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Implementation of Classroom-Based Assessment in Malaysia

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Abstract

Classroom-based Assessment (CBA) was officially established and introduced to focus on pupils' learning's holistic development and eradicate exam-oriented learning. Albeit the specific circular was issued in 2017, teachers in schools still lacked the skills and confidence in its implementation. The teachers presumed that the CBA is merely a teaching and assessment task detached from the existing teaching and learning. The apprehension was formed due to insufficient information on the implementation of the CBA. The practical implementation of CBA requires a comprehensive and systematic planning stage, followed by the preparation, implementation, and reporting stage. Henceforth, the Ministry of Education conducted workshops and intensive CBA training for headteachers and school principals to understand CBA implementation procedures. Based on the kind hand-in-hand, school leaders are deemed responsible for disseminating the CBA knowledge and skills acquired to teachers in their respective schools for implementation. However, the extent to which the implementation of CBA would be a triumph is yet to be substantiated. Subsequently, this study suggests a comprehensive CBA framework model to stakeholders by guiding their

teachers in understanding the concepts and skills of CBA. This model, too, could assist teachers and boost their confidence during the implementation of CBA in the classroom.
Keywords: Classroom-based Assessment, Exam-oriented Assessment, Teaching and Learning, Model, Concepts and Skills.

Introduction

The review of Malaysia Education Blueprint 2013-2025, where the main aim is to equip students holistically to compete in the global economy and society in the 21st Century, contains six key attributes needed by every student to be globally competitive. They are knowledge, thinking skills, leadership skills, bilingual proficiency, ethics and spirituality and national identity (Narinasamy et al., 2018). These attributes are aligned with the National Education Philosophy, which aims to produce Malaysian citizens capable of achieving a high level of personal well-being to contribute to the betterment of the nation, family, and society. Therefore, the 21-st century skills have been intensively discussed and implemented in Malaysia since 2016 with the vision of tailoring the approaches and assessments to help bring out the talents of each individual as highlighted in the aspiration of the Malaysian Education Blueprint 2013-2025. Subsequently, the new pedagogical method of the 21st-century, which comprises higher-order thinking skills (HOTS), communication, creativity, critical thinking, collaboration, citizenship, characteristics, and i-THINK, has been implemented in the education system.

In this regard, the education system in Malaysia has employed several transformations that emphasize thinking skills and the aspects of problem-solving (Mohammad et al., 2018). The higher-order thinking skills have been encompassed in the Standard Curriculum Primary School to instigate and pave the way for developing cognitive capabilities. The transformations are comprehensively sustained through higher education institutions, and the effect must be assessed.

Assessment is a fundamental attribute of pupils' learning. An assessment provides students and teachers with knowledge and information about student learning outcomes, strengths, and weaknesses (Mansor et al., 2020). Therefore, assessment is accepted as one of the crucial parts of teaching, whereby educators can determine their students' level of skills or knowledge (Taras, 2005; Tosuncuoglu, 2018). In addition, assessments also provide teachers with helpful feedback about student learning acquisition (Taras, 2005; Stiggins, 1992; Tosuncuoglu, 2018) and offer the teachers the opportunity to evaluate learning and then use that information to improve students' knowledge.

The importance of assessment as the heart of the teaching and learning process is highlighted by (Zhengdong et al., 2017). Formerly, classroom assessment had often used traditional academic assessment methods that relied on norm-referenced tests, also known as standardized testing, to assess students (Patton et al., 2017). Comparatively, thinking skills have been prioritized as the essential skills that should be developed to attain high achievement (Tajularipin et al., 2017).

Accordingly, to improve classroom instructional activities, the classroom assessment has been intensified and given attention in recent years (Barnes et al., 2017; Black, 2014; Black & Wiliam, 2009; Narinasamy & Nordin, 2018). In Malaysia, to assess the students, School-Based Assessment is administered by the subject teachers perpetually in the teaching and learning process aligned with the 21st-century skills to access the quality of teaching and learning in Malaysia's public schools. The assessment is planned, administered, viewed, and reported deliberately following the procedures set by the Malaysian Examinations Board

(MEB). To determine the quality of the evaluation, coordination and monitoring mechanisms are employed to improve the reliability and validity of assessment scores implemented in schools. However, the school-based assessment was postponed in 2014 to identify the problems caused by the grievances of teachers and parents and to furnish with necessary and immediate steps to improve school-based assessment.

