The Effectiveness of Classroom Based Assessment on B40 Preschoolers and Primary School Students' Outcome: An Evaluation Study.

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ABSTRACT

Classroom Based Assessment (CBA) was introduced with the aim of ensuring comprehensive assessment carried out on the students themselves and not just focusing on the examination system alone. This research carried out with the aim of evaluating the effectiveness of classroom-based assessment among B40 preschoolers and primary school students' outcome.

CIPP Assessment Model were used as a research framework involving all components, namely the assessment of context, input, process, and product. The study sample consisted of 384 preschool and primary school teachers selected randomly all over Malaysia. The research instrument is a questionnaire that was adapted and modified from previous studies related to this study and has five constructs.This study was carried out using a mixed method analysis.Quantitative data analysis is reported in research findings using descriptive analysis that shows descriptive statistics overall found that all components in the CIPP Model show a high level : Dimension of Context (Mean : 3.93, SD: 0.80), Dimension of Input (Mean : 4.04, SD:0.65),Dimension of Process (Mean : 4.06, SD: 0.66) and Dimension of Product (Mean : 3.89, SD: 0.64). Overall, the findings have shown that the evaluation of the effectiveness of the Classroom Based Assessment (CBA) among the B40 preschoolers and primary school students is at a high level. The study has to some extent contributed to the collection of studies related to classroom-based assessment that can provide enlightenment and follow-up actions to improve the existing system.

Keywords: Classroom Based Assessment, Effectiveness, Preschoolers, Primary School Students.

INTRODUCTION

According to UNESCO (2010), assessment is one of the elements of the curriculum. In Malaysia, the assessment system itself have had experienced changes. In primary schools, the assessment of Level 1 (Year 1-Year 3) students had been revised when the mid-term and end-of-year exams were abolished starting in 2019 (Ministry of Education, 2018). The importance of focusing student learning based on student development and values have resulted in abolishing these examinations at school. Thus, Classroom Based Assessment (CBA) or Pentaksiran Bilik Darjah (PBD) was introduced to replace examinations to assess student learning.

Classroom Based Assessment is one of the academic components in School-Based Assessment (SBA) or Pentaksiran Berasaskan Sekolah (PBS) which is implemented in conjunction with the implementation of the Primary School Standard Curriculum (KSSR) (Revision 2017) (KPM, 2016). CBA is therefore implemented continuously through variety of activities in all subjects (KPM, 2018).

The implementation of Classroom Based Assessment started in primary schools in 2011 and was later expanded to secondary schools in 2012, based on the guidelines set out in Examination Board Bulletin (SSLP) No. 3/2011. PBS is an assessment system that aims to ensure student achievement is not solely based on exams. It includes a comprehensive assessment of student achievement and learning development through four components: Classroom Based Assessment (Pentaksiran Bilik Darjah), Physical Activity, Sports, and Co-curricular Assessment (Pentaksiran Aktiviti Jasmani Sukan dan Kokurikulum), Psychometric Assessment (Pentaksiran Psikometri), and Centralized Assessment (Peperiksaan Pusat).

The effectiveness and success of Classroom Based Assessment is directly proportioned to teachers' commitment. Effective assessment will be able to provide information to teachers, administrators, parents, and students, relevant to students' knowledge and understanding. CBA will enable the school and parents to get qualitative and quantitative feedback about the students (Ahmad and Mohamod, 2016). CBA is carried out for all subjects to determine the students' mastery level based on Performance Standards, Content Standards and Learning Standards. According to the Curriculum and Assessment Standard Document (DSKP), PBD is implemented continuously focusing on aspects of knowledge, skills, and values. Competent teachers are important in making the learning a success. Continuous student development in the classroom can be tracked through systematic classroom assessment (Kanji, 2014).

Classroom based assessment is important during the teaching and learning process in classrooms. CBA helps teachers in fostering students' curiosity and analytical thinking, determining areas of strength and improvement in their learning, integrating moral, aesthetic, and national values, monitoring holistic development students, adjust teaching approaches, evaluate teaching effectiveness, and implement needed interventions immediately.

While implementing CBA, teachers assess students extensively in terms of cognitive, psychomotor, and affective, aligned to the goals of National Education Philosophy (FPK) which is focused in developing students who are intellectually, spiritually, emotionally, and physically balanced and harmonious, based on a firm belief in and devotion to God (Ministry of Education Malaysia, 2018). Therefore, a study was conducted to identify the effectiveness of classroom-based assessment on B40 preschool and primary school students' outcome by looking at the teachers' competency conducting CBA during their teaching practices.

Problem Statement

The concept of classroom-based assessment (CBA) is not something new but in Malaysia, the examination-oriented assessment system is still practiced in Malaysia (Osman & Mohd Saat, 2014; Zamri Mahamod, Nasyimah Ismail & Wan Muna RuzannaWan Mohammad, 2016). Teachers are seen unable to conduct assessment throughout their teaching and learning practices.

According to Ravikumar Varatharaj (2015) there is still room for improvement among teachers to implement the assessment method. Suzana Abd Mutalib and Jamil Ahmad (2012) had identified that there are still teachers who failed to monitor student learning due to lack of knowledge, unfair decision-making, and weaknesses in teaching planning, thus failing to uncover students' true potential, and resulting in inaccurate reporting of student performance.

Classroom based assessment conducted in an accurate manner would be able to reflect on the actual level of achievement of students in mastering the goals set in the curriculum (Ministry of Education, 2018). This is important for teachers, students, and stake holders to make educational decisions to further improve the learnings scenario in the classrooms. It will also help in saving time, cost, and energy in making any intervention or related policy.

In the written curriculum that we have (KSSR), classroom-based assessment is carried out to be aligned with concept of continuous learning process which is based on student development. Primary School Curriculum Standard (KSSR) raises the role of assessment for learning. Therefore, the teacher's role in teaching and assessment is equal because these two processes go hand in hand. The selection of appropriate assessment instruments is important because teachers need to obtain information on students' mastery, identify their level of learning mastery and make good judgments so that the recorded and reported performance of students represents

their actual performance. Therefore, it is significant for teachers to identify students' cognitive abilities before planning their teaching and assessment.

