The Effectiveness of Classroom-Based Assessment Implementation by Teachers at Secondary Schools in Johor

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ABSTRACT

The readiness of capable and knowledgeable teachers is a key issue in the implementation of Classroom-Based Assessment (PBD). This study aims to examine the effectiveness of implementing Classroom-Based Assessment (PBD) through teachers' understanding of the PBD implementation process, their knowledge of PBD implementation methods, and the practices of PBD implementation, as well as the challenges encountered in implementing PBD in schools. This study uses a qualitative approach. The purposive sampling technique was employed, utilizing semi-structured interviews and a literature review approach that incorporated journals, e-books, articles, the internet, and academic books. A total of four (4) teachers who teach Form 5 at a secondary school in Johor were selected as study respondents. The data obtained were manually analyzed using thematic analysis. The study results indicate that the process of implementing PBD, as practiced, knowledge of PBD implementation methods, PBD implementation practices, and challenges in implementing PBD in schools affect the effectiveness of PBD implementation.

Keywords: Classroom-Based Assessment, Implementation Process, Teacher Knowledge, Implementation Methods, Implementation Practices, Implementation Challenges

INTRODUCTION

Classroom-Based Assessment (PBD) is the process of collecting information about student achievement and the effectiveness of teaching in the classroom. Effective PBD helps teachers and school administration understand the extent to which students comprehend the teaching materials provided by the teacher and assists students in identifying weaknesses in their learning. Teachers implement PBD by administering, assessing, scoring appropriately, and recording the overall achievements of students at the school level (Mahamod et al., 2010).

This study emphasizes the importance of understanding the process of implementing Classroom Assessment (PBD) carried out in schools, such as planning and executing Teaching and Learning in the Classroom (PdPc) and assessment methods, where teachers record and analyze students' mastery. If a student is weak in a particular subject, the teacher needs to take follow-up actions to improve the student's learning mastery. Teachers need to report the overall mastery level of the students. In addition, teachers' knowledge of the implementation methods of PBD is also being studied. Juan et al (2023) emphasize that an effective

implementation method of PBD will impact student performance towards excellence (Mengistie, 2020). Teachers equip themselves with knowledge about appropriate PdPc methods by attending PBD courses or workshops provided by the school.

Next, the practice of implementing PBD among teachers and students also needs to be emphasized to ensure its effectiveness (Arumugham, 2020). The practice of implementation refers to activities that can uncover and develop students' potential. The PBD practices implemented include project-based learning planning that encourages teachers to use self-assessment methods and student feedback, thereby maturing students in terms of knowledge, enabling them to compete on the global stage and meet the needs of Industry Revolution 4.0. Finally, the challenges that teachers must face in implementing PBD are also evaluated. Through Daman's (2022) study on the challenges of implementing PBD, among them are the readiness level of teachers in implementing PBD, negative feedback from teachers, parents, students, and also bodies related to education in Malaysia regarding the implementation of PBD, as well as doubts about the effectiveness of implementing PBD as a replacement for examination tests.

Problem Statement

The results of Omar's (2019) study indicate that teachers' understanding of the implementation of PBD is at a moderate and unsatisfactory level, with only 52.60% fully knowledgeable about the PBD implementation process. The group of teachers is still seen as confused and unprepared in implementing PBD. This issue proves the existence of a gap in teachers' understanding of the PBD implementation process, and teachers do not know the steps that need to be followed in the PBD implementation. The second issue refers to Roslan's (2023) study, which indicates that there is unfairness in teacher assessments when using the PBD method, specifically that the assessment levels are inconsistent and there are time constraints in implementing the PBD assessment process. This problem occurs due to the lack of teachers' knowledge regarding the implementation methods of PBD, which can lead to unfairness in student assessments in the classroom. This study was conducted to identify the extent of teachers' knowledge regarding the implementation methods of PBD to enable teachers to conduct assessments effectively.

In addition, previous studies on the implementation of PBD practices were only focused on authentic assessments among primary school teachers (Atan et al., 2020). Additionally, the practice of implementing project-based PBD has attracted more interest from previous researchers. Therefore, this study aims to bridge the existing gap by examining the implementation practices of PBD beyond project-based assessments at the secondary school level. Finally, Idriset (2016) emphasized that the lack of confidence and commitment among teachers is a barrier to the successful implementation of PBD in schools. The Classroom Research and Assessment Unit in 2021 found that the challenges of implementing PBD were widely discussed at the primary school level, such as time constraints, teachers' skills in implementing PBD, and the workload of teachers, which caused some teachers to give up on implementing PBD. Therefore, this study will expand the research on the implementation practices of PBD at the secondary school level.

Overall, this study examines the effectiveness of the implementation of PBD at the secondary school level and focuses on teachers' understanding of the PBD implementation process, teachers' knowledge of PBD implementation methods, PBD implementation practices, and the challenges of PBD implementation in schools.

Research Objectives

This study was conducted based on the following research objectives:

1. Identifying the implementation process of PBD that can be used in schools.
2. Investigate the extent of teachers' knowledge about the implementation methods of PBD in schools.
3. Identifying the practices of implementing PBD in schools.
4. Examining the challenges in the implementation of PBD in schools.

Research Questions

The research questions constructed based on the proposed research objectives are as follows:

1. What are the implementation processes of PBD that can be used in schools?
2. To what extent do teachers understand the methods of implementing PBD in schools?
3. What practices of implementing PBD are used in schools?
4. What are the challenges in implementing PBD in schools?

Scope of Study

This study focuses on secondary school teachers at a Secondary School in Johor. This study uses secondary source methods, specifically the literature method, by referring to journals, e-books, articles, the internet, and academic books. Interviews were also conducted at the school to support the research findings or discussion. To study the effectiveness of PBD implementation, this research limits the scope of the study to several factors affecting the effectiveness of PBD implementation, namely the PBD implementation process, teachers' knowledge of PBD implementation methods, PBD implementation practices, and the challenges faced in implementing PBD in schools.

Limitations/ Study Constraints

There are several limitations or constraints of the study during the conduct of this research. The sample of this study consists of only four secondary school teachers in the Masai district, Johor. The small number of respondents, focusing only on teachers of Mathematics, Malay Language, and Geography, prevents the findings of this study from being unable to be generalized to represent all teachers in the state of Johor or Malaysia. In addition, the interview questions that were drafted were too general, causing respondents to lose focus and mix up their answers to the questions given.

