Incorporating Assessment Moderation in the Malaysian Classroom-Based Assessment (CBA) Teacher Training Module

Jude Tan

School of Linguistics and Applied Language Studies, Victoria University of Wellington, Kelburn, Wellington 6012, New Zealand
judephtan@gmail.com

Abstract. With the urgent need to improvise the specialised training to teachers to ensure competency in implementing changes that are introduced for Classroom-based assessment (CBA) in Malaysia, this paper examines the gap that is present in the teacher training curriculum in the current nationwide movement. To address the underlying problem in relation to issues of the inconsistency in CBA and students’ Performance Level Report, this report investigated the feasibility of the curriculum of the in-service teacher training programme that teachers undergo in conjunction with the implementation of the CBA reform, which is the CBA Teacher Training Programme. Employing the problem-solving approach in developing a curriculum, it identifies the problem and proposes an additional standalone module focusing on assessment moderation to be incorporated in the CBA Teacher Training Module, as potential solution to minimise the inconsistencies in CBA to improve the quality of assessment developed and implemented by teachers and to support them in the radical shift towards heightened accountability and greater transparency in assessments that lie on their shoulders. This paper also contributes to the understanding of ways assessment moderation can be applied in the designing assessment tasks to ensure validity and also in the process of judgement after an assessment task is carried out to ensure reliability and transparency of the students’ Performance Level Report.

Keywords: Classroom-based assessment · CBA · Moderation · Teacher Accountability · Reliability and Validity · Professional Judgement · Quality Assurance · Assessment Education · Teacher Professional Development

1 Introduction

Innovation in the education system is perpetual with the tide of constantly arising new demands and needs from education stakeholders and society that change all the time. Assessment is an important aspect of any curriculum as it provides the means to measure learning progress.

Malaysia’s education system was still largely exam-oriented in the 1990s, with students’ (and teachers’) performance being judged by the test results (Aziz et al. [1]).
However, in recent years, Malaysia has been gradually moving away from the multi-decade tradition of exam-oriented practice and has recently decided to abolish public exams for primary schools in 2021. Albeit this nationwide movement, the implementation of Classroom-based assessment (CBA) or [Pentaksiran Bilik Darjah] since 2016, later revised in 2019 in the CBA Guide (2nd Edition) or [Buku Pentaksiran Bilik Darjah Edisi Ke-2], was introduced with intention to replace the exam-oriented assessment system as part of the reform. By implementing CBA as a continuous process in teaching and learning sessions in the classroom, teachers are able to identify the learning progress, students’ development, skills acquisition, as well as the mastery of curriculum objectives (Tan & Kenayathulla [2]). Teachers can use the data and results obtained from CBA to track their students’ mastery level and improve pedagogical approaches, and also for parents to support their children in self-evaluations to improve their child’s performance in various aspects. However, the implementation of CBA was not smooth sailing, with issues regarding questionable validity and reliability due to inconsistency (Rosli et al. [3]; Tan & Kenayathulla [2]) in the CBA results and students’ Performance Level Report raised by stakeholders despite the series of cascade training programmes provided to the teachers over the years.

Arumugam [4] highlighted the urgent need to provide specialised training to teachers to ensure competency in implementing the changes that are introduced for CBA. Furthermore, Kwiek and Szadkowski [5] suggested that teachers need a longer timeframe to learn and embrace the changes of any curriculum reform.

To address the underlying problem in relation to issues of the inconsistency in CBA and Students’ Performance Level Report, this report investigated the feasibility of the curriculum of the in-service teacher training programme that teachers undergo in conjunction with the implementation of the CBA reform, which is the CBA Teacher Training Programme.

2 The CBA Cascade Training Programme for In-Service Teachers

The Cascade Training Model was considered the ideal choice (Karalis [6]) for the implementation of training for teachers at a large scale in all primary schools nationwide. According to Aziz et al. [1], the term ‘cascade’ is generally used to describe the training programme that occurs in a series or sequence of phases, “where each stage derives from or acts upon the product of the preceding” (p. 2). Since the CBA reform in 2016 and again in 2019, the movement came with packages of CBA training for in-service teachers in national schools throughout the country, in four stages consisting of three tiers (Fig. 1):