Teachers should not conduct assessment based on only one set of tests but instead need to diversify the forms and methods of assessment to be able to accurately interpret the student's current development. Classroom based assessment must be able to focus on student-centered activities and formative assessment that assesses students' abilities continuously. There are still many teachers who think that the implementation of PBD is a complicated and burdensome process (Siti Hayati & Yeh, 2018). Therefore, many are still not confident in the practice of assessing their students (Fakhri & Mohd Isha, 2016) There are teachers who are not practicing giving written feedback on students' work and using the assessment findings to help in the students' learning (Varatharaj, 2015).

Nevertheless, conducting classroom-based assessment is not something that is easy to master. Classroom based assessment is very important to observe the overall performance of students who meet the goals of the National Education Philosophy to form and develop brilliant human capital (Idris, 2016), however there are several issues and challenges that arise. Among the issues in the implementation of educational policies such as PBD according to Hussein (2014) is that there are teachers or administrators who implement the policy selectively, i.e. only aspects that are agreed upon and do not implement other aspects that are considered inappropriate. This situation is influenced by the lack of knowledge and skills among teachers, especially those who teach non-optional subjects and the lack of training related to the form and content of assessment can cause biased and unfair assessment results (Ali & Veloo, 2017).

Many common issues in the field of education such as workload, large number of students as well as interference from outside parties causing classroom assessment to be less effective (Sani & Yunus, 2018) as well as rigid process of conducting the assessment (Raman & Yamat, 2014).

LITERATURE REVIEW

Primary School Curriculum Standard (KSSR) syllabus in the second wave of the implementation of the Malaysian Education Development Plan (PPPM) 2013-2025 has gone through several improvements, exclusively focusing on the process of assessment. Implementation of Classroom Based Assessment (CBA) especially in relation to assessment is the effect of abolishing biannual examinations for level one pupils (Ministry of Education Malaysia, 2018b). Level one students will be fully assessed by teachers based on the Curriculum and Assessment Standard Document (DSKP) and guidelines provided by the Curriculum Development Division (BPK) starting in 2019.

During the process of Classroom-based Assessment (CBA), teacher's role has varied starting from planning, implementing, assessing, evaluating, reporting, and making follow-up actions. Following this, teachers are given a great degree of autonomy in the process of CBA implementation in accordance with the guidelines that have been provided. Although training have been provided, the teachers still feel less confident in assessing their students. Classroom based assessment and the formative assessment in it has long been practiced in the daily teaching and learning process. However, when it involves decision making on assessment, it certainly brings concern to teachers because they are the agents of implementing the curriculum (Kiddie, 2018).

Implementing classroom-based assessment without knowledge will cause problems in student development. A study from Kumaran Gengatharan & Azali bin Rahmat, (2019) stated many teachers have required an assessment model need to help in implementing CBA. This shows that teachers lack the knowledge to construct assessment items in CBA. They are more geared towards use the worksheets found in activity books rather than constructing the items.

Formative assessment can be conducted spontaneously when the teacher notices the students' behavior on their learning, and it will allow them to communicate with them directly (Mazlini & Noorfazelawati, 2019). Planned formative assessment includes activities such as quizzes and homework assignments that are given to assess students' current learning progress (Dixson & Worrell, 2016). The variety of activities in formative assessment throughout teaching and learning processes provides an opportunity for teachers to get to know the students'

abilities and cognitive abilities well and to be able to provide reinforcement, enrichment, and recovery exercises according to the needs of the students in the class being taught. Classroom based assessment can also be conducted using summative assessment periodically. Summative assessment is conducted at the end of each learning unit, term, month, or year to test students' mastery during learning.

Classroom based assessment is not something that is easy to master. Furthermore, there is no clear agreement among experts on the aspects that teachers need to master in CBA. This situation may be due to its very wide coverage of the curriculum, in addition to the diversity of the context in which the teacher is, making it difficult for experts to reach a consensus on the aspects of CBA need to be mastered by the teacher.

Many studies have been conducted to identify the experts' opinion on the aspects of classroom based assessment for teachers to use as a guide. among the ideas are, that teachers need to master their planning in conducting the assessment itself (Abu Bakar & Bhasah, 2008; Stiggins & Duke, 2008), instrument construction (Alkharusi et al., 2012), administration of the assessments (Gonzales & Fuggan, 2012), assessing standard performance (Airasian & Russell, 2008), scoring and grading (Chen & Bonner, 2017), statistical analysis (Alkharusi, 2012), intervenstions after the assessment (Suah 2012), use of t instructional technology (Airasian & Russell, 2008), and ethics in (Brookhart, 2011).

Various assessment methods are required to measure the achievement of learning objectives (Kalai, 2020; Noorzeliana, 2016: Tan & Husaina, 2020). Most teachers are also seen not using the CBA results as needed intervention as improvement as well as well documented reporting to parents and students (Norazilawati et. al, 2015). This indicates that the process of classroom based assessment conducted by teachers has not reached the performance standard as per stated in the curriculum (KPM, 2016). Priority must be given to these issues since the implementation of classroom based assessment is the main agenda of the KPM to prepare the young generation of Malaysia to face the needs of the 21st century (KPM, 2017; 2018; KPM 2019).

Certain studies have shown that the classroom assessment practices implemented by some teachers are still unsatisfactory. Teachers' assessment practices are said to be more geared towards traditional assessment (Suah et al., 2010; Varatharaj, 2015; Acar-erdol & Yıldızlı, 2018), does not comply with valid classroom based assessment practice procedures (Wiliam & Thompson, 2017; Arumugham, 2019) and implementing these assessments are simply to comply with instructions from the superiors (Looi-Chin & Soubakeavathi, 2013) to meet the requirements of giving marks to students (Fakhri & Mohd Isha, 2016) without understanding the real purpose of classroom based assessment being conducted (Acar-erdol & Yıldızlı, 2018).