LITERATURE REVIEW

Definition and Concept of Study Variables

Classroom-Based Assessment (PBD)

Roslan (2023) defines the concept of PBD as a process of gathering information and forming judgments about a student's educational progress. KPM defines PBD as a continuous assessment during the PdPc sessions to obtain information about students' development, progress, abilities, and achievements. PBD can be used formative and summative, as well as assessment for learning, assessment as learning, and assessment of learning.

Faudzi & Ahmad (2019) define PBD as an assessment method that focuses on the authentic and holistic development and learning of students, moving away from an examination-oriented approach. Teachers can assess students comprehensively, considering the cognitive, psychomotor, affective, and social aspects of the students. This assessment is in line with the National Education Philosophy, which emphasizes physical, mental, and spiritual education. PBD is also implemented in the curriculum through various assignments and activities such as projects, quizzes, and presentations, all of which are assessed based on specific performance standards and teacher expertise.

According to Atan, Mohamad, and Yaacob (2020) in their study, the concept of PBD focuses on the use of assessment as a tool for learning and understanding. PBD is not intended to compare students' mastery levels but rather to detect students' progress and help improve teachers' instruction. KPM emphasizes the importance of PdPc in building and shaping students' character. Teachers are responsible for assessing and recording students' achievements. The goal of the PBD assessment is to produce progressive, competitive, innovative, and creative individuals who contribute to the development of the nation (Omar, 2019).

The Process of Implementing PBD in Schools

Implementation involves follow-up actions on programs or policies to ensure they successfully achieve their objectives (Mofu & Waray, 2021). This study examines the implementation process of PBD in secondary schools. Previous studies have limitedly discussed the process of implementing PBD and have focused more on the methods of implementing PBD (Atan, Mohamad & Yaacob, 2020; Hanapi, Zakaria & Muner, 2021; Gegantharan & Rahmat, 2019). The study by Saliman & Mahamod (2023) found that teachers in schools follow a specific process when planning assessments, which includes content selection, assessment method selection, and determining follow-up actions.

The Curriculum Development Division in 2018 also emphasized the important role of teachers in implementing the approach through the PBD implementation process, which involves setting learning objectives based on assessed learning standards, planning, constructing instruments, and conducting assessments, recording assessment results, analyzing assessment information, reporting, and taking follow-up actions. Considering the lack of research on the implementation process of PBD, this study takes the initiative to evaluate from the teachers' perspective regarding the implementation process of PBD in secondary schools.

Teacher Knowledge on The Implementation Methods of PBD in Schools

Atan, Mohamad & Yaacob (2020) define a teacher knowledgeable about the assessments used in schools as a teacher who can effectively use principles, procedures, strategies, and methods of assessment to help students learn and make fair decisions about student progress, the curriculum, and the overall educational program.

Implementing PBD without proper knowledge can hinder student development (Hanapi, Zakaria & Muner, 2021). The study by Gegantharan & Rahmat (2019) suggests that teachers need a health education assessment model to assist in implementing PBD, as teachers lack knowledge in constructing assessment items for this approach. Most teachers rely on existing questions or examples, which are deemed inappropriate. This issue is important to address because the implementation of PBD involves various parties.

Teachers' knowledge of PBD implementation methods includes three different PBD implementation methods such as observation, writing, and oral assessment (Roslan, 2023). According to Atan, Mohamad & Yaacob (2020), the assessment method frequently used by teachers is oral assessment. The study also found that primary school teachers frequently use oral assessments during teaching and learning in the classroom. According to the Ministry of Education Malaysia in 2019, teachers should use various assessment techniques such as observation, oral, and written assessments to ensure effective teaching and learning in the classroom.

Implementation Practices of PBD in Schools

Bashiron & Razak (2022) state that the level of PBD practice in primary schools is at a high level. Through this study, teachers were seen to strongly agree with the practice of implementing PBD, where teachers use student PBD performance feedback to improve their teaching. Next, it is followed by the practice of discussing with other teachers about the implementation of PBD, and the PBD Main Committee at the school plays a significant role in providing exposure and training to enhance understanding for implementing PBD. In addition, the practice of attending briefings related to PBD organized by the Committee, school, District Education Office (PPD), and State Education Department (JPN) is also implemented, and teachers provide opportunities for students to interact in the classroom.

However, the findings of the study by Faudzi and Ahmad (2022) found that not many teachers are prepared to implement PBD because they do not have the opportunity to learn the techniques and practices of PBD

implementation correctly. Therefore, further research is needed to understand the practices of implementing PBD carried out in schools, especially in secondary schools.

Challenges of Implementing PBD in Schools

Bashiron & Razak (2022) found that primary school teachers almost agreed with the challenges of PBD. The challenges, especially those involving the burden on teachers, need to be addressed by the administrators and the Ministry of Education (KPM) to facilitate the implementation of the Classroom-Based Assessment (PBD). The burden on teachers referred to is related to tasks beyond teaching; teachers also bear administrative duties and other positions. In addition, teachers agree with the challenge of students transferring to a new school without bringing their PBD records from the old school. Additionally, teachers also face time constraints in assessing PBD. This finding is also supported by Naim & Rohaya (2014), who noted that teachers spend a lot of time on assessment tasks, including preparing instruments, recording, and organizing data. The study by Ahmad & Mahamod (2015) also highlighted issues in the implementation of PBD, such as workload, difficulties in data entry, and limited assessment periods. In addition, some teachers still lack understanding of how to conduct assessments effectively (Jamaludin & Rashed, 2020).

Teachers also face challenges in implementing PBD due to a lack of confidence in producing reports using the PBD format and viewing report preparation as burdensome. Additionally, inefficient coordination in schools, lack of knowledge and experience, difficulty in obtaining relevant materials and resources, and time constraints further complicate the implementation of PBD. Therefore, a comprehensive approach is needed to address these issues and take corrective steps in implementing PBD in schools (Hanapi et al. 2022). This study will measure the challenges of implementing PBD in secondary schools because there has been insufficient discussion on the challenges of implementing PBD at the secondary school level.