Yamtim and Wonwanich (2013) accentuated that the positive impact on the SBA system initially transformed to the opposite during its implementation in schools. It suffered from many problems and unprecedented matters emerging beyond the ministry's expectations. The Ministry of Education Malaysia (MOE) is very concerned about implementing School-Based Assessments raised by teachers and views on their impact on students. A school-Based assessment is a policy that involves a holistic assessment of students' achievement. MOE is always objective and transparent to any complaints, comments, views, and criticisms from the teachers and the community regarding its implementation. As a result, Classroom-Based Assessment (CBA) was introduced after some modifications to develop student learning, which is learning-oriented and eliminated the examination-oriented recognition. CBA is a part of the learning process, and it is also one of the components of School-Based Assessment that focuses on the development and progress of students holistically (Curriculum Development Division, 2019). It employed several transformations that emphasized higher-order thinking skills and problem-solving (Mohammad et al., 2018). The higher-order thinking skills have been encompassed in the Standard Curriculum Primary School to instigate and pave the way for developing cognitive capabilities. The transformations are sustained comprehensively through higher education institutions.

Based on the circular disseminated by the Ministry of Education Malaysia (Ref: KPM.600-5/1/5 Vol.3(6) dated the 23rd of November 2017), Classroom-Based Assessment is one of the components of School-Based Assessment (SBA) and must be implemented dutifully and with integrity commencing from the 2018 school session (MOE Circular, 2017). Regarding the circular issued, all schools, including national schools (SK), national type schools (SJKC and SJKT) as well as national secondary schools (SMK), are subjected to the instruction. Albeit the instruction regarding the implementation was issued in 2017, the teachers in the schools were observed to lack the skills in its performance. Therefore, CBA workshops were instigated in all schools in Malaysia to provide exposure and provide the teachers with essential skills. In addition, officers of the Curriculum Development Division personally went down to the field to deliver information related to CBA to schools. Briefings and comprehensive information were also delineated to headteachers and school principals to establish an accurate understanding of the CBA concept in schools.

Background of the Problem

Many Asian countries, including Malaysia, are still struggling to overcome specific issues in classroom assessment due to the lack of primary school facilities (Leong, 2014; Narinasamy & Nordin, 2018). The Asian countries' assessment and examination landscape has been revised and refined accordingly to be aligned with classroom assessment to revitalize teaching and learning in the classrooms to equip students for global challenges (Lam et al., 2012; Leong, 2014).

The digital revolution of the 21st Century demands a more complex life in which we need to align ourselves with critical, creative, and innovative thinking, which associates with the use of technology. Inevitably, most of our daily needs have been automated, that less thinking is needed to accomplish tasks, which contributes to being less reflective. The

challenging life in the globalization era causes information to travel rapidly without territorial boundaries. The most prescient future in our schools would be the invasion of artificial intelligence in our classrooms. Artificial intelligence and digital systems will affect many human expectations, and lives will change (Siraj, 2017). Hence information could be accessed instantly with the advent of technology. Are our students prepared for this state?

Essentially, students need to solve complex real-time problems faced in the future. Other vital skills are thinking and working creatively in the job environment, both in the digital and non-digital environment, to develop and produce solutions. Analytical thinking is also a critical skill because it provides proficiency in comparing, contrasting, evaluating, and synthesizing before implementing instructions. Depending solely on digital technology would refrain the young generation from thinking creatively or critically because of the total dependence on the technology.

To achieve the goal and survive the challenges of the 21st-century demands, as mentioned, high-level thinking skills are essential to the young generation. (Vikneswaran & Zanaton, 2016). Higher-order thinking skills (HOTS) include three concepts: a student's capacity to apply the knowledge and skills to new situations, critical thinking, and problem-solving (Collins, 2014). Higher-order thinking skill (HOTS) is a complex mental process that requires nuanced judgment, interpretation, and analysis of difficult situations according to multiple criteria (Resnick, 1987). HOTS occurs when someone gains new information, stores it in memory, make connections, rearranges, and develops it to find possible answers in confusing situations (Lewis & Smith, 1993; Ansori et al., 2019).