Therefore, this study has been conducted by looking into the effectiveness of the classroom based assessment on students' outcome , especially among the B40 pre-schoolers and primary school students. Implementation of classroom based assessment is for the development of the students themselves. (Hawe & Dixon, 2017).This will give a clear picture regarding the student's learning progress. Overall, the classroom based assessment is implemented as suggested by MoE, but there are some issues that need to be addressed. One of the obvious ones is the inconsistency of teachers implementing it. There are teachers who implement these assessments as motivation for the students in learning while there are others who focuses on only the performance standard (Tahap Penguasaan) . Although these two aspects are important , the focus on performance standard (Tahap Penguasaan) causes teachers to pay less attention to the process of students' learning development.

Research Objectives

The objective of this study is to identify the effectiveness of the classroom based assessment on students' outcome , especially among the B40 pre-schoolers and primary school students. Specifically, the objectives of this study are :

- To identify the implementation level of Classroom Assessment (CBA) based on context dimension (teaching environment, infrastructure and time allocation) at pre-schools and primary schools.
- To identify the implementation level of Classroom Assessment (CBA) based on input dimension (teacher readiness and acceptance) at pre-schools and primary schools.

- To identify the implementation level of Classroom Assessment (CBA) based on process dimension (teaching methods and standard reporting system) at pre-schools and primary schools.
- To identify the effect of the implementing Classroom Based Assessment B40 pre-schoolers' and primary school students' achievement (knowledge, skills and attitudes).
- To identify the difference in the classroom based assessment implementation level based on the dimensions of context, input, process and according to the demographics (type of school and location) in pre-schools and primary schools.
- To identify the relationship between the factors in the dimensions of context, input and process that affects the dimension of product while implementing Classroom Based Assessment in pre-schools and primary schools.
- To identify the challenges faced and suggestions for improving the implementation of Classroom Based Assessment in pre-school and primary school.

Research Questions

The research questions of this study are as stated below.

- What is the implementation level of Classroom Assessment (CBA) based on context dimension (teaching environment, infrastructure and time allocation) at pre-schools and primary schools?
- What is the implementation level of Classroom Assessment (CBA) based on input dimension (teacher readiness and acceptance) at pre-schools and primary schools?
- What is the implementation level of Classroom Assessment (CBA) based on process dimension (teaching methods and standard reporting system) at pre-schools and primary schools?
- What is the effect of the implementing Classroom Based Assessment among the B40 pre-schoolers' and primary school students' achievement (knowledge, skills and attitudes)?
- What is the difference in the Classroom Based Assessment implementation level based on the dimensions of context, input, process according to the demographics (type of school and location) in pre-schools and primary schools?
- What is the relationship between the factors in the dimensions of context, input and process that affects the dimension of product while implementing Classroom Based Assessment in pre-schools and primary schools?
- What are the challenges faced and suggestions for improving the implementation of Classroom Based Assessment in pre-school and primary school?

Research Hypotheses

- Ha1: There are differences in the Classroom Based Assessment implementation level based on the dimensions of context, input, process according to the demographics (type of school and location) in pre-schools and primary schools.
- Ha2: There is a relationship between the factors in the dimensions of context, input and process that affect the dimension of product in the Classroom Based Assessment implementation in pre-schools and primary schools.

METHODOLOGY

This study was carried out using a mixed method analysis which involves a combination of qualitative and

quantitative research and using questionnaires, observations and interviews as a data collection process (Tashakkori et al, 2003; Wiersma et al, 2005). The quantitative part of the research was conducted using CIPP evaluation model by Stufflebeam (1971). The sample is part of the total population that has the same characteristics as the population taken based on a certain procedure and can represent the population (Soran, 2015). The population of this study is 236,993 teachers who teach in 7780 primary schools (including preschool) in Malaysia (Source: KPM e-Operation Data, 2021).

According to Cohen's Size Determination Table, if the population size is over 100 thousand, then the required sample size is 384 people for a study with a confidence level of 99% and a significance level of 0.05. Therefore this study will take 384 teachers as a sample using the cluster sampling method. The research instrument is a questionnaire that was adapted and modified from previous studies related to this study. A pilot study was carried out on the instrument after expert confirmation is made. According to Mohd. Najib (2003), the number of respondents of 15 to 20 people is sufficient for validity and reliability analysis. Therefore this study will involve 20 respondents who have almost the same characteristics as the actual study respondents to conduct a pilot study. Cronbach's Alpha value:

Constructs	**Instrument**	**Alpha Cronbach**
B	Dimensi Konteks	.895
C	Dimensi Input	.943
D	Dimensi Proses	.954
E	Dimensi Produk	.883

The data collection procedure was carried out from November to December 2022 via google form. This method was chosen since this is the easiest way to get data in the country's situation under the threat of the Covid-19 Pandemic. This method is also very suitable for studies that involve a large number of respondents, and from different school backgrounds throughout Malaysia. In addition, this study also had used qualitative data to support the quantitative findings that will be collected by conducting interviews with 6 teachers from the selected schools.

The measurement scales involved in this study are the Nominal Scale and the Ordinal Scale. The nominal scale was used to collect the demographic data of the respondents while the ordinal scale in this study was a 5-point Likert scale, namely 1- Strongly disagree, 2-Disagree, 3-Not sure, 4-Agree and 5-Strongly agree. Descriptive and inferential analysis will be done using the Statistical Package for Social Science (SPSS) software to obtain mean values, percentages, t-values and r-values. Table 1 shows how to analyse the data that will be used in this study.

Table 1: Data Analysis Procedure

Research Objectives	Data Analysis
Identifying the implementation level of Classroom Assessment (CBA) based on context dimension (teaching environment, infrastructure and time allocation) at pre-schools and primary schools.	Mean Score, Percentage
To identify the implementation level of Classroom Assessment (CBA) based on input dimension (teacher readiness and acceptance) at pre-schools and primary schools.	Mean Score, Percentage
To identify the implementation level of Classroom Assessment (CBA) based on process dimension (teaching methods and standard reporting system) at pre-schools and primary schools.	Mean Score, Percentage
To identify the effect of the implementing Classroom Based Assessment	Mean Score, Percentage

B40 pre-schoolers' and primary school students' achievement (knowledge, skills and attitudes).	
To identify the difference in the classroom based assessment implementation level based on the dimensions of context, input, process and according to the demographics (type of school and location) in pre-schools and primary schools.	t-Test
To identify the relationship between the factors in the dimensions of context, input and process that affects the dimension of product while implementing Classroom Based Assessment in pre-schools and primary schools?	r Value (Pearson Correlation Coefficient/Multiple Regression Analysis

For the descriptive analysis that had been carried out, study uses the mean score interpretation formulated by Landell (1997) to determine the implementation level of Classroom Based Assessment (CBA).