The trainers from Curriculum Development Division of MOE consisted of officers who were in charge of the CBA reform project and are well-versed in the overall implementation process of CBA. The Tier 1 training event was attended by State Master Trainers from each of the thirteen states plus two federal territories nationwide, consisting of officers from each State Education Department. Then, these State Master Trainers would deliver the Tier 2 training attended by District Trainers from every district within their respective states. Finally, the District Trainers will deliver the Tier 3 CBA training
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Trainers from the Curriculum Development Division in the Ministry of Education

- Tier 1: State Master Trainers (Officers from each State Education Department)
- Tier 2: District Trainers (Officers from each District Education Office)
- Tier 3: School Teachers

Fig. 1. The CBA Cascade Training Model

to course participants consisting of teachers from schools within their respective districts. The execution of the CBA Teacher Training Programme in each tier lasted for three days (6–7 h of daily sessions) with lunch breaks in between.

In this report, I will focus on the curriculum context of the Tier 3 training programme, where the delivery was predominantly transmissive compared to Tier 1 and Tier 2 courses due to large number course participants (school teachers) in each district. It was difficult for student-centred activities in such settings where the number of course participants from schools within district-level varies from 20 to hundreds for a single District Trainer. Furthermore, due to time constraints in covering content, often the trainers tend to skip a lot of content that they deemed as ‘less-important’ sections within modules to cover all topics by the end of the course. This led to inadequate content delivery that the programme suffered, especially in Tier 3 courses because of the watering down of content from each tier. The watering down of content as it was passed on to course participants is a prevalent concern with the cascade training approach (Hayes [7]).

3 The Curriculum Problem

In addition to tendencies of content dilution, the main curriculum problem that contributed to the issue of questionable validity and reliability of CBA due to inconsistency in the CBA results and students’ performance level report among the teachers (course participants) is the lack of input for “assessment moderation” as an essential component in the CBA Teacher Training Programme.

Primary school teachers in Malaysia generally do not practice moderation or discuss their pupils’ work with each other. In other words, they rarely assess each other’s pupils’ work and there was no collaboration in judgement or evaluation between teachers (inter-raters), even in any school examinations before CBA reform was introduced. Therefore, it is safe to say that moderation is an unfamiliar process or practice among primary school teachers in Malaysia.

There was no standalone slot / lesson or module in the CBA training program specifically allocated for “assessment moderation” component. Although “assessment moderation” was introduced and briefly mentioned among many other new components in the CBA (2nd Edition) Guide by the Curriculum Development Division of the Malaysian Ministry of Education as “the process of determining aspects or criteria in an assessment” (Kementerian Pendidikan Malaysia [8], p. 40), the input was insufficient for teachers to actually understand and embrace this new component in their CBA practices. Moreover,
the way that information was disseminated in the CBA training courses did not really
allow for participants’ adequate exploration and familiarisation with assessment moder-
ation because it was not given enough emphasis or content depth in the teacher training
curriculum.

The concept of moderation in assessment is not new. Saddler [9] claimed that it
is widely practiced in education to improve marker consistency or inter-rater reliabil-
ity by having multiple assessors appraise complex students’ responses in assessment
tasks. Papers have been published over the world (e.g., New Zealand - Smaill, [10] and
in Australia – Beutal et al. [11]; Saddler [9]; Smith, [12]), suggesting that assessment
moderation is an established practice for quality assurance as part of teacher devel-
opment in nationwide curriculums. Smaill [10] emphasised the significance of social
moderation in assessments because the process pools together the experiential and intel-
lectual resources from multiple teachers/assessors through collaborative discussions.
These resources include knowledge and experience in designing assessment tasks, elic-
itng responses from learners, as well as evaluative expertise garnered from their previ-
ous judgements that are comparable (Smaill, [10]). Besides being used as accountability
mechanisms, Beutal et al. [11] viewed assessment moderation as instrinsic to improved
teaching and learning since teaching team members work together to produce a com-
mon understanding of assessment needs, standards, and evidence demonstrating varying
levels of performance.

In the Malaysian CBA context where the assessment landscape has been dramat-
ically altered from standardised high-stakes examination to CBA, the intellectual and
experiential resources of teachers also need to be redefined. In that sense, the process of
social moderation among teachers for assessments enables teachers to collaborate and
share a complex range of knowledge and skills in CBA, which shall contribute to pro-
fessional learning and the overall improvement of assessment competency in this new
landscape. Furthermore, research emphasised that social moderation processes among
teachers does not only improve dependability and utlility of assessment information but
also provides professional learning opportunities (Smaill [10]). The implementation of
CBA in Malaysia carries a radical shift towards heightened accountability and greater
transparency in assessments to the shoulders of classroom teachers, as well as entrench-
ing evidence-based practice in school management using the CBA results, there is a new
need for moderation to support teaching and learning and at the same time addressing
accountability requirements.