Framework of Study

The dependent variable being studied is the effectiveness of PBD implementation. The independent variables are the process of PBD implementation, teachers' knowledge of PBD implementation methods, PBD implementation practices, and the challenges of PBD implementation in schools. The research framework has been constructed as shown in Fig. 1.
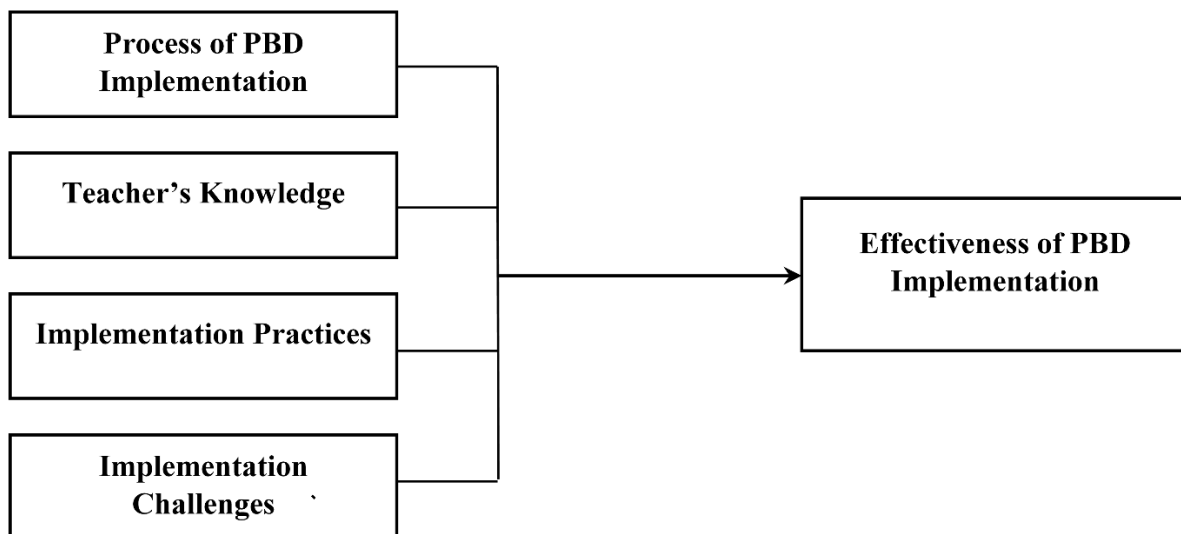

Fig. 1 Research Framework

Theoretical Background

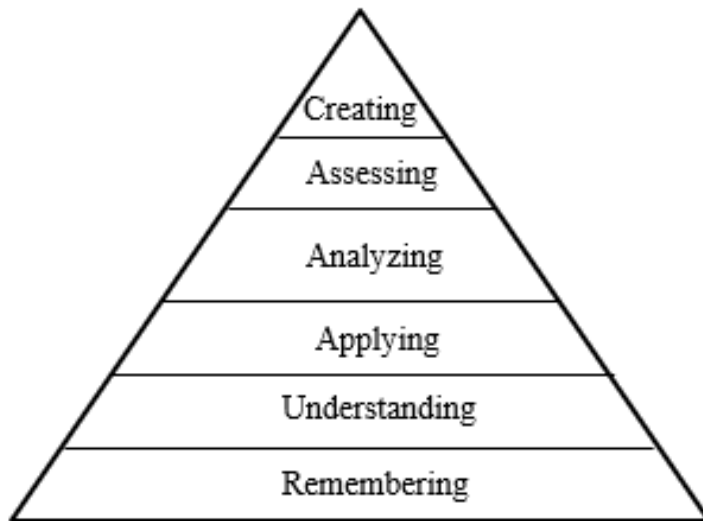**Theory of learning assessment (Revised Bloom's Taxonomy) (Krathwohl, 2002)**

Fig. 2 Revised Bloom Taxonomy (Krathwohl, 2002)

The original pioneers of Bloom's Taxonomy, proposed by Bloom & Krathwohl in 1956, introduced the idea of a framework of thinking levels that illustrate the thinking process from lower to higher levels. However, Krathwohl (2002) revised Bloom's Taxonomy to consider the changes of the times, placing the level of creating at the highest hierarchy, replacing the evaluating level in the original Bloom's Taxonomy. There are six (6) categories of cognitive levels in this domain, namely remembering, understanding, applying, analyzing, evaluating, and creating. For the component of creating, students need to analyze and combine components to produce a new product, which is the most challenging cognitive task (Wilson, 2018).

After the teacher masters the concepts suggested in the Revised Bloom's Taxonomy as written by Krathwohl (2002), the teacher can also understand how to implement this Bloom's Taxonomy in the planning and execution of PBD through the PdPc process (Azman, Zulkifli & Tamuri, 2023).

Assessment Model (CIPP Evaluation Model Framework)

Fig. 3 CIPP Evaluation Model Framework (Adapted from Stufflebeam et al. (1971) in Mustafa and Yakob, 2021)

The CIPP evaluation model framework has been used by previous researchers for this study. According to this model, there are four (4) dimensions of evaluation, namely context evaluation, input evaluation, process evaluation, and output evaluation. All four dimensions can provide a comprehensive perspective on the educational program (Mustafa & Yakob, 2021). Therefore, the evaluation can be conducted in an organized and systematic manner to meet the assessment standards. The focus of the program is known as the context dimension. In addition, the input dimension refers to strategies for implementing the program. Curriculum planning, learning content, and assessment planning are examples. In addition, the process dimension encompasses actions, such as the learning process, assessment, and teaching and learning activities. Finally, the product aspect is related to the outcomes and effectiveness of the program. Generally, the CIPP evaluation model is used to produce better programs. This guide is designed to assist researchers in examining how to implement the scoring of Proficiency Levels (PL) for listening and speaking skills among teachers (Mohamad et al., 2023).

Empirical Research

Tables I, II, III, and IV are as in Appendix 1. A total of three (3) past studies have been listed in Table 1 to explain the relationship between teachers' understanding of the PBD process and the implementation of PBD in schools. All three of these research findings show a positive correlation between teachers' understanding of the PBD process and the implementation of PBD in schools. All the listed studies were conducted within the country. Two (2) studies were conducted in primary schools (Said et al., 2022 & Villasamy et al., 2023) and one (1) past study was conducted in both primary and secondary schools (Salleh et al., 2019).

Five (5) previous studies describe the relationship between teacher knowledge and the implementation of PBD in schools in Table 2. All the findings of the studies show a positive correlation between teachers' knowledge and the implementation of PBD. The studies listed were conducted within the country, specifically in the states of Selangor, Pahang, Sabah, and Sarawak. There are two (2) studies conducted in primary schools (Juan et al., 2023; Ambotang et al., 2021), one (1) study in secondary schools (Jaafar, 2023), one (1) study in rural schools (Omar, 2019), and one (1) study in both primary and secondary schools (Hanapi et al., 2021).