Table 2 :Interpretation of Mean Score.

Mean Score	Level
1.00-2.33	Low
2.34-3.66	Average
3.67-5.00	High

Landell (1997)

Research Findings

Table 3 Respondents' Profile

Characteristics	Classification	Frequency	Percentage %
Gender	Male	101	25.3
	Female	299	74.8
Teaching Experiences	< 10 years	122	30.5
	11-20 years	154	38.5
	21-30 years	90	22.5
	31-40 years	34	8.5
Education Level	Bachelors' Degree	329	82.3
	Masters' Degree	71	17.8
	Doctor of Philosophy	0	0
Teaching Option	Malay	66	16.5
	English	14	3.5
	Science	164	41.0
	Mathematics	37	9.3
	History	0	0
	Others	119	29.8

Type of Schools	National School	316	79.0
	Chinese Vernacular School	78	19.5
	Tamil Vernacular School	6	1.5
Classes Taught	Pre School	22	5.5
	Primary School	378	94.5
School Location	Urban	204	51.0
	Rural	196	49.0
Num of B40 students	0-10 students	141	35.3
	11-20 students	134	33.5
	21-30 students	76	19.0
	31-40 students	49	12.3

Table 3 shows majority of the respondents are female (74.8%) and only 25.3 % are male. A total of 38.5% of the respondents have had 11-20 years of teaching experiences. Meanwhile the highest percentage of them are teachers with a Bachelors Degree. (82.3%).Most of them are teachers who specialises in Science subject at their respective schools (41.0%). Around 79.0% teachers come from National School background. Total respondents from preschools is 5.5% and primary school is 94.5%.Most of the school is located in the urban area (51.0%). Looking into the number of B40 students in each classes in these respective respondents, most of them has 0-10 students in their classes, around 35.3% of them.

Research Objective 1: To identify the implementation level of Classroom Assessment (CBA) based on context dimension (teaching environment, infrastructure and time allocation) at pre-schools and primary schools.

Based on Table 3, the mean to identify the level of implementation of Classroom Assessment (CBA) from the context dimension (teaching environment, infrastructure, and time allocation) have produced high mean score value (M=3.93). The average mean value is produced by the fourth item, the time allocation for implementing Classroom Assessment (CBA) at school is sufficient mean = 3.59 (SP=0.901). The highest mean score is produced by the first item, which discusses the schoolwork environment (support of administrators, cooperation of colleagues) that helps in implementing Classroom Assessment (CBA), mean = 4.26 (SP = 0.626).

Table 4: Mean, Mean Score and Standard Deviation of the implementation level of Classroom Based Assessment (CBA) from the context dimension (Teaching Environment, Infrastructure and Time Allocation)

Nu	Item Dimension of Context	Mean	Mean Score	Standard Deviation
1	The work environment at the school (support of administrators, cooperation of colleagues) helps me in implementing Classroom Based Assessment (CBA)	4.26	High	0.62
2	I can implement Classroom Based Assessment (CBA) both inside and outside of the classroom	4.25	High	0.60
3	The school provides facilities (classrooms, laboratories, workshops, resource rooms, ICT materials) that help me implement Classroom Based Assessment (CBA).	4.12	High	0.76
4	The time allocation for implementing Classroom Based Assessment (CBA)is sufficient.	3.59	Average	0.90

5	I set up a Classroom Based Assessment (CBA) corner in class (exhibiting student work)	3.69	High	0.87
6	The number of students in my class is suitable for implementing Classroom Based Assessment (CBA).	3.71	High	1.02
	Total Mean Score	**3.93**	**High**	

Research objective 2: To identify the implementation level of Classroom Based Assessment (CBA) based on input dimension (teacher readiness and acceptance) at pre-schools and primary schools.

Based on Table 5 as a whole it shows the mean level of implementation of Classroom Based Assessment (CBA) from the input dimension (teacher's readiness and acceptance) is at a high level with a mean score value is (M = 4.04). The highest mean is contributed by second item, I can implement PBD in formative and summative way, which the value of mean is mean = 4.20 (SP = 0.625).

Table 5 Mean, Mean Score and Standard Deviation of the implementation level of Classroom Assessment (PBD) from the input dimension (Teacher Readiness and Acceptance)

Nu	Item Dimension of Input	Mean	Mean Score	Standard Deviation
1	I have the knowledge on the concept of implementing Classroom Based Assessment (CBA) in the subjects I teach.	4.13	High	0.59
2	I can implement PBD in formative and summative way	4.20	High	0.62
3	I took the initiative to improve Classroom Based Assessment practices	4.11	High	0.62
4	I can give ideas on improving the Classroom Based Assessment (CBA) implementation process in my school	3.98	High	0.64
5	I have integrity in implementing Classroom Based Assessment (CBA) by referring to the standard performance stated in the subject's DSKP	4.09	High	0.63
6	I can provide in-service training- LADAP regarding Classroom Based Assessment (CBA)	3.78	High	0.77
	Total Mean Score	**4.04**	**High**	

Research objective 3: To identify the implementation level of Classroom Assessment (CBA) based on process dimension (teaching methods and standard reporting system) at pre-schools and primary schools.

Table 6 shows the mean of the implementation level of Classroom Based Assessment (CBA) through online platform for the dimension of process (teaching methods and standard reporting system) is at high level with a mean score value is (M = 4.06). The highest mean lies in the seventh item, I can explain to parents about the student's performance standard with a value of mean = 4.14 (SD = 0.814).