4 The Solution

The simple solution to the curriculum problem is to incorporate the “assessment mod-
eration” component as an additional or standalone training module to be included in the
CBA training course. This would grant more emphasis and in-depth focus on the said
aspect in the CBA training course and unlock more learning opportunities for course
participants to familiarise themselves with and acquire adequate knowledge and skills
in practicing assessment moderation in evaluating CBA.
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4.1 Goal, Learning Outcomes and Learning Opportunities

This additional “CBA moderation” module, if supplemented with suitable prescriptions of teaching and learning activities and materials added to the training programme will create learning opportunities for the course participants (CPs) to achieve the following learning objectives, as described in Table 1:

4.2 The “Assessment Moderation” Component in the CBA Training Module

Assessment moderation is an engagement practice where members of a teaching team build a common understanding of assessment standards, criteria and evidence for varying qualities of students’ performance (Adie, Lloyd & Beutel [13]; Grainger & Adie, 2014, in Crimmins et al. [14]). As part of this procedure, instructors participate in a roundtable discussion of student work based on a set of established assessment criteria (DET [15]). In other words, moderation involves collaboration between members of a teaching team and can be seen as a professional development opportunity.

4.2.1 Overview of the “Assessment Moderation” Component in the CBA Training Module

The course component for “assessment moderation” should include an overview to guide the CPs (teachers) and school administrators on how to utilize assessment moderation

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**Table 1. Goal, learning outcomes and learning opportunities.**

<table>
<thead>
<tr>
<th>Learning Outcomes (LO)</th>
<th>Learning Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LO 1:</strong> Use or apply appropriate assessment moderation procedures in developing constructs and items for CBA materials or activities, and evaluation criteria for students’ mastery of learning / performance level.</td>
<td>- Demonstrate this learning by participating in teacher questioning and class discussions. - Seek feedback from peers and trainer on understanding. - Explore ways to extend learning</td>
</tr>
<tr>
<td><strong>LO 2:</strong> Use or apply appropriate assessment moderation procedures in evaluating pupil’s mastery of learning and performance levels.</td>
<td>- Pay attention to assessment moderating scenarios and analyse how teachers moderate CBA (video sample)</td>
</tr>
<tr>
<td><strong>LO 3:</strong> Plan, organize, and/or participate and engage effectively in assessment moderation procedures in the implementation of CBA</td>
<td>- Practice assessment moderation procedures in CBA. - Collaborate with teaching team (peer moderators) in moderation procedures in CBA.</td>
</tr>
</tbody>
</table>
as a method to improve pupils’ growth in language development. It should be applied to support:

1. CBA materials development and promote consistent CBA practices among teachers across classrooms.
2. The development of learning processes and self-regulatory skills to assist pupils in self-evaluation and sense of ownership in their learning.

With assessment moderation in CBA, teachers within a school are able to establish and adopt a consistent and accurate assessment criterion descriptions that can be used to describe pupils’ performance and mastery in learning to stakeholders (school administrators, parents, teachers and pupils). It is important to understand the process of moderation and how it can be applied to improve pupils’ learning outcomes (DET [15]).

4.2.2 Contents of the “Assessment Moderation” Component in the CBA Training Module

Secondly, the course component should include the information for the input of knowledge to raise CPs awareness about different types of moderation practices in assessment and the purposes for each, as follow:

4.2.2.1 Moderation for Assessment and Moderation of Assessment

There are two ways moderation can be applied in CBA: 1. Moderation for assessment, and 2. Moderation of Assessment (DET, [15]). The prior is done before (in preparation for) the CBA activity, while the latter is carried out after the CBA activity.

4.2.2.2 When to apply assessment moderation for CBA and its purposes

CPs should be provided input on when to use moderation within an improvement cycle, with the purpose of making valid and consistent evidence-based decisions in CBA:

**Moderation Before CBA**

Using moderation to align curriculum, teaching pedagogy, assessment and reporting in designing CBA instruments.

- **Moderation for assessment:**
  1. to develop marking guidelines for a learning topic or area that demonstrate how student accomplishment may be connected to the performance levels in the Curriculum Standards and Evaluation Document (DSKP) that is evident in student work samples.
  2. “to determine learning intents and describe learning continuum” (DET [15], p.2) using the Primary School Standard-based Curriculum (KSSR).

