed to multiple-choice tests because they have been utilized for more than 50 years (Effendi, 2017, 2022).

The use of multiple-choice questions (MCQs) in the summative test is frequent because they have several benefits. One of them is the easy scoring process that helps teachers efficiently grade the test. As Brown (2010, p. 55) mentioned, multiple-choice questions enable overworked teachers to do a simple and reliable scoring and grading process with predefined correct answers and efficient scoring techniques. Another benefit is that MCQs allow for more questions to be asked to evaluate a large amount of content and knowledge because students can respond to them relatively rapidly compared to other tests.

Despite its benefits, making multiple-choice questions can be tricky for teachers. One of the English teachers in the research site chosen stated that it is challenging to construct a good distractor in multiple-choice questions (MCQs). Several studies show that tests made by English teachers in Indonesia have a poor quality of distractor (Shelvia, 2014; Setiyawati, 2020; Ningsih, 2021; Eri, 2021). The teacher's statement is in accordance with Hughes (2003, p. 77) who explains that one of the issues with multiple-choice questions is that it is incredibly challenging to generate excellent items. Excellent items are based

not only on the distractor but also on the difficulty level and discrimination power. To examine the level of difficulty and discrimination power, teachers can utilize item analysis which includes the facility and item discrimination analysis according to Brown's (2010) theory.

Item analysis is a procedure for discovering excellent test items that can be utilized for evaluation. To distinguish between good and bad test items and enhance their quality for future application, it is necessary to evaluate the test items' quality (Brown & Hudson, 2002). Using this analysis, teachers can ensure that the test given to the students does not have too difficult and too easy question items and can differentiate the students' abilities.

The multiple-choice test is incomplete until teachers pay attention to the item analysis. Writing flawless question items is relatively rare due to its difficulty. Therefore, it is necessary to identify the defects and fix them (Atkinson, 2006). A study by Paramartha (2017) revealed that an English teacher-made test could hardly discriminate among students with different levels. This study emphasized the urgency to continuously evaluate teacher-made multiple-choice tests according to the two indices: item facility and item discrimination.

Another way to construct good multiple-choice questions is by following the guidelines or strategies revealed by some experts. The research topic about teacher perception of MCQs has not been deepened much. Haladyna and Rodriguez are some of the most popular experts in MCQs-making theory. Their book *Developing and Validating Test Items* reveals several guidelines teachers can use to construct good MCQs. In this current research, teacher opinions about using those strategies will be examined. Furthermore, there are three main topics to investigate the teacher opinion: 1) the advantages and disadvantages perceived by teachers in using multiple-choice questions, 2) the challenges encountered and strategies employed to construct multiple-choice questions, 3) the use of multiple-choice questions in summative tests in comparison to other types of questions.

Many researchers have conducted several studies on item analysis of

Multiple-Choice Questions (MCQs). One of them is Hartati (2019) who investigated Item Analysis for a Better Quality Test. The next is Maharani (2020) who explored the Item Analysis of the English Final Semester Test. The last is Sariay (2017) who investigated teachers' and students' perceptions of multiple-choice and open-ended questions, along with the GCSE system. Despite the relevancy, the current research differs from previous research in terms of focus and approach. While the first and second previous studies focused only on the item facility, item discrimination, and distractor efficiency of the multiple-choice questions (MCQs), the current research also focuses on the English opinion about the use of multiple-choice questions (MCQs) in the summative test. While the last previous study topic is wider to the teacher's and students' opinion about multiple-choice questions and open-ended questions, the current research only focus on the teacher opinion about multiple-choice questions (MCQs).

B. Research Questions

The problem stated in the background raises the following research questions:

- 1) What are the item facility (IF) and item discrimination (ID) of the multiple-choice questions (MCQs) made by English teachers in junior high schools?
- 2) What are the opinions of junior high school English teachers concerning multiple-choice questions in summative tests?

C. Research Purposes

From the background and research questions mentioned before, here are the purposes of this current research:

- 1) To identify the item facility (IF) and item discrimination (ID) of the multiple-choice questions (MCQs) made by English teachers in junior high schools.
- 2) To describe the opinions of junior high school English teachers concerning multiple-choice questions in summative tests.

D. Research Significance

Theoretical and practical advantages are supposed to arise from this current research. In terms of theoretical advantage, the research findings can be utilized as an additional source of how crucial it is to choose the appropriate item before handing it to students for evaluation. Aside from that, in terms of practical advantage, this research finding can help teachers rely more on utilizing item analysis while constructing multiple-choice questions. Moreover, educational policymakers can use the findings of this research to create better policies for education development in Indonesia.

E. Research Framework

A multiple-choice questions test offers many benefits to the teacher. First, it is designed by teachers who consider the local needs of their classrooms so that the test outcomes are closely tied to classroom-specific objectives and specific class conditions. Second, it is efficient since the grading process is easy. The overworked teacher can utilize the simple and reliable scoring technique offered by multiple-choice question tests (Brown, 2010, p. 55). Apart from its benefits, using multiple-choice questions can be challenging. As stated by Hughes (2003, p.77), one of the issues with multiple-choice questions is that it is extremely challenging to generate excellent items.

