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## The Need for Instrument Development to Measure Teachers' Efficacy in Implementing Classroom Assessment

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### Abstract

This study aims to discuss the need for instrument development to measure teachers' efficacy in implementing classroom assessment. This study found three conditions for developing teachers' efficacy instrument: to determine teachers' efficacy in implementing classroom assessment, plan teachers' professional development training, and no specific instrument to measure teachers' efficacy in implementing classroom assessment. Therefore, to measure teachers' efficacy in implementing classroom assessment, a comprehensive and up-to-date instrument with higher validity and reliability needs to be developed using the Rasch Measurement Model.

**Keywords:** Classroom Assessment, Teachers' Efficacy, Instrument, Validity, Reliability, Rasch Measurement Model

### Introduction

Assessment is an essential process to identify students' learning development. Along with the desire to change the focus of learning from examination-oriented to focus on students' learning development, classroom assessment is implemented in all primary schools in Malaysia starting from 2019 (Curriculum Development Division, 2018). However, the implementation of classroom assessment was done inaccurately and deviated from its original purpose (Isa et al., 2020; Box et al., 2015; Salleh et al., 2019; Noh et al., 2020). That problem arises because, there are some problems experienced by teachers while performing classroom assessment such as lack of confidence in practising assessment skills, unable to provide useful feedback and time constraints to diversify assessment strategies to meet the diverse abilities of students (Dorin & Yasin, 2019; Salleh et al., 2019; Jusoh & Mahamod, 2019). These factors reflect the low of teachers' efficacy in implementing classroom assessment.

Teachers' efficacy can influence teachers' confidence in performing a task, including assessing students' task. Therefore, the teachers must identify their efficacy so that teachers can overcome existing weaknesses. To determine the level of teachers' efficacy, an instrument that meets the validity and reliability requirements needs to be developed.

Therefore, the purpose of this paper is to identify the need to develop an instrument that can measure teachers' efficacy in implementing classroom assessment.

## **Literature Review**

The researchers conducted a literature review to provide a clear picture of the concepts discussed in this article. This section will explain the literature review related to classroom assessment, teachers' efficacy and instrument.

### **i. Classroom Assessment**

Assessment is a process performed by teachers to obtain information to conclude students' learning development decisions. Teachers can use information obtained through the assessment to plan further learning according to students' needs (Brookhart, 2003; Fives & Barnes, 2020). Besides, the assessment results are also essential to determine the effectiveness of teachers' teaching. Therefore, the assessment must be done continuously in the classroom under the teacher's supervision (Ghazali et al., 2018), and it is known as Classroom Assessment.

Most researchers conceptualize classroom assessment as a process implemented by teachers to collect, synthesize, interpret, and use it to make decisions related to students' learning performance and teachers' teaching performance (Brookhart, 1997; Fives & Barnes, 2020; Russell & Airasian, 2012). The information obtained during the classroom assessment process is crucial to help teachers improve students' learning mastery. This concept is also applied in the implementation of classroom assessment in Malaysia, as explained in the Classroom Assessment Implementation Handbook (Curriculum Development Division, 2019).

Classroom assessment is the most effective type of measurement in influencing students' learning and motivation (Fives & Barnes, 2020; McMillan, 2018). Therefore, teachers need to have motivation and ability in implementing classroom assessment (Bruun & Evans, 2020). Thus, self-efficacy becomes an important aspect that can help teachers increase their confidence to implement classroom assessment effectively and accurately.

### **ii. Teachers' Efficacy**

Teachers' efficacy in implementing classroom assessment refers to teachers' confidence in planning, organizing, and carrying out assessment-related activities (Hartell, 2018), which coincides with the concept of self-efficacy by Bandura (1997). According to Bandura (1997), teachers' efficacy is the teacher's confidence in performing tasks successfully. In implementing classroom assessment, teachers need to have the confidence in implementing the assessment process by meeting the standards set out in the Curriculum and Assessment Standards Document.

Self-efficacy will guide and motivate teachers' actions based on their belief in their ability to implement the assessment process and continue educational activities, influencing students' learning (Hartell, 2018). Studies related to teachers' efficacy in implementing classroom assessment are rarely done (Green, 2019) compared to teachers' efficacy studies in other aspects such as teaching, leadership, job satisfaction and emotional intelligence. Therefore, the study's proposed implementation in this aspect, especially the development

of an instrument, should be done to measure the extent of teachers' efficacy in carrying out classroom assessment.

### **iii. Instrument**

Teachers' efficacy instruments in implementing classroom assessments were developed to be administered by teachers and school administrators to identify the extent to which teachers' efficacy in implementing classroom assessment. This instrument will help teachers and school administrators to identify problems encountered in implementing the classroom assessment process. In Illinois, teachers' assessment efficacy instrument is provided to identify teachers' difficulties in implementing classroom assessment to enable professionalism development programs to be implemented to improve teachers' efficacy (Wolfe et al., 2007).

The instrument acts as a measuring tool to determine the teacher's efficacy where a teacher's efficacy will indicate the extent of the teacher's ability to perform classroom assessment. Researchers identify the requirement to develop an instrument with a valid and reliable instrument to detect teachers' problems in implementing classroom assessment. Existing problems reflect the inability of teachers to perform classroom assessment and need to be addressed. In this study, the instrument is defined as a measurement tool for teachers and school administrators to assess teachers' efficacy in conducting classroom assessment.