Many studies have established higher-order thinking skills (HOTS) as an essential and vital skill in the present challenging era (Brookhart, 2010; Coffman, 2013; Yen & Halili, 2015; Ansori et al., 2019). Thinking skills are also crucial for people in the 21st Century, both in the workplace and in making reasoned choices in daily lives (Coffman, 2013). Parallelly, most the teachers agree that it is vital to teaching HOTS since it is pertinent to global economic growth, the development of information and communication technology (ICT), a knowledge-based economy, and a fast-paced world (Yen & Halili, 2015; Ansori et al., 2019). This move is crucial to prepare the students for the future. The notion is in line with the goal of the national education system, which is "an ongoing effort towards further developing the potential of individuals in a holistic and integrated manner, to produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God" (National Education Philosophy). The philosophy is designed to ensure future Malaysians would-be knowledgeable and competent citizens, possess high moral standards, execute responsibility competently and contribute to society and the nation.

However, the report published by the Malaysian Ministry of Education (MOE, 2013) disclosed that 60% of 15-year-old students who had completed lower secondary school failed to achieve the minimum proficiency level in thinking skills of knowing, applying, reasoning, and transferring knowledge and skills learned in classrooms for application in the real-world (Yusoff & Seman, 2018). The teachers in many schools were found to have employed conventional and teacher-centered teaching methods, including chalk and talk-based teaching. By utilizing this method, most learners only learn the essential and initial elements from the lessons. Students are not given sufficient opportunities to develop their thinking (Abdul & Effandi, 2013; Noraini, 2005; 2007). The ramification of the failure in teaching according to the higher thinking order skills causes students to be passive information receivers, and it does not result in conceptual understanding (Abdul & Effandi, 2013; Noraini, 2005).

In addition, students' comprehension and mastery of the subjects learned in school cannot be evaluated. The adequacy of the student's competency in grasping the subjects taught in schools is difficult and tedious to assess. The knowledge obtained is not extended to their minds, and they suffer disengagement with their thinking skills, resulting in the inability to retain knowledge for the future. The new curriculum in Malaysia emphasizes HOTS questions facilitated by more appropriate and advanced pedagogies and methods such as mind mapping or flow charts in promoting and encouraging the students to think before responding to matters concerning knowledge acquisition.

MOE further reported that compared with 15-year-old students from Singapore, Hong Kong, South Korea, and Shanghai, Malaysia's 15-year-olds are left behind three or more years in schooling (Yusoff & Seman, 2018). Considering the disconcerting result, MOE has emphasized the achievement of thinking skills as one of the aims of strategic planning stated in the Malaysia Education Blueprint 2013-2025. The Blueprint states: "Every child will master important cognitive skills, including critical thinking, reasoning, creative thinking, and innovation" (MOE, 2013). Inevitably, an appropriate evaluation in regulating and monitoring the system is vital.

After an earnest discussion in the Cabinet Meeting on the 17th of December 2010 regarding the School-Based Assessment (SBA), a consensus was established on implementing the (SBA) as a part of the National Education Transformation Programme. The Malaysian government has proposed the implementation of SBA (school-based assessment) in public schools, intending to replace the current public examinations. (Faizah, 2011). School-Based Assessment has been envisioned by the Ministry of Education Malaysia (MOE) to address the problems of the National Education system, particularly the too exam-oriented element. Furthermore, the purpose was to achieve a holistic assessment and provide an alternative to testing. The school-based assessment looks at teachers' assessment of their students whom they are closer with, and this is among the reasons SBA has become increasingly popular in many countries over the world (Gan et al., 2017).

On the contrary, on the 11th of February, 2014, the Ministry of Education (MOE) postponed SBA to reassess its implementation. The measure was taken due to the teachers' dissatisfaction with the drawbacks, including the burden of completing and recording students' assessments into a centralized computer system. The parents are ambivalent regarding their children's assessment. A survey conducted among teachers from other countries too revealed the uncertainty and lacked confidence among teachers regarding SBA, which is the teacher-mediated and context-dependent assessment, since many doubt that they possess the required knowledge and skills to carry out the evaluation accurately and appropriately (Gan et al., 2017)

Correspondingly, exams were still prominent in SBA. To eliminate the dependence on the exam, the Ministry of Education employed drastic measures by abolishing examinations for Level One students (Years One, Two, and Three) in all primary schools and strengthening the practice of Classroom-Based Assessment (CBA). Lewkowicz and Leung (2020) posited that any teacher-led classroom activity designed to seek information regarding the students' performance on curriculum tasks would yield results regarding their understanding as well as their need for further support and scaffolding regarding their situated learning needs, could be considered as CBA.