Three (3) previous studies describe the relationship between implementation practices and the implementation of PBD in schools in Table 3. All previous studies show a positive correlation between implementation practices and the implementation of PBD in schools. All three (3) previous studies were conducted within the country, namely in the Hulu Langat district, Selangor, the Gombak district, Selangor, and the Kota Tinggi district, Johor. Two (2) previous studies were conducted in primary schools (Long & Osman, 2019; Marnizam & Ali, 2021), while one (1) previous study was conducted in a secondary school (Rozana, 2023).

The relationship between the challenges of implementation and the implementation of PBD in schools, obtained from five (5) previous studies in Table 4, shows a positive correlation. All the studies were conducted within the country, and most of them were carried out in primary schools (Manap & Sheikh, 2020; Ministry of Education Malaysia, 2019; Marnizam & Ali, 2021). The study by Daman (2022) was conducted online, while the study by Omar (2019) was conducted in rural schools.

METHODOLOGY

Research Design

This study organizes the research methodology through three (3) approaches, namely, research design, data collection methods, and data analysis methods (Roslan, 2023). This study uses an interpretive philosophy to explain the implementation process, methods, practices, and challenges of PBD to Form 5 teachers through the implementation of qualitative methodology, which will help researchers gain an in-depth understanding of the subject being studied and assist in understanding the scenario of the subject being studied from various participant perspectives (Braun et al., 2019).

Population

The population in this study is a group of teachers who generally provide PBD scores, consisting of Form 5 teachers from secondary school in Masai, Johor.

Sampling

The purposive sampling technique is used based on the researcher's consideration to select the most useful and appropriate sample that meets the study's requirements (Babbie, 2002). The researcher chose to use purposive sampling techniques based on three (3) criteria: first, teaching experience of more than 10 years; second, grade; and third, the highest academic qualification at the Bachelor's degree level. The researcher also used the snowball sampling technique, where the study respondents were asked to suggest suitable respondents for the study (Yusof et al., 2019).

Data Collection Methods

The chosen data collection methods are semi-structured interview techniques, document content analysis, and thematic analysis. The purpose of combining these data collection methods is to achieve a sufficient level of data validity to meet the study's objectives and questions. The researcher conducted semi-structured interviews with four (4) teachers directly involved in the implementation of PBD for Form 5 secondary school, which are expected to provide detailed and in-depth information.

The interview sessions were conducted face-to-face. Each respondent was called for an interview three (3) times to ensure the consistency and validity of the information provided was accurate. The researcher will provide explanations for questions that the respondents do not understand. The interview was recorded and stored in the form of a transcript. Two (2) types of data are used in this study: primary and secondary data. Primary data refers to interview data obtained from the conducted interview sessions, while secondary data is obtained from books, articles, and journals. Then, for data analysis, the document content analysis technique is used again, and the results will be categorized according to the thematic method.

Semi-Structured Interview

Semi-structured interviews were conducted based on the respondent profiles in Table 1.

TABLE I RESPONDENT PROFILES

	Respondent 1	Respondent 2	Respondent 3	Respondent 4
Gender	Female	Female	Female	Female
Subject Taught	Mathematics	Malay Language	Mathematics	Geography
Teaching Experience	16 years	10 years	14 years	12 years
Grade	DG 44	DG 42	DG 43	DG 42
Highest Academic Qualification	Bachelor's Degree in Mathematics	Bachelor's Degree in Malay Language	Bachelor's Degree in Mathematics	Bachelor's Degree in Sport Science

In-Depth Interview

This method requires researchers to conduct detailed interviews based on the established guidelines. Every point mentioned by the respondent is important data. Relevant responses will be recorded word for word and documented (Jasmi, 2021).

Through this method, researchers can gain a comprehensive understanding by delving into the topic of PBD. According to Jasmi (2021), this approach is unique because the number of respondents is smaller. The researcher can provide detailed explanations behind the respondents' answers and longer observations on the feedback given. The researcher chose to conduct an interview analysis because there was no time to carry out a full observation.

Document Content Analysis Method

Document analysis is a subset of research data collection methods derived from content analysis, which is an objective description of printed, broadcasted, or depicted communication messages. According to Jasmi (2021), the message can be heard, obtained, and seen by referring to the content of the text in terms of words, meanings, images, symbols, ideas, or themes of the communicated message.

PBD for Form 5 in secondary school is the subject being studied, and data can be obtained by conducting document analysis. Information is readily available and difficult to fabricate; the document analysis method is the easiest to implement, referring to journals, syllabi and teaching outlines, daily lesson plans, and textbooks.

Examples of analysis material documents include data documents, guidelines set by KPM, study program files accessible online, study curricula, infrastructure, and technology. All documents used by researchers must be reviewed and reported in a single report, and if they are difficult to copy, copies must be included.

Thematic Analysis Method

This thematic analysis begins with data analysis, followed by the coding construction phase, and concludes with the data presentation section in the form of matrices or tables, networks, concept maps, flowcharts, and diagrams to facilitate readers in examining the research findings obtained (Mokhtar, Yaakub & Hamzah, 2018).

Thematic analysis is one of the research methods widely used in qualitative research, although it is less commonly used in academia. Nevertheless, this method is highly effective for analyzing patterns and themes in any reference source to further expand the research scope in a specific field of knowledge (Hisham, 2016). The elements focused on as data analyzed by the researcher are the process of implementing PBD, teachers' knowledge of methods for implementing PBD, practices in implementing PBD, and the challenges teachers face in implementing PBD.

FINDING AND DISCUSSION

Discussion of Key Findings

The process of implementing PBD that can be used in schools

According to the Ministry of Education Malaysia (2019), to ensure that student development occurs in a planned and integrated manner, assessments are conducted during the PdPc session or immediately after the PdPc session through a combination of formative and summative assessments.

Furthermore, based on the guidelines issued by the Ministry of Education Malaysia (KPM) through the Implementation Guide for PBD Edition 2 in 2019, the elements of PBD involve assessment for learning,

assessment as learning, and assessment of learning, which include a combination of formative and summative assessments. Through the interview data obtained, all three (3) respondents provided the same answer, with respondents 1 and 2 giving feedback as follows:

"The concept of PBD, which consists of formative and summative assessments, where subject teachers test students in class after each topic has been continuously taught until the end of the learning session." (Respondent 1)

"When this continuous assessment is ongoing, it means their knowledge is continuous, so they are ready for tests or quizzes in the classroom at any time." (Respondent 2)

"PBD is a continuous assessment during teaching and learning sessions to obtain information about students' progress and achievement related to the topic or subtopic taught by the teacher on that day's Ppdc." PBD occurs in both formative and summative ways. (Respondent 4)

Meanwhile, respondent 3 added a statement regarding the concept of PBD, which consists of formative and summative assessments, stating that "it determines learning outcomes based on learning objectives."