### **Methodology**

In particular, this study is an overview of the need to develop an instrument to measure teachers' efficacy in implementing classroom assessment. This study aims to identify the need for instrument development to measure teachers' efficacy in implementing classroom assessment. This study does not involve respondents, and the researchers will discuss the study's findings based on the literature review.

### **Findings**

The findings of this study indicate that all teachers do not readily accept changes in assessment practices. Difficult in getting change is associated with low self-efficacy, which can hinder classroom assessment effectiveness (Green, 2019). Therefore, the need to develop an instrument that can measure teachers' efficacy in implementing classroom assessments are as follows:

#### **i. To identify teachers' efficacy**

Teachers' efficacy is vital in the process of implementing classroom assessment. Teachers with high self-efficacy will do better planning in implementing classroom assessment (McMillan, 2013) to meet students' needs. In the context of the definition, teachers' efficacy refers to teachers' beliefs in their ability to perform tasks such as completing the assessment process to determine students' learning development (Bandura, 1997; Green, 2019; Vivian & Falkner, 2018). Teachers' efficacy also refers to the teacher's ability to improve students' achievement according to set standards (Bandura, 1997; Green, 2019) to ensure that teachers can accurately identify students' learning development. Therefore, teachers' efficacy must be determined either through self-assessment or assessed by school administrators using a reliable and valid instrument. Identifying teachers' efficacy is essential to enable teachers to identify their self-efficacy level and then change their behaviour to successfully implement classroom assessment.

### **To plan teachers' professional development training**

Identifying teachers' efficacy in implementing classroom assessment is like analyzing teachers' strengths and weaknesses in implementing classroom assessment. The information obtained will provide adequate information for school administrators to plan specific training to improve teachers' professionalism, especially in the assessment aspect. If an instrument can analyze which parts teachers can't do in a classroom assessment process, educational administrators must plan training. Information from instrument data analysis will help school administrators to plan beneficial programs as has been done in foreign countries such as Illinois (Wolfe et al., 2007) and Europe (Bruun & Evans, 2020).

#### **ii. No specific instrument**

Previous researchers have indeed done studies related to self-efficacy a lot. However, most studies focus more on teachers' efficacy in teaching practice, job satisfaction, leadership, training and willingness to change. Most previous studies also only adapted the Teacher Self Efficacy Scale (TSES) instrument developed by Tschannen-Moran and Hoy (2001) in their research. The difficulty in finding instruments that directly measure teachers' efficacy in implementing classroom assessment indicates the need to develop an instrument that can measure teachers' efficacy in implementing classroom assessment. Teachers' efficacy in implementing classroom assessment is essential because self-efficacy is an obstacle to assessing assessment practices (Green, 2019). Thus, there is a need to develop teachers' efficacy instrument by focusing on teachers' efficacy in implementing classroom assessment.

Hence, the development of specific teachers' efficacy instrument to determine teachers' efficacy in implementing classroom assessment will help future researchers determine the level of teachers' efficacy and a guide and reference for other researchers in this field. Besides, this study also contributes to more systematic documentation that involves planning and developing an instrument.

### **Discussion**

Researchers have found no specific instruments to measure teachers' efficacy in implementing classroom assessment in the Malaysian context. Therefore, an instrument that meets the validity and reliability aspects needs to be developed so that teachers can identify their efficacy in implementing the assessment process to take follow-up action.

Teachers' efficacy reflects the confidence of teachers in implementing classroom assessments. Teachers' efficacy is required at all classroom assessment stages, specifically during the assessment process's planning and implementation stage. High level of teachers' efficacy in planning classroom assessments helps teachers overcome difficulties in planning classroom assessments. It involves taking into account aspects of student skills (Adhikari, 2020; Yan & Cheng, 2015) so that assessment tasks are designed to suit students' abilities and meet standard practices.

Similarly, at the implementation stage, teachers' efficacy is needed to increase teachers' confidence in diversifying assessment methods appropriate to students' needs without neglecting the standards set out in the Curriculum and Assessment Standard Document. Teachers' ability to diversify assessment methods is important to encourage

interaction during the assessment process to enable teachers to identify students' strengths and weaknesses as a source to develop students' potential (Black & Wiliam, 2009).

Therefore, teachers' efficacy in implementing classroom assessment should be taken into account so that the implementation of classroom assessment runs as intended by the Ministry of Education Malaysia. Having high self-efficacy will encourage teachers to effectively assess students and contribute quality to our country's education.

### **Conclusion And Recommendation**

Teachers' efficacy instrument that meets the validity and high-reliability aspects should be developed to measure teachers' efficacy in implementing classroom assessment. Rasch measurement model should be used to develop an instrument that meets the validity and reliability aspects

The Rasch measurement model is a probability model designed to answer questions about an individual's ability to answer items with specific difficulty parameters and the probability that they will answer the item correctly (Bond & Fox, 2015; Mokhsein, 2018). This probability increases in line with the values of some other item parameters such as difficulty parameters, discrimination parameters, and guess parameters through the Rasch measurement model.

Also, only Rasch measurement models can solve problems such as producing linear measurements, can use all types of data, detect errors or outliers and provide separate or independent measurement instruments for observed object parameters (Aziz et al., 2015). Not only that, but the Rasch measurement model is also capable of detecting model inaccuracies and producing repeated measurements.

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