In this regard, the ministry decided that CBA should be implemented at the Level One primary school because the growth of students occurs rapidly during that period and is very important as a basis for students to optimize development and growth at the next level of

learning. Inevitably, CBA is a part of teaching and learning in the classroom and is performed continuously. The exercise necessitates collecting and analyzing information to establish continuous reflection on teaching and learning to secure consistent judgments towards improving pedagogical skills. The focus of the Classroom-Based Assessment was shifted from examination-oriented to the development of student learning or learning-oriented, and solely examination-oriented assessment was abolished. The school-Based assessment relates to teachers designing and providing feedback on assessable activities within classroom contexts.

Teachers play a vital and prominent role in implementing CBA by determining learning objectives based on Learning Standards to be assessed, planning and building assessment instruments, performing assessments, recording assessment results, analyzing assessment information, and reporting and follow-up steps. All data obtained from the assessment is not intended for comparison or competition between students. Alternatively, the information is regulated to assist the school and parents in planning follow-up steps to uplift the students' mastery and achievement in learning (Curriculum Development Division, 2021).

According to (Sanders & Rivers, 2016), teacher quality is the most influential and vital factor at the school level in determining students' achievement. However, some problems in the implementation of CBA were identified and detected based on the scores obtained from an analysis conducted regarding the issues of CBA implementation among the 176 participants of the Professional Qualifications Program for National Education Leaders (NPQEL) Cohort 1/2019. (MOE, 2019). Among the issues that emerged is the concept of initiative towards CBA, which was inexplicit to the implementers and hindered their apprehension on the notion of CBA. It was also apparent that the implementers were ambivalent regarding the duties and responsibilities. As a result, teachers feel detached and isolated from CBA as the benefit gained by the students is not evident. The other view of the teachers is that CBA does not facilitate their work but benefits the District Education Office, State Education Department, and Ministry of Education Malaysia only. Moreover, the teachers find CBA to be intricate since they do not possess prerequisite competencies and are too demanding in time and effort even though CBA is relevant.

To achieve success in CBA, the ministry has provided knowledge and skills to the pertinent parties. Courses and workshops were conducted for administrators and teachers in schools nationwide. The concept, implementation, and importance of CBA were imbued to strengthen the understanding of the importance and implementation of CBA among teachers and parents (Curriculum Development Division, 2021). However, there is still no effort to develop a comprehensive and holistic model to help stakeholders comprehend the concepts and skills related to CBA Teaching and learning for Level one primary schools. Albeit the presence of plights in the CBA implementation, the CBA has marked its way to the secondary schools. The move has provided the impetus for investigations and discussions.

Issues Related to Classroom-Based Assessment

The Ministry of Education Malaysia instigated Classroom-Based Assessment (CBA) as part of the Education Transformation Program. CBA was planned, administered, scored, and reported strategically following the established procedures. It is a form of assessment conducted by teachers and the school. Generally, the Classroom-Based Assessment has 17 standards that have been identified and adopted as international guidelines and as an indicator of fair student assessment practices (Mazliana et al., 2018). This standard will be the conceptual framework for the context of this study. However, the CBA approach enfolds three domains, namely (i) assessment for learning, (ii) assessment as learning, and (iii)

assessment for learning. The three components of the approach characterize different purposes tailored to the learning objectives in the classroom pedagogical content knowledge. In addition, CBA is also a component of formative assessment that is implemented continuously during teaching and learning in School-Based Assessment.

The previous Assessment Literacy studies conducted by several researchers from the Malaysia National University (UKM) exhibit the validity and reliability of the assessment literacy instruments, which contain standards pertinent to assessing the assessment literacy of teachers in Malaysia (Mazliana et al., 2018). However, this study does not discuss the assessment literacy of teachers who are also the study participants in Malaysia. Similarly, studies by Chapius (2012); Yantim and Wongwanich (2013) lack data related to teachers' assessment literacy. Therefore, the findings of these studies correspond with the views of the Ministry of Education as articulated in the statement of problems related to CBA, which states that teachers are less skilled in assessment literacy (KPM, 2018). Furthermore, many teachers' assessment studies in the 20th Century focused only on paper and pencil tests. A study report by Shulman (1986) 40 years ago illustrated that these paper and pencil tests are inconsistent and unrelated to the students' daily lives. As a result, the school children failed to relate the concepts learned with everyday life occurrences. The implication is that many students simply memorize facts without understanding the idea of a topic in the subjects taught in school.