Furthermore, based on respondent 1, when an assessment is conducted at the end of a chapter, it is referred to as formative assessment. Meanwhile, if the assessment takes place in the middle of the year, covering several chapters, the assessment is a summative assessment method.

"So, we have two teachers. One, if we can do the end topic, based on the topic, or if we want, we can do the end of the topic, meaning the chapter. We call it formative. It means, okay, I want to do PBD for chapter 3 next week. So, in the PBD, there are questions TP3, TP4, TP5, and so on, right? So, the teacher will mark it. That's what we call formative."

"But when it comes to summative assessments, they involve many chapters. So, he said mid-year and end-of-year. We call that summative. It covers. If it's mid-year, it covers chapters 1 to 5. Ok, we call that summative. That's what we also call assessment. PBD as well, but summative. So, when we align it in class and the summative itself, then we will see it."

This shows that teachers' understanding of the concept and process of implementing PBD is through continuous assessment methods, namely summative and formative. This finding is also supported by previous research by Wilson (2018), which states that the concept of continuous assessment in learning can provide better and clearer information compared to assessments conducted previously.

Teacher's knowledge about methods of implementing PBD in schools

Through the interview findings obtained, it can be seen that the knowledge of all four (4) respondents about the methods of implementing PBD is focused on observation, oral, and written methods. However, the implementation of these methods varies according to the subject being taught, namely Mathematics, Malay Language, and Geography.

The Mathematics subject uses observation, written, and oral assessment methods, referring to the excerpt from respondent 1's interview response.

"Like usual, for Mathematics, I usually use written methods." But sometimes, the teacher can also assess through observation, in groups." and respondent 3,

"We can assess from the exercises, the writing from the exercises, and then the worksheets I provide." If it's an observation of group activities, for example, finance, I ask them to present. If they can elaborate and actively participate in the group, I will consider that as part of their PBD. Okay, then the teacher will ask him orally, and he will answer on the spot."

The Malay Language (Bahasa Melayu, or BM) subject also uses observation, written, and oral assessment methods, referring to the excerpt from respondent 2's interview response.

"If it's like me, because BM uses all three skills, I often use oral, observation, and also writing."

The Geography subject uses only two (2) methods, namely, written and oral assessments. This is seen through the interview response of respondent 4,

"Ordinary oral for the induction of the PdPc topic and TP1 (Know) and TP2 (Know and Understand) in a formative manner (not formal like a Quiz)."

Meanwhile, written assessments use modules or worksheets that are appropriate for the learning objectives and the Daily Lesson Plan (RPH).

In addition, other methods of implementing PBD known by the respondents include through Professional Learning Community (PLC), teachers' proficiency in Standard Curriculum and Assessment Document (DSKP), and methods that align with the Daily Lesson Plan (RPH). This discussion is seen through the excerpt of respondent 4's interview answer,

"Well, through PLC (Professional Learning Community) in the Committee, which is conducted at least once a month for discussions between the Committee Head and subject teachers." The teacher's skill in mastering the DSKP is good. Methods that are appropriate according to the teacher's lesson plan.

In conclusion, teachers have extensive knowledge about the methods of implementing PBD in schools, which include observation, oral, and written methods, PLC methods in committees, mastery of DSKP skills, and methods that are appropriate according to RPH. This study aligns with previous research by Atan, Mohamad & Yaacob (2020), Jamil & Said (2019), and the Ministry of Education Malaysia (2019), which state that the methods frequently used in PBD assessment are through observation, oral, and written means. However, the discovery of new knowledge regarding the implementation methods of PBD, namely through the PLC method in committees, mastery of DSKP skills, and appropriate methods according to RPH, proves that respondents possess a high level of knowledge regarding the implementation methods of PBD in schools, which influences the effectiveness of PBD implementation.

Implementation practices of PBD in schools

Through the interview findings obtained, it can be seen that the practice of implementing PBD in schools refers to the respective subject teachers to ensure that the learning objectives are achieved. The practice of implementing PBD is also seen to differ according to the subject being taught, such as the Malay Language and Geography subjects.
Based on the interview responses from respondent 1, the implementation practice for the Mathematics subject is according to each subject teacher to achieve the objectives, whether those objectives are achieved or not on that day.

"Subject teachers implement PBD according to their respective subjects based on the objectives achieved on that day. All teachers implement PBD. All teachers implement PBD because it is continuous, meaning that every class, the teacher must implement the objectives. This means that when we teach, we want to ensure that our objectives are achieved or not, so in the end, we will give exercises to ensure this."

Meanwhile, respondent 3 quoted in the interview,

"If it were me, my KP is the one who monitors how I teach and all that, looking at my predictions, okay, the objectives I want to achieve on that day, meaning if I want TP3, what I can do to help the students achieve TP3, but at least two (2) objectives a day that I want to achieve."

Next, for the Malay Language subject, it also uses its assessment practices based on the responses from the interview with respondent 2.

"Only that for BM, it will only evaluate three (3) skills, so it doesn't have a chapter, it just follows the theme because for reading, we can repeat it for the next theme, similarly with just language, the concept is understanding."

The Geography subject uses assessment methods such as observation, written, oral, through project work, quizzes, presentations, and other activities based on the responses from the interview with respondent 3.

"PBD is implemented continuously throughout the PdPc process throughout the year." PBD is implemented through various assessment methods such as observation, oral writing through project work, quizzes, presentations, and other learning activities, based on Performance Standards and the professional judgment of teachers. This reporting is done at least twice a year.

Overall, teachers have their ways of implementing PBD assessment practices in schools to achieve learning objectives according to the lesson plan. Guided by previous research by Earl & Katz (2016), which states that PBD assessment practices include communicating with students, evaluating classwork and presentations, using rubrics and scoring guides, open-ended questions, computer-based tests, journal writing, learning logs, and checklists. However, there are several new findings regarding PBD assessment practices, which help students achieve the best TP learning objectives.