Table 6 Mean, Mean Score and Standard Deviation of the implementation level of Classroom Based Assessment (CBA) through online platform for dimension of process (Teaching Methods and Standard Reporting System)

Nu	Item Dimension of Process	Mean	Mean score	Standard Deviation
1	I can implement Classroom Based Assessment (CBA) based on the methods	4.12	High	0.56

	recommended in the KPM CBA Implementation Guidebook (observation, oral and written).			
2	I can formulate Classroom Based Assessment (CBA) instruments according to the students' level of readiness.	3.98	High	0.67
3	I can plan lessons based on Content Standards and Performance Standards in the DSKP of the subjects being taught.	4.12	High	0.61
4	I can analyze Classroom Based Assessment data to plan interventions for students who have not reached the minimum performance standard.	4.07	High	0.61
5	I can follow-up with the student's performance standard and their learning style through differentiated learning strategies.	3.99	High	0.66
6	I can complete the Classroom Based Assessment (CBA) template transparently.	4.00	High	0.68
7	I can explain to parents about the student's performance standard confidently.	4.14	High	0.81
	Total Mean Score	**4.06**	**High**	

Research objective 4: To identify the effect of the implementing Classroom Based Assessment on B40 pre-schoolers' and primary school students' achievement (knowledge, skills and attitudes)-Dimension of product.

Table 7, the overall effect on the implementation of the Classroom Based Assessment (CBA) on B40 preschooler's and primary school students' achievement (knowledge, skills, and attitudes) is high with a high mean score where the mean value is (M = 3.89). The highest mean was contributed by the first item which is: My students can give responses that lead to critical and creative thinking related to the content of the lesson with the value of mean = 4.15 (standard deviation = 0.631).

Table 7 Mean, Mean Score and Standard Deviation of the effect of the implementing Classroom Based Assessment on B40 pre-schoolers' and primary school students' achievement (knowledge, skills, and attitudes)-Dimension of product.

Num	**Item Dimension of Product**	**Mean**	**Mean Score**	**Standard Deviation**
1	My students can give responses that involves critical and creative thinking related to the content of the lesson.	4.15	High	0.63
2	My students can communicate in carrying out learning activities.	3.79	High	0.68
3	My students can carry out collaborative learning activities.	3.92	High	0.59
4	My students can ask questions related to the content of the lesson.	3.92	High	0.63
5	My students can relate the content of the lesson to their lives/local/global issues.	3.76	High	0.67
6	My students can make decisions / solve problems related to the assigned tasks.	3.84	High	0.61
	Total Mean Score	**3.89**	**High**	

Research objective 5 : To identify the difference in the classroom-based assessment implementation level based on the dimensions of context, input, process and product according to the demographics (type of school and location) in pre-schools and primary schools.

Based on Table 8, a one-way variance analysis was performed to explore the impact of between type of school on the dimension of context. Findings show that there is a significant difference at the $p < 0.05$ level for the context dimension, $F(2,397) = 16.756$, $p = .002$. Post Hoc comparison using the Scheffe Test shows that there is a significant mean score difference between the National Schools (Mean = 3.96, SD = 0.54) with SJK (Chinese) (Mean = 3.83, SD = 0.53) with SJK (Tamil) (Mean = 3.91, SD = 0.50).

Table 8 Differences in types of school based on the dimension of context.

Category	N	Mean	Standard Deviation
National Type School	316	3.96	0.54
Chinese Vernacular School	78	3.83	0.53
Tamil Vernacular School	6	3.91	0.50

Table 8.1 ANOVA test of CBA implementation based on the dimension of context for different types of school.

	Sum of squares (SS)	Degree of Freedom	Mean Sum of Square	F Ratio	Sig
Between Groups	2.966	2	2.593	16.756	.002
Within Groups	90.307	397	.287		
Total	93.545	399			

Table 8.2 Scheffe's Post Hoc Test Results of CBA implementation based on the dimension of context dimension for different types of school.

Types of School (I)	Types of School (J)	Difference of Mean (I-J)	Sig
National Type School	Chinese Vernacular School	.23394*	.002
	Tamil Vernacular School	.05274	.764
Chinese Vernacular School	National Type School	-.23394*	.002
	Tamil Vernacular School	-.08120*	.879
Tamil Vernacular School	National Type School	. 23394*	.002
	Chinese Vernacular School	.08120	.764

*sig: 0.05

Based on table 9, a one-way variance analysis was carried out to explore the impact of types of school based on the dimension of input. Findings have shown that there is a significant difference at the $p < 0.05$ level against the dimension of input, $F(2,397) = 16.266$, $p = .002$. Post Hoc comparison using the Scheffe Test shows that there is a significant mean score difference between the National Type Schools (Mean = 4.05, SD = 0.59) with Chinese Vernacular School (Mean = 4.02, SD = 0.54) with Tamil Vernacular School (Mean = 4.19, SD= 0.71).

Table 9 Differences in types of school based on the dimension of input.

Category	N	Mean	Standard Deviation
National Type School	316	4.05	0.59
Chinese Vernacular School	78	4.02	0.54
Tamil Vernacular School	6	4.19	0.71

Table 9.1 ANOVA test of CBA implementation based on the dimension of input for different types of school.

	Sum of squares (SS)	Degree of Freedom	Mean Sum of Square	F Ratio	Sig
Between Groups	2.874	2	2.563	16.266	.002
Within Groups	90.107	397	.256		
Total	93.233	399			

Table 9.2 Scheffe's Post Hoc Test Results of CBA implementation based on the dimension of context for different types of school.

Types of School (I)	Types of School (J)	Difference of Mean (I-J)	Sig
National Type School	Chinese Vernacular School	.22549*	.002
	Tamil Vernacular School	-.14117	.782
Chinese Vernacular School	National Type School	-.22549*	.002
	Tamil Vernacular School	-.16667	.563
Tamil Vernacular School	National Type School	. 22549*	.002
	Chinese Vernacular School	. 16667	.563

*sig: 0.05

Based on table 10, a one-way variance analysis was carried out to explore the impact of types of schools on the dimensions of context. Findings show that there is a significant difference at the $p < 0.05$ level for the dimension of process, $F(2,397) = 16.429$, $p = .002$. Post Hoc comparison using the Scheffe Test shows that there is a significant mean score difference for National Type Schools (Mean = 4.05, SD = 0.59) with Chinese Vernacular School (Mean = 4.02, SD = 0.54) with Tamil Vernacular School (Mean = 4.19, SD = 0.71).