Based on these findings, Mazliana et al (2018) have proposed that assessment literacy training should be provided to teachers to improve their knowledge, skills, and competencies to keep them abreast with the imminence of the future. This statement is supported by the study of Radin (2008), who also recommended that it is vital for teachers to be given appropriate training to improve their assessment literacy. Lack of confidence in implementing CBA is a constraint for teachers and hinders successfully implementing 21st-century learning skills. Indistinguishably, the Examination Board (2012) 's study also revealed the disinclination of teachers to implement CBA due to a lack of skills in the preparation of assessment instruments in various forms. His study also substantiates that teachers are the ardent practitioners of assessment utilizing paper and pencil. (Noorzieliana et al., 2014). A study by Noraini and Zamri (2015) on 315 school students in Muar, Johor, discovered that the readiness of secondary school students is at a moderate level with a mean of only 3.62. This clearly illustrates that students are still not proficient with the concept of CBA because the implementation of the examination system is still preferred. In addition, the findings of this study also convey that high school students still need teachers to provide information to them, which is very contrary to the government's intentions in Malaysia Education Blueprint 2013 - 2025.

Relatively, it is the responsibility of the researchers to build a model of CBA to be utilized as a guide for teachers to implement CBA in the classroom.

Model Teaching and Learning framework of Primary School Mathematics Classroom-Based Assessment

The suggested learning model of Classroom-Based Assessment is named the Primary School Mathematics Classroom-Based Assessment and Learning Framework Model. Contextual elements, including CBA issues, are studied and compared distinctively by Mathematics teachers in schools, Mathematics experts at the Institute of Teachers Education, and universities through courses and training materials provided before constructing a framework model. The construction of a framework is a delicate process, and this study

utilizes diagrams to increase the comprehension of the process involved. The CBA model diagrams depict information about the elements and requirements of the framework to be developed.According to the Effective Learning Model discussion, the primary purpose of the learning materials developed is to promote student learning, quality, regular and systematic. Therefore diagram 1 illustrates the conceptual framework of the Classroom-Based Assessment.

The framework mentioned above can explain the issues that emerge from several aspects and their origins. Based on the problems, the framework conveys the steps to be implemented in CBA. Educators have received training and reference books on implementing the mentioned CBA, but it is not structured for teachers to comprehend the steps to materialize and implement CBA instantly. Hence the framework of this model aims to facilitate the educators to run the CBA program more conveniently and systematically. This framework also promotes creative teaching. A lesson taught in the classroom would be more creative through the proposed teaching strategies, and students would have enjoyable and fruitful activities in the classroom. Through the Classroom-Based Assessment, teachers would have the opportunity to enhance their skills in:

- Determining learning objectives – highest targets during the teaching planning process
- Unpack and repack the curriculum according to the syllabus