Challenges in implementing PBD in schools

There are several challenges in implementing PBD in schools, such as constraints in the varying levels of student understanding in certain subjects. According to the respondent who was interviewed, he has faced difficulties in ensuring that students understand and follow the provided learning modules and assessment questions. It has been understood that students have different levels of understanding, which causes them to be reluctant to answer the questions given and prefer not to answer those questions. This poses a challenge for teachers to provide assessments and grades for such students, thereby undermining the assessment process itself.

"But the regular daily schools, the usual ones like this, from what I see, if the student doesn't understand the language, you understand, right? They don't want to understand the language, they don't understand the questions, they don't understand, so they lose interest, they don't want to. There lies our problem; that problem alone, he doesn't want to do it, he wants to sleep."

The second respondent explained the challenges faced by a teacher who teaches Malay in implementing PBD at school. Among the challenges faced by Malay language teachers is the language barrier in implementing PBD.

"The language problem, especially for Chinese and Indian students, for example, I take the back class, I don't want to take the front class. "For example, when we talk, we think they understand, but then they say, Teacher, I didn't understand what you said earlier. When we ask him to read, he just reads, reads without understanding."

This matter has caused the student to lose interest in the Malay language itself due to a lack of understanding of the language. The impact of this barrier has caused the student to lose some motivation in learning and become more passive in class.

The third respondent explained the challenge they faced, which involved student absenteeism in class. Through the interview conducted, there was a statement from the respondent indicating that the difficulty in implementation is based on the factor of student absenteeism.

"Okay, the first problem is absenteeism, when they miss classes, they lose interest, that's how it is."

The students' absenteeism has made it difficult for teachers to provide a comprehensive assessment because students frequently miss school, causing the PBD to be delayed and less effective for students who are less interested or often absent from school.

In conclusion, as stated in Idris's (2016) study, the challenges frequently faced by teachers are the lack of confidence and commitment among teachers to successfully implement PBD. Each teacher will certainly face their challenges in implementing PBD. Through this interview, new research findings have been discovered, namely three (3) challenges identified by respondents related to the implementation of PBD, which are constraints in terms of varying levels of student understanding, language barriers, and student absenteeism in school. Through this study, the researcher was able to identify other challenges that can be shared as references for teachers or educational bodies directly involved in PBD.

CONTRIBUTIONS OF THE STUDY

Academicians

This study can benefit those entering the field of education by providing knowledge about the effectiveness of PBD implementation. Through this study, the knowledge that can be obtained by teachers is related to learning assessment. This assessment knowledge will help teachers evaluate students' performance systematically and continuously. This will enable teachers to understand the level of student achievement in various aspects, for example, in terms of learning, teachers can identify the level of knowledge, skills, and attitudes of the students.

In addition, teachers can also gain knowledge to improve their teaching. Through this study, teachers can acquire effective assessment knowledge and can help identify shortcomings in the teaching process. By analyzing the assessment results, teachers can take the necessary actions to improve classroom instruction.

Practitioners

This study will benefit schools in improving the quality of educational assessment. Through this study, which examines the effectiveness of the implementation of PBD, the school can assess the quality of education provided to students at the school. Therefore, the school can also make improvements to the school curriculum. The assessment results allow the school to evaluate the effectiveness of the curriculum and adjust it for teachers and students.

Through this study, stakeholders, particularly the Curriculum Development Division (BPK), Ministry of Education (KPM), can ensure the enhancement of professionalism, especially among teachers, to implement PBD according to guidelines and stay on the right track. Indirectly, the aspirations of the National Education Assessment System (SPPK) in the Malaysian Education Development Plan (PPPM) 2015-2025 can be achieved in the future.

Future Research

Based on the listed limitations of the study and the findings obtained, the researcher identifies several suggestions for conducting future research as follows:

a. Increasing the number of respondents in the study population sample so that the data collected is broader and can represent a portion of teachers serving in secondary schools, thereby ensuring reliability and validity.
b. Expand this study to all teachers in the Masai district, Johor, to understand teachers' comprehension of the PBD process, teachers' knowledge of PBD implementation, PBD implementation practices, and the challenges faced by teachers of other subjects regarding the effectiveness of PBD implementation in schools.

c. Preparing more specific interview questions to facilitate respondents' understanding and enable them to answer questions in a more organized manner.

d. Researching other aspects such as involvement, initiative, parental support, and so on, to overcome the constraints of implementing PBD in schools.

CONCLUSIONS

In conclusion, teachers' understanding of the PBD implementation process, teachers' knowledge of PBD implementation, PBD implementation practices, and challenges in implementing PBD affect the effectiveness of PBD implementation in schools. After several years of PBD cultivation in secondary schools, teachers are seen to have a better understanding of the PBD process, which is carried out continuously during the PdPc process using formative and summative assessment approaches. Teachers also know the types of instruments that can be used for assessment and are skilled in selecting and developing appropriate approaches to be used during teaching and learning in the classroom to ensure the achievement of objectives set before the class even begins. However, the implementation of PBD has several constraints in terms of student absenteeism, student attitudes, language proficiency, family socioeconomic factors, and differences in students' skill levels, which indirectly affect the effectiveness of PBD implementation in schools.

Despite the listed constraints, the interviewed respondents each agreed and opined that PBD should be implemented in schools. It is not too burdensome because of the use of offline records and does not interfere with teachers' duties outside of teaching hours. However, the implementation and recording must be transparent and unemotional. PBD requires teachers to better understand the abilities, skills, and attitudes of students so that they can achieve the set mastery levels through the improvement of the PdPc process. Additionally, PBD also shapes students who are always ready to learn and master learning topics continuously, and not just during exam time. Respondents also stated that the examination for the final year of level 2 in primary school (UPSR) needs to be conducted again because the readiness and knowledge of students entering the secondary level are not on par with the mastery level provided by primary school teachers. This has led to a massive reshuffling of classes after the mid-year exams and has disrupted the implementation of PBD due to the transfer of students to other classes. Therefore, the implementation of PBD is hoped to be further strengthened with clear guidelines and the best methods to provide Level of Mastery (TP) that aligns with the progress and development of students. PBD is also implemented in a hybrid manner alongside Primary School Achievement Test (UPSR) and Form Three Assessment (PT3) to achieve sustainable development goals.