Table 10 Differences in types of school based on the dimension of process.

Category	N	Mean	Standard Deviation
National Type School	316	4.10	0.59
Chinese Vernacular School	78	3.89	0.54
Tamil Vernacular School	6	4.14	0.58

Table 10.1 ANOVA test of CBA implementation based on the dimension of process for different types of school.

	Sum of squares (SS)	Degree of Freedom	Mean Sum of Square	F Ratio	Sig
Between Groups	2.922	2	2.461	16.429	.002
Within Groups	90.207	397	.227		
Total	93.128	399			

Table 10.2 Scheffe's Post Hoc Test Results of CBA implementation based on the dimension of process for different types of school.

Types of School (I)	Types of School (J)	Difference of Mean (I-J)	Sig
National Type School	Chinese Vernacular School	.21475*	.002
	Tamil Vernacular School	-.03617	.983
Chinese Vernacular School	National Type School	-.21475*	.002
	Tamil Vernacular School	-.25092	.463
Tamil Vernacular School	National Type School	. 03617	.983
	Chinese Vernacular School	. 25092	463

*sig: 0.05

Based on Table 11, one-way variance analysis was performed to explore the impact of school type based on dimension of product. Findings show that there is a significant difference at the level of $p < 0.05$ for the dimensions of product, $F(2,397) = 16.529$, $p = .002$. Post Hoc comparison using the Scheffe Test shows that there is a significant difference in mean scores for National Type School (Mean = 3.88, SD = 0.52) with Chinese Vernacular School

(Mean = 3.97, SD = 0.51) with Tamil Vernacular School (Mean = 3.86, SD = 0.57).

Table 11 Differences in types of school based on the dimension of product.

Category	N	Mean	Standard Deviation
National Type School	316	3.88	0.52
Chinese Vernacular School	78	3.97	0.51
Tamil Vernacular School	6	3.86	0.57

Table 11.1 ANOVA test of CBA implementation based on the dimension of product for different types of school.

	Sum of squares (SS)	Degree of Freedom	Mean Sum of Square	F Ratio	Sig
Between Groups	2.989	2	2.891	16.529	.002

Within Groups	92.207	397	.248		
Total	93.266	399			

Table 11.2 Scheffe's Post Hoc Test Results of CBA implementation based on the dimension of product for different types of school.

Types of School (I)	Types of School (J)	Difference of Mean (I-J)	Sig
National Type School	Chinese Vernacular School	.21475*	.002
	Tamil Vernacular School	-.03617	.863
Chinese Vernacular School	National Type School	-.21475*	.002
	Tamil Vernacular School	-.25092	.358
Tamil Vernacular School	National Type School	. 03617	.863
	Chinese Vernacular School	. 25092	.358

*sig: 0.05

Table 12 shows an independent sample t-test has been implemented to compare whether there is a difference in the level of CBA implementation for the dimensions of context, input, process, and product related to the location of schools. There is a significant difference in the mean score of the dimension of context with the location of the school where the mean score of urban schools (Mean = 4.04, SD = 0.48) and rural schools (Mean = 3.83, SD = 0.49; t (3.98) = 4.401, p = .000 more smaller than 0.05.

There is a significant difference in the mean score of the dimension of input based on the location of the school where the mean score of urban schools (Mean = 4.16, SD = 0.60) and rural school (Mean = 3.92, SD = 0.45; t (3.98) = 4.533, p = .000, smaller than 0.05. There is a significant difference in the mean score of the dimension of process with the location of the school where the mean score for urban schools (Mean = 4.18, SD = 0.52) and rural schools (Mean = 3.93, SD = 0.39; t (3.98) = 5.474, p = .000 smaller than 0.05. There is a significant difference in the mean score of the dimension of product with the location of the school where the mean score for urban schools (Mean = 3.92, SD = 0.50) and rural schools (Mean = 3.86, SD = 0.46; t (3.98) = 5.655, p = .000 smaller than 0.05.

Table 12 An independent sample t-test of differences in the level of CBA implementation from the context, input, process, and product dimensions based on location of school demographics.

Demographics	Factor	N	Mean	Standard Deviation	Df	t-value	Sig
Dimension of Context	Urban	204	4.04	0.48	398	4.401	.000
Location	Rural	196	3.83	0.49			
Dimension of Input	Urban	204	4.16	0.60	398	4.533	.000
Location	Rural	196	3.92	0.45			

	Urban						
Dimension of Process	Rural	204	4.18	0.52	398	5.474	.000
Location		196	3.93	0.39			
	Urban						
Dimension of Product	Rural	204	3.92	0.50	398	5.655	.000
Location		196	3.86	0.46			

In summary, there is a difference in the level of Classroom Based Assessment implementation from the dimensions of context, input, process, and product based on demographics, type of school and the location of the school. National type schools were found to have a higher level of CBA implementation than Chinese vernacular schools and Tamil vernacular schools, while an urban school had a higher level of Classroom Based Assessment implementation than rural schools. Therefore, Ha1, that discusses the differences in the Classroom Based Assessment implementation level based on the dimensions of context, input, process according to the demographics (type of school and location) in pre-schools and primary schools is accepted.

Research Objective 6: To identify the relationship between the factors in the dimensions of context, input and process that affects the dimension of product while implementing Classroom Based Assessment in pre-schools and primary schools.

Table 13 Pearson correlation coefficients (r) Cohen (1988)

r Value	Relationship Interpretation
0.10 - 0.29	Weak
0.30 - 0.49	Moderate
0.50 - 1.0	Strong

+1.00<r<-1.00

Based on Table 14, Pearson's Correlation test was also conducted to find the relationship between the four variables, which are the dimension of context, input, process, and product. Analysis of the variable relationship between the dimension of context dimension and input shows that the r value is 0.503 or 50.3 percent at the 99 percent confidence interval found a strong relationship. Analysis of the relationship between the dimension of context and process shows that the r value is 0.547 or 54.7 percent at the 99 percent confidence interval, revealing a strong relationship. The analysis of the relationship between the context dimension and the product dimension also shows that the r value is 0.516 or 51.6 percent at the 99 percent confidence interval concludes a strong relationship.