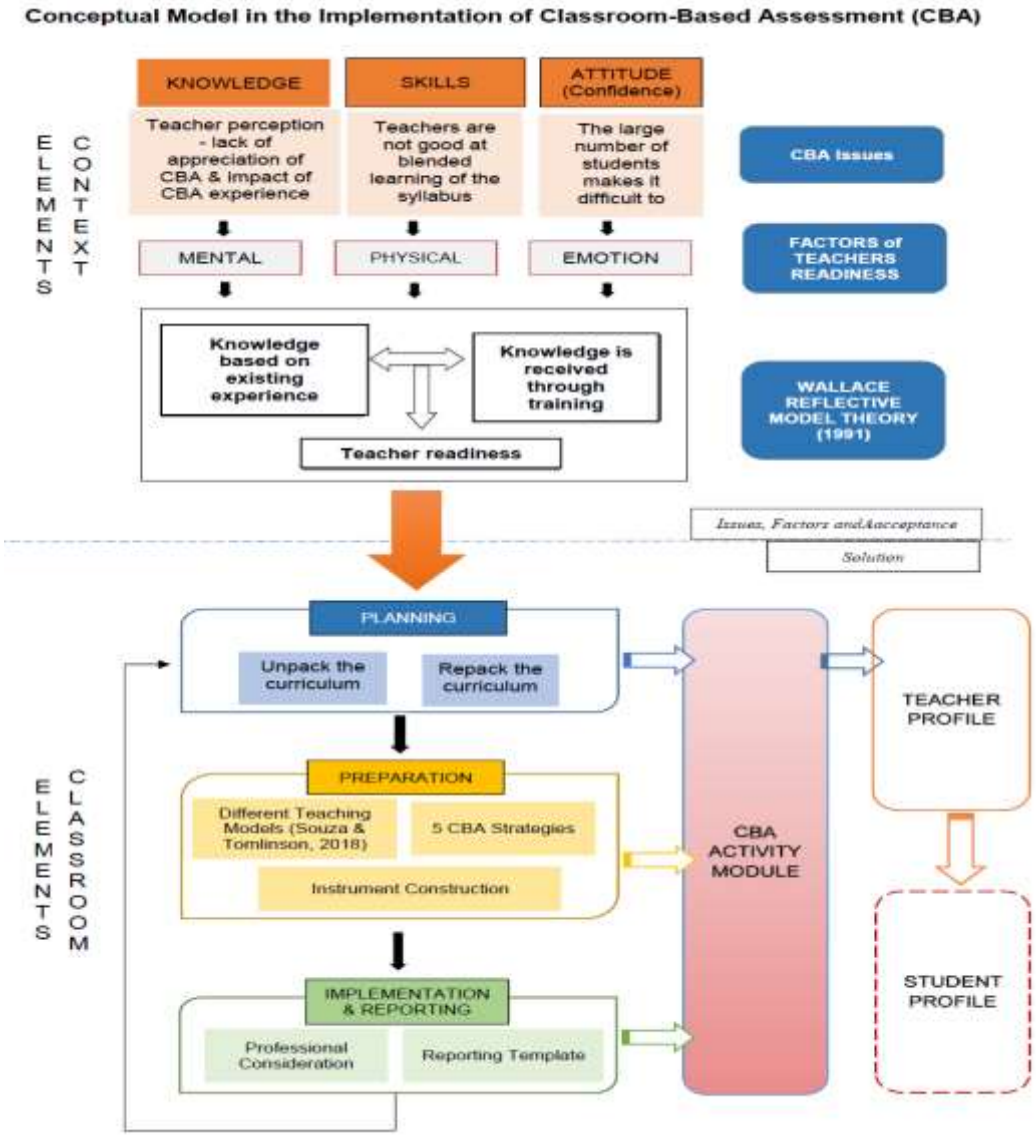

Diagram 1: The conceptual framework of the Classroom-Based Assessment.

- Assess students holistically based on students' work
- Ensure there are developments in student learning
- Provide teaching materials and assessment instruments that are appropriate for students
- Provide Student Mastery Level Reporting
- Provide reviews of student development (skills, attitudes, values) in the teacher review column in the reporting template
- The need to constantly discuss with colleagues the development and progress of students and implement follow-up actions.

Discussion and Conclusions

The Ministry of Education Malaysia implements Classroom-Based Assessment (CBA) as part of the Education Transformation Program in line with Malaysia Education Blue Print 2013-2025. CBA is a form of assessment conducted by the teachers and schools and sent to the state Education Office and parents of students. The goal of the assessment is to decrease the burden of the students who depend solely on the exam, albeit each individual has their

unique potential. The CBA is proposed to replace the year six primary school achievement test and form three assessment so that students' placement of students in the science or art stream does not merely depend on the achievement at year six or form three. The Ministry of Education has provided many options for students in Malaysia to focus on their expertise and not rely solely on exams.

The proposed conceptual model would impact schools, specifically to assist teachers who lack the skills and knowledge to implement CBA in schools. It would be more convenient for the schools to identify the implementation procedures. The model would enlighten the teachers, diminish their burden in implementing CBA, and boost their confidence in attaining success in CBA. The utilization of the model would facilitate a smooth implementation of the CBA and establish a successful Classroom-Based Assessment in Malaysia.

Educational change is a complex phenomenon. The success of the new evaluation system will depend on the proper management of resources and manpower. This study reveals some important facts about the knowledge and integrity of teachers in implementing this new evaluation system. Therefore, a comprehensive and holistic model can help stakeholders comprehend the context of problem and this proposed concepts and skills as solutions to teaching and learning that facilitate the objective of this study which developing a new and easy model to establish successful Classroom-Based Assessment.

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