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REFERENCES

1. Ahmad, A., & Mahamod, Z. (2016). The level of proficiency of secondary school Malay language teachers in implementing school-based assessment based on gender, option, and teaching location. Journal of Malay Language Education, 5(1), 18–29.
2. Ambotang, A. S., Andin, C., & Minduru, N. (2021). Contribution of primary school teachers' knowledge and skills towards the implementation of classroom assessment practices in Kota Kinabalu, Sabah. Kesidang Journal, 6(1), 107–119.
3. Arumugham, K. S. (2020). Curriculum, teaching, and assessment from the perspective of classroom assessment implementation. Asian People Journal (APJ), 3(1), 152–161.
4. Arumugham, K. S., & Ariffin, J. (2021). Abolition of the primary school assessment test and implementation of classroom assessment: A survey among headmasters. Asian People Journal (APJ), 4(2), 80–89.

5. Atan, N. A., Mohamad, Z., & Yaacob, N. (2020). Classroom assessment practices (PBD) for authentic assessment among primary school teachers. [Publication details missing].

6. Azman, N. A., Zulkifli, H., & Tamuri, A. H. (2023). Implementation of Bloom's taxonomy in the Standard Curriculum and Assessment Document (DSKP) for secondary school Islamic education: An analysis. [Publication details missing].

7. Babbie, E. (2002). La práctica de la investigación social (12th ed.). Belmont, CA: Wadsworth.

8. Bashiron, A. A., & Razak, K. A. (2022). Pilot study on the implementation of classroom assessment (PBD) among Islamic education teachers (GPI): Knowledge, practices, and constraints. Proceedings of the 7th International Conference on Social Sciences and Humanities (PASAK 7 2022). https://doi.org/[add if available]

9. Braun, V., Clarke, V., & Hayfield, N. (2019). Un punto de partida para tu viaje, no un mapa: Nikki Hayfield en conversación con Virginia Braun y Victoria Clarke sobre el análisis temático. Investigación Cualitativa en Psicología, 1–22.

10. Daman, B. (2022). The implementation of PBD in PdPR: A challenge for teachers. Dedication Research Journal, 20(2), 1–21.

11. Earl, L. M., & Katz, M. S. (2016). Repensando la evaluación en el aula con un propósito en mente: Evaluación para el aprendizaje, evaluación como aprendizaje, evaluación del aprendizaje. Manitoba Education, Citizenship and Youth.

12. Faudzi, N. H. M., & Ahmad, A. (2022). The readiness of history teachers to implement classroom assessment in teaching and learning. Proceedings of the International Conference on Business and Education (ICBE), March 2022.

13. Gengatharan, K., & Rahmat, A. (2019). The need for health education assessment modules for Level One teachers in the implementation of classroom assessments. Journal of Sports Science & Physical Education, 8(2), 19–27.

14. Hanapi, M. H. M., Vadivelu, S. D., Zakaria, N., & Othman, M. S. (2022). Evaluation of the implementation of classroom assessment (PBD) in primary schools in Shah Alam, Selangor. KQT eJournal, 2(2), 1–9.

15. Hanapi, M. H. M., Zakaria, N., & Muner, S. (2021). The readiness level of primary school teachers in the Klang District, Selangor, in the implementation of classroom assessment from the knowledge aspect. Jurnal Antarabangsa Pendidikan Moden, 3(9), 1–8.

16. Hisham, A. Y. B. (2016). Thematic analysis of ḥadith related to the poor and needy in Ṣaḥiḥ Bukhari 68. Proceedings of the National Conference on Zakat in Economic Development (NCOZ 2015).

17. Idris, N. (2016). Evaluation of the implementation of school-based assessment among teachers. [Publication details missing].

18. Jaafar, R. (2023). Knowledge, practices, and attitudes of Malay language teachers towards readiness in the implementation of classroom assessment (PBD) in secondary schools. [Publication details missing].

19. Jamaludin, R., & Rashed, Z. N. (2020). Assessment of the challenges faced by teachers in conducting student character evaluations. ATTARBAWIY: Malaysian Online Journal of Education, 4(1), 8–12.

20. Jamil, H., & Said, R. R. (2019). Implementation of scoring for Malay language oral assessment in classroom assessment. Journal of Malay Language Education, 9(2), 25–36.

21. Jasmi, K. A. (2021). Preparation of a qualitative research proposal for Islamic studies and education. Sultan Ahmad Shah Islamic University College Pahang.

22. Juan, N. P., Rahman, S., & Surat, S. (2023). The level of knowledge, skills, and readiness of teachers towards the implementation of classroom assessment (PBD). Malaysian Journal of Social Sciences and Humanities (MJSSH), 8(5), e002339.

23. Ministry of Education Malaysia. (2019). Guide to the implementation of classroom assessment (PBD) (2nd ed.).

24. Krathwohl, D. R. (2002). Una revisión de la taxonomía de Bloom: Una visión general. Theory into Practice, 41(4), 212–218.

25. Long, T. H., & Osman, K. (2019). Practices and integrity levels of primary school science teachers in the implementation of classroom assessment. Science Education Seminar 2019.

26. Mahamod, Z., Embi, M. A., & Yusoff, N. M. R. N. (2010). School-based assessment: A guide for Malay, English, and Arabic language teachers. Faculty of Education, National University of Malaysia.

27. Manap, M. N. B., & Sheikh, A. B. M. (2020). The influence of competency levels and constraints in the implementation of classroom assessment among teachers of integrated religious primary schools in Selangor. [Publication details missing].

28. Marnizam, F. I., & Ali, S. R. (2021). Evaluation of the implementation of classroom assessment (PBD) among primary school mathematics teachers. Journal of Science and Mathematics Education in Malaysia, 11(2).

29. Mengistie, S. M. (2020). Conocimiento, actitud y práctica de la instrucción diferenciada de los maestros de escuela primaria: El caso de los maestros en servicio en formación del Colegio de Educación de Maestros de Debre Markos, zona de Gojjam Occidental, región de Amhara, Etiopía. International Journal of Curriculum and Instruction, 12(1), 98–114.

30. Mofu, A. C., & Waray, Y. (2021). The importance of management in task implementation at the Teluk Kimi District Office, Nabire Regency. Sketch: Journal of Social Sciences, 14(2), 12–23.

31. Mohamad, M. M., Johari, M. F., Othman, K. H., & Chia, S. Y. (2023). Work satisfaction levels among vocational college lecturers. Online Journal for TVET Practitioners, 8(2), 11–22.

32. Mokhtar, M. M., Yaakub, R., & Amzah, F. (2018). The challenges faced by Malay language teachers in efforts to instill higher-order thinking skills (HOTS) in teaching and learning (PdPc) of argumentative essay writing. Malaysian Online Journal of Education, 2(2), 7–14.