Pearson's Correlation Test was conducted to identify of the relationship between the dimensions of input with the context. It showed the value of r is 0.503 or 50.3 percent at the 99 percent confidence interval that had proved a strong relationship. The analysis of between the dimension of input and process showed that the r value is 0.658 or 65.8 percent on the confidence interval proves a strong relationship. The analysis of the relationship between the dimension of input and product showed that the r value is 0.554 or 55.4 percent at the 99 percent confidence interval, proving a strong relationship.

Pearson's Correlation Test was implemented to find the relationship between the dimension of process and context showing the r value is 0.547 or 54.7 percent at the 99 percent confidence interval confirming a strong relationship. Analysis of the relationship between the dimension of the process and input shows that the r value is 0.658 or 65.8 percent at the 99 percent confidence interval, confirming a strong relationship. Analysis between

the dimension of process and product shows that the r value is 0.577 or 57.7 percent at 99 percent confidence interval concluding a strong relationship.

Table 14 Pearson's correlation between the dimension in context, input and process that affect the dimension of product on Classroom Based Assessment (CBA) implementation in pre-school and primary school.

		Context	Input	Process	Product
Context	Pearson Correlation	1	.503**	.547**	.516**
	Sig. (2-tailed)		.000	.000	.000
	N	400	400	400	400
Input	Pearson Correlation	.503**	1	.658**	.554**
	Sig. (2-tailed)	.000		.000	.000
	N	400	400	400	400
Process	Pearson Correlation	.547**	.658**	1	.577**
	Sig. (2-tailed)	.000	.000		.000
	N	400	400	400	400
Product	Pearson Correlation	.516**	.554**	.577**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	400	400	400	400

**Correlation is significant at the 0.01 level (2-tailed)

In summary, the findings from the Pearson Correlation analysis had indicated that there is significant relationship between context, input , process and the dimension of product while implementing Classroom Based Assessment in pre-schools and primary schools. Therefore, Ha2 that discusses the relationship between the factors in the dimensions of context, input and process that affect the dimension of product in the Classroom Based Assessment implementation in pre-schools and primary schools is accepted.

Research objective 7: To identify the advantages, challenges, and suggestions for improving the implementation of Classroom Based Assessment in pre-school and primary school.

Based on analysis of interviews with selected respondents, the answers and opinions of teachers can be grouped into 3 main ideas, which are : the advantages of conducting the classroom based assessment, the challenges faced by it and the intervention towards overcoming the issues faced implementing classroom based assessment.

- The advantages of implementing classroom based assessment among B40 pre-schoolers and primary school students.

Classroom Based Assessment (CBA) involves a comprehensive approach to evaluation. It takes into account the cognitive, emotional and communication skills of students and teachers. This type of assessment targets on complete understanding of the students' strengths, weakness and interests. Classroom Based Assessment (CBA) involves an evaluation process that is carried out in stages, where teachers will have to identify the students' strengths and weakness before administering any assessment to them. This will allow students to be more engaged and prepared for it. Classroom based assessment allow teachers to determine their students' learning styles and interests. Teachers can monitor and follow the progress of individual students and provide feedback about students' achievement. Classroom Based Assessment (CBA) will help in discovering what students have learned and what they still need to learn. It also helps teachers to decide what to teach next in their coming

lessons. This assessment tool can be as an evaluation method to test the effectiveness of their teaching methods. The respondents also had mentioned that CBA will enable teachers to give feedback to parents and also other teachers together with other professionals to provide more effective intervention to improve their teaching and learning strategies.

- The challenges of Classroom Based Assessment (CBA) implementation against the occurrence of B40 pre-schoolers and primary school students.

Classroom Based Assessment (CBA) is difficult to implement when the teachers themselves are not well informed. Lacking of knowledge and understanding on Classroom Based Assessment among teachers had contributed in feeling of disassociation towards it. The implementation of assessment is also disrupted when teachers do not know how to use the correct assessment techniques and methods. This system is still new and teachers have not yet been able to master this assessment method better. It becomes more complicated when there are many improvements made by the Ministry of Education in improving this assessment system in a direction that is easier and does not burden teachers. Students achievement which is poor had also contributed towards the challenges. Without any standard examination format to assess them, students are still grasping the meaning classroom based assessment, therefore they don't put enough effort in completing those instruments given. Students attitude of not completing the given task or assignment also is an important issue that need to be overcome by the teachers. Lack of understanding of the indicators, standard performance given based on the DSKP had made it even more difficult for teachers to implement and assess those students. Sadly, many teachers are handling too many students in one classroom. These students are with different learning abilities, thus making it more difficult for the teachers to administer the assessment, because Classroom Based Assessment should not be carried out with one size fits all type of assessment. Even after meticulous preparation of the assessment worksheets, teachers are finding it difficult to conduct the classroom based assessment in their classes when the school is still struggling with the students' attendance issues. The high number of absentees have also dampened the process of classroom based assessment process altogether. The support from parents and guardians plays a big part in hindering the process of conducting the classroom based assessment. Parents are not interested in the end product of the classroom based assessment since they don't understand the indicators of the standard performance. Many are still familiar with the grading system when our nation was still mostly exam orientated.

- Suggestions to overcome the issues faced by teachers implementing classroom based assessment towards better student outcome specifically for B40 pre-schoolers and primary school teachers.

Teacher empowerment and autonomy must be upgraded for the process of classroom based assessment where they are enforced with knowledge and skills needed. Teachers should be sent to advance level training so that they are able to handle any given situations in their classroom while they carry out the assessments. The training will enable teachers to become more creative in developing assessment methods and worksheets for their students according to their learning abilities. Implementing project based learning during lessons will allow teachers to carry out assessments more holistically and conveniently. Students are exposed to new and fun way of learning through project based learning method. Meanwhile parents must be given more exposure and information on the real meaning and functionality of Classroom Based Assessment. This will allow them to help the teachers at school to carry out the assessment with full support. In the administrative level, some contents in the DSKP must be looked into and revised to identify the suitability together with the relevancy of the content for the students. Identifying these needs will help the teachers to carry out assessments with more ease. The process of counter checking the indicators of assessment (standard performance) must be carried out with full integrity at schools, involving the heads of the schools and other head of subjects at school (Penjaminan Kualiti). This will allow the outcome of the assessments are valid thus will at the end ensure the effectiveness of the assessment towards the students' outcome.