To achieve successful items in multiple choice question tests, teachers should use an analysis called item analysis. Finding efficient and excellent test items to apply in evaluations is done through item analysis. Brown and Hudson (2002, p. 22) mention that item analysis is the process of differentiating between good and bad items and improving their quality for further use. Musial et al. (2009) revealed item analysis as a sequence of processes for assessing the value of the test items. Brown (2010) states that reviewing items according to the following three categories: item facility, item discrimination, and distractor analysis will help teachers choose and arrange the proper multiple-choice questions on an examination (p. 55). Because this is an essential stage in effective multiple-choice test preparation, very teacher in the classroom who

gives students a multiple-choice test is urged to evaluate each question item. (Oller, 1979, p. 245).

Item facility is used to determine whether an item is easy or difficult. A good question's difficulty level should fall into the moderate range. It is neither easy nor difficult but may still be used to gauge a student's aptitude and reveal how well they grasp the information being assessed (Gamage, Ayres, Behrend, & Smith, 2019). The function of item discrimination is determining whether an item can differentiate high-low test taker ability (Brown, 2010). The ability of students to understand the subject given was correlated with the items' higher discriminating index. The chance that students will respond correctly will increase as they learn and comprehend the material being taught. Items that cannot distinguish students by ability are due to various factors, including inappropriate answer key questions, items with multiple correct answers, unclear competence measurements, and an option that does not work. According to Koretsky, Brooks, and Higgins (2016), the flawed item is the one that is too difficult or that students are familiar with. The function of distractor efficiency is determining whether an item has a value in a test. Hughes (2003, p.228) asserts that ineffective distractors, that is, those selected by a small percentage of students, have no significance on test reliability. Better distractions should be used in their place, or the item should be changed or removed altogether.

Aside from using item analysis, another way that the teachers can do to construct good MCQs is by employing several strategies suggested by Haladyna and Rodriguez (2013). They identify several guidelines to make MCQs such as content concern, formatting concern, style concern, how to write a suitable and appropriate stem, and some do and do not in writing the choice of multiple-choice questions.

There is a positive relation between whether teachers used the item analysis or not with their opinion about using multiple-choice questions (MCQs) in the summative test. Teachers are more likely to perceive MCQs as suitable, effective, and appropriate for summative assessments when the MCQs have a

high item facility and high item discrimination. This is because teachers believe that MCQs with a high item facility are more likely to be fair and reliable assessments for students and MCQs with a high item discrimination are more likely to be able to identify students who have mastered the learning objectives accurately. In this current research, a question was asked to determine whether the teachers use the item analysis. Moreover, the other questions were asked to determine several aspects: a) the advantages and disadvantages perceived by teachers in using multiple-choice questions, b) the challenges encountered by the teachers and strategies they employed to construct multiple-choice questions, and c) the use of multiple-choice questions in summative tests compared to other types of questions.

F. Previous Studies

Numerous researchers have conducted studies on the item analysis of multiple-choice questions (MCQs). The first research by Hartati (2019) who investigated item analysis for a better-quality test. This study was undertaken in East Java. The result demonstrates that the ratio of easy to difficult items on the summative test is 19:25:6, but it should be 1:2:1 for easy, medium, and difficult. There are 3, 13, and 16 levels of discriminating power for excellent, good, and satisfactory levels, however, there are 17 and 2 levels for poor and bad levels. A total of 43 (21.5%) of the distractors are dysfunctional, which causes the items to be too simple and reduces their ability to distinguish between students in the top and lower groups. Its difference with this current research is the topic. While the first previous study focuses only on the IF, ID, and DE of the multiple-choice questions (MCQs), the current research also focuses on the English teachers' challenges in making the MCQs.

The second researcher, Maharani (2020), explores item analysis of the english final semester test. This study was carried out in Ponorogo. The results showed that the test's easy, medium, and difficult item proportions are poorly balanced. The test included 39 excellent items in the item discrimination (97.5%), which means that it could distinguish between high and low

achievers. Furthermore, there were 32 items (80%) with valuable distractors. Similar to the previous research above, this research is different from the current research in term of focusses. This research limits its focus to only identifying the IF, ID, and DE of the multiple-choice questions (MCQs).

The other one is Ma'rifah (2021) who discussed an item analysis of English test during online learning. In order to perform this study, a quantitative methodology was used at vocational high schools in East Lampung. The data is from a student's examination worksheet. The research indicates that the majority of the items (52%) fall into the difficult category, followed by the intermediate category (34%) and the easy category (14%). In item discrimination, none of the things are seen as very good; some are accepted but require adjustment, while others are rejected. The distractors were determined to have 38 effective items and the others to have no impact. The difference between the current research and this study is that the current research uses a qualitative approach while this study uses a quantitative approach.

The last one is Sariay (2017) who investigated teachers' and students' perceptions of multiple-choice and open-ended questions, along with the GCSE system. The study examines: (1) the experience of the participants; (2) issues they encounter; (3) factors influencing the teaching and learning process; (4) assessment strategies. A qualitative approach was employed. The results confirm that the secondary school teachers employed multiple-choice questions to retrieve and monitor acquired knowledge, in order to promote students' understanding in a variety of subjects. They also put questions to students in a multiple-choice format (which requires pupils to recall knowledge from pervious lessons), as this is considered to enhance the sustainability of knowledge. However, the students did not view multiple-choice questions as a good indication of true knowledge, unless they were capable of challenging examinees. The difference between this study and this current research is the topic. While the previous study focusses on the teacher and students opinion of MCQs and essay, this current study focus on item facility, item discrimination, and teachers' opinion about MCQs.



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