33. Mustafa, Z., & Yakob, N. (2021). Religiosity among Muslim science stream students who follow science education in a Tawhidic manner. Journal of Islam and Contemporary Society, 22(1), 256–265.

34. Naim, H. A., & Rohaya, T. (2014). Challenges of school-based assessment: The teacher's dilemma. Proceedings of the International Seminar on Human Sustainability 2014 (pp. 9–10).

35. Omar, S. S. H. W. (2019). Knowledge, skills, attitudes, and problems of teachers in implementing Malay language classroom assessment in primary schools. Journal of Malay Language Education, 9(3), 56–67.

36. Roslan, M. (2023). Classroom assessment method (PBD) and its impact on Level One students in Malaysia: Analysis of Islamic education subject. [Publication details missing].

37. Said, A., Johari, D., Yunus, N. M., & Husin, N. M. (2022). The level of understanding and integrity of Malay language teachers in implementing classroom assessment in primary schools. Journal of Malay Language Education, 12(2), 118–124.

38. Saliman, F., & Mahamod, Z. (2023). The practice of Malay language teachers at SKM in planning assessments using differentiated learning approaches. Journal of World Education, 4(4), 204–217.

39. Salleh, M., Sarkowi, A., Jafar, M. F., Arif, Z. M., & Hamid, H. (2019). The level of teacher literacy towards approaches in classroom assessment. Jurnal Informasi dan Pemodelan Kimia, 9, 12–24.

40. Stufflebeam, D. L. (1971). La relevancia del modelo de evaluación CIPP para la rendición de cuentas educativa. [Publication details missing].

41. Villasamy, P. K., & Mohammad, W. M. R. W. (2023). The level of understanding, skills, and attitude of Malay language teachers in the implementation of classroom assessment (PBD) in primary schools. Journal of World Education, 5(1), 544–559.

42. Wilson, M. (2018). Haciendo que la medición sea importante para la educación: El papel crucial de la evaluación en el aula. Educational Measurement: Issues and Practice, 37(1), 5–20.

43. Yusof, & Elias. (2019). The process of adapting to changes experienced by Muslim brothers: A case study in the state of Kedah Darul Aman. Journal of Sciences and Management Research, 2600, 738X.

APPENDIX

TABLE I The relationship between understanding the PBD process and the implementation of PBD

Authors	Research Location	Sample	Research Methods	Hypothesis Analyzed	Research Findings
Arumugham & Ariffin (2021)	Primary schools throughout Malaysia	168 head masters	Online interview Online survey	Understanding PBD Concepts and Processes –> PBD implementation	Positive
Salleh, Sarkowi, Jafar, Arif & Hamid (2019)	Schools in the Kuala Muda/Yan, Pendang, and Kubang Pasu districts, Kedah	500 teachers	Online survey form Cross-sectional survey	Teacher's level of understanding –> PBD implementation	Positive
Said, Johari, Yunus & Husin (2022)	Primary schools in the Tuaran district, Sabah	103 Malay language teachers	Online survey form	Teacher's level of understanding –> PBD implementation	Positive
Villasamy & Mohammad (2023)	Primary schools in the Temerloh district, Pahang	150 orang Malay language teachers	Questionnaire	Teacher's level of understanding –> PBD implementation	Positive
Hanapi, Vadivelu, Zakaria & Othman (2022)	SJKT, SK, and SPK in Shah Alam, Selangor	108 teachers	Questionnaire	Teacher's level of understanding –> PBD implementation	Positive

TABLE II The relationship between teachers' knowledge of PBD methods and the implementation of PBD

Authors	Research Location	Sample	Research Methods	Hypothesis Analyzed	Research Findings
Juan, Rahman & Surat (2023)	5 primary schools in category A of the School Transformation Program 2025 (TS25), Pahang	83 teachers	Questionnaires	Teacher's knowledge → Implementation of PBD	Positive
Jaafar (2023)	Secondary schools in the Hulu Langat district, Selangor	235 Malay language teachers	Online Questionnaires	Teacher's knowledge → Implementation of PBD	Positive
Hanapi, Zakaria & Muner (2021)	Schools in the Klang district, Selangor	500 teachers	Questionnaires Cross-sectional survey	Teacher's knowledge → Implementation of PBD	Positive
Ambotang, Andin & Minduru (2021)	Primary school in the Kota Kinabalu district, Sabah	500 teachers	Questionnaires	Teacher's knowledge → Implementation of PBD	Positive
Omar (2019)	Rural schools in the Betong district, Sarawak	95 Malay language teachers	Questionnaires	Teacher's knowledge → Implementation of PBD	Positive

TABLE III The relationship between the practice of PBD implementation and the implementation of PBD

Authors	Research Location	Sample	Research Methods	Hypothesis Analyzed	Research Findings
Jaafar (2023)	Secondary schools in the Hulu Langat district, Selangor	235 Malay language teachers	Online Questionnaires	Teacher Practice Stage → Implementation of PBD	Positive
Long & Osman (2019)	Primary schools in the Kota Tinggi district, Johor	126 Science teachers	Questionnaires	Teacher's Practice → Implementation of PBD	Positive
Marnizam & Ali (2021)	Primary schools in the Gombak district, Selangor	114 Mathematics language teachers	Questionnaires	Design phase → Implementation of PBD	Positive

TABLE IV The relationship between the challenges of implementing PBD and the implementation of PBD

Authors	Research Location	Sample	Research Methods	Hypothesis Analyzed	Research Findings
Daman (2022)	Online	Two (2) trainees teachers majoring in Mathematics at IPG Kent Campus	Case study - observation and written reflection report	Implementation challenges → PBD implementation	Positive
Manap & Sheikh (2020)	Sekolah Rendah Agama Integrasi Negeri Selangor	267 teachers	Questionnaire Semi-structured interview	Implementation constraints → PBD implementation	Positive
Sh. Siti Hauzimah Wan Omar (2018)	Rural schools in the Betong district, Sarawak	95 Malay language teachers	Questionnaires	Implementation problems → PBD implementation	Positive
Kementerian Pendidikan Malaysia (2019)	Rural schools in the Betong district, Sarawak	160000 teachers	Questionnaires	Implementation challenges → PBD implementation	Positive
Marnizam & Ali (2021)	Primary school in the Gombak district, Selangor	114 Mathematics language teachers	Borang soal selidik	Kekangan pelaksanaan −>Pelaksanaan PBD	Positif