DISCUSSION

According to Yates and Johnston (2018), examination approach is less suitable to be practiced in the education system since each student has different potential and abilities. Therefore a more holistic approach that requires a relatively long period of time is needed to identify the abilities and potential of these students. Students are seen to have more interest and fun in learning when they do not have an excessive burden of exams and focusing

doing activities such as presentations, project-based learning which in the end will provide more meaningful learning (Tong, 2016). In the implementation of Classroom Based Assessment, aspects of student outcome are emphasized since only through assessment students are able to show changes in learning (Sidhu, Kaur & Chi, 2018).

Assessment is a tool or technique to collect information that are related to the students' learning and outcome. In other words, assessment is how teachers assess student learning. Gareis and Grant's book (2015) links assessment with learning where they state that assessment does not only play a role as a tool for measuring student learning, but also as a tool for student learning. Scott (2020) states that assessment drives learning. Close collaboration between students, educational organizations, learning curriculum and the use of appropriate assessment and feedback is important in supporting learning and improving student performance indirectly.

This study has shown a similar result with the study conducted by Julian@Juliana George Jette and Mohd Izham Mohd Hamzah (2020) that involved 300 head teachers from 1090 rural primary schools in Sarawak. The study shows a significant relationship at a moderate level between the teacher's teaching and learning assessment and student achievement from the aspect of academic achievement, co-curricular achievement and student personality achievement.

Most of teachers have agreed that their teaching environment , infrastructure and time allocated are very conducive for them to conduct Classroom Based Assessment with their students. Many also have agreed that teacher readiness and acceptance have helped tremendously in conducting those assessments in their classrooms since they have enough knowledge and skills and not forgetting their initiative to conduct the assessment creatively. Effective teaching method and a standardised reporting system had also helped many teachers to conduct classroom based assessment without much issues. The strategic use of DSKP and the teachers' skills in designing assessment method had helped in creating meaningful learning experiences for the students. The effectiveness of the Classroom Based Assessment had been proven by the high mean score in the dimension of product. Students are seen able to think analytically, critically and creatively when asked about their learning process. They are able to connect their learning to their daily life experiences and solve problems by using their own ideas. When looking into the demographic aspect (types of school and location) of conducting the Classroom Based Assessment, it has been proven that National Type Schools are more efficient than the Chinese and Tamil Vernacular Schools. Meanwhile urban schools have reported that they are more efficient in conducting these assessment compared to rural schools. The evaluation study that has been conducted here have proven that the Dimension Of Context(Teaching environment, infrastructure, time allocation) Dimension Of Input (Teacher readiness and Acceptance) and Dimension Of Process (Teaching method and Standard reporting system) have strong relationship towards students outcome (Dimension of Product).

CONCLUSION

Activities carried out during the process of assessment will be able to help to improve students' skills in addition to shaping students' development (Kalai Selvan, 2020). This has similarities with Bandura's Social Learning Theory (Bandura, 1977) which states that students observe and store the information seen in the mind and later will display the behaviour. Assessment done effectively can provide useful data and an accurate level of student mastery for teachers (Ramlah Ab. Khalid, Jamil Ahmad &Analisa Hamdan, 2015). Continuous assessment throughout the year enables teachers to play the role of assessor to ensure the development and mastery of student learning (Ministry of Education Malaysia, 2016).

Assessment refers to the process of giving meaning to the evaluation and later identify the need for rehabilitation, strengthening or enrichment and then scoring or grading the evidence obtained to represent the student's actual performance. Continuous assessment represents a system that assesses the quality of student work at each level. Assessment is the activity of gathering information about a person's abilities and making decisions about his performance (Zainuriyah, 2013). This activity assesses student performance across three aspects, namely knowledge, skills and attitudes (Mohd Faizal Nizam Lee et al., 2019). The teachers need to use their assessments well so that the determined student performance is in line with the actual student performance. Effective assessment helps teachers know the level of student learning and also the effectiveness of the teacher's teaching.

Based on the research findings, the study had concluded that

- Dimension of context : The implementation level of Classroom Assessment (CBA) based teaching environment, infrastructure and time allocation at pre-schools and primary schools is high.
- Dimension of Input: The implementation level of Classroom Assessment (CBA) based on teacher readiness and acceptance)at pre-schools and primary schools is also high.
- Dimension of Process: The implementation level of Classroom Assessment (CBA) based on teaching methods and standard reporting system at pre-schools and primary schools is high.
- Dimension of Product: The effect of the implementing Classroom Based Assessment B40 pre-schoolers' and primary school students' achievement (knowledge, skills and attitudes) is also high
- There is a significant level of difference in the level of Classroom Based Assessment implementation from the dimensions of context, input, process, and product based on demographics, type of school and the location of the school. National type schools were found to have a higher level of Classroom Based Assessment implementation than Chinese vernacular schools and Tamil vernacular schools, while an urban school had a higher level of Classroom Based Assessment implementation than rural schools.
- Pearson Correlation analysis had indicated that there is significant relationship between context, input , process and the dimension of product while implementing Classroom Based Assessment in pre-schools and primary schools

Overall, the research findings that have been obtained can lead to several important implications to the national education scenario since Classroom Based Assessment is one of the important element in the education system. This research to some extent has contributed to the collection of studies related to assessment in particular which is related to the implementation of Classroom Based Assessment by teachers in pre-schools and primary schools which discusses the improvement, mastery, readiness, planning, implementation, acceptance and constraints faced by them in implementing Classroom Based Assessment in schools. With the findings of this study able to provide enlightenment and possible follow-up actions taken to improve the existing Classroom Based Assessment system for it to become more effective and does not further cause burden to the teachers. The results of this study can also be used as one of the more accurate information results for policy makers to further improve Classroom Based Assessment.

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