Example steps as shown in Fig. 2.

**Purpose:** To establish consensus on what constitutes standard accomplishment and to prepare the teaching and learning lessons and CBA activities within.

The rationale for such steps or a flow chart (e.g., Fig. 2) and “moderation for assessment” to be included as part of the training content is to provide input to help learners gain a clearer picture of how assessment moderation procedures can be used to improve the quality CBA items and constructs, as input for preceding the training activities to achieve **LO 1**. It is also important to help CPs understand that moderation before
CBA activities can help to improve consistency of teacher judgements, accuracy, and reliability of reported results, as well as increase efficiency in the evidence gathering processes of pupils’ learning by improving the quality of the items and constructs of CBA instruments.

**Moderation After CBA**

After CBA activities, moderation can be applied to improve consistency of teacher judgement about pupils’ achievement levels and learning progress. However, if CBA is in the form of practical performances, presentations or any activity that does not involve written work or physical evidence, moderation could be incorporated by having another teacher (moderator) being present when the CBA activity is taking place in the classroom, or by simply having access to a video or audio recording of the event (University of Edinburgh [16]).

**Moderation of assessment:**

1. To develop better understanding of the DSKP among teachers.
2. To collect evidence of pupils’ learning against performance levels in the DSKP from the CBA tasks, portfolios, and other samples of pupils’ work, for cross marking and comparison to marking criteria and rubrics that documents the knowledge and skills being evaluated.
3. To ensure shared accountability among evaluators (teachers) in providing valid, consistent, and credible decisions in judgement to pupils’ learning and achievements.
This would help eliminate doubts from parents and stakeholders, since the pupils’ performance level is rated by multiple assessors (teachers).

Example steps as shown in Fig. 3.

The rationale for these contents (moderation of assessment) to be part of training input in the CBA training module is to help learners understand the flow of how assessment moderation could be applied in evaluating students’ work after CBA activities to minimise or eliminate inconsistencies in rating the pupils’ level of mastery in the performance level reports. This will serve as input for teaching and learning activities during the CBA training towards the achievement of **LO 2**.

However, it is also important for CPs to be reminded that this information such as the examples in Fig. 2 and Fig. 3 only serves as basic input to help their understanding of how to carry out assessment moderating procedures and not to restrict their practice in any way. It should not be used as a checklist in the sense of a “behavioural approach” (Hoang [17]) as it will restrict their autonomy and potential to develop more creative use of the assessment moderation techniques and procedures. For example, to reduce workload and time consumption for the process, teachers (moderators) could just randomly select the students’ work samples between other moderators (inter-rater) that was rated highest Performance Level (PL) and lowest PL or with any odd data that stands out to be for the moderation process for selective cross-marking in detail. Teachers’ professional autonomy should not be constrained because that would cause internal potential for autonomy to dwindle (Hoang [18]). It is essential that training input and guidelines help CPs to improve their professional practice and not restrict their potential or add to their workload.

Fig. 3. The flow of actions for assessment moderation after CBA activity.
3.4.2.3. Contents of the “Assessment Moderation” Component in the CBA Training Module

For cascade training approach to succeed, “the method of conducting the training must be experiential and reflective rather than transmissive” (Hayes [7], p. 138). Exemplar videos of CBA moderation scenarios should be integrated as should be part of curriculum content as stimuli for discussions. An online webpage video at https://www.aitsl.edu.au/tools-resources/resource/moderating-student-work-illustration-of-practice shows how experienced Year 1 teachers in an Australian elementary school work with colleagues to analyse samples of students’ work in the process of CBA moderation. Such video exemplars of real-life scenarios could serve as training content for student-centered classroom discussions to facilitate CPs’ learning towards achievement of LO 2, and serve as foundation to prepare CPs for real-life practice and independent learning after the course – LO 3.

5 Training Programme Evaluation

Hoang [19] stated that language programme evaluation may refer to anything ranging from determining the efficacy of a classroom routine or monitoring teaching and learning outcomes to reviewing the accountability of programmes, departments, and institutions. She added that evaluating a programme aims to uncover objective proof that something is or has been worthwhile to implement and to allocate value to it (Hoang [19]). It is crucial to plan evaluation for education programmes strategically because the results obtained can carry significant implications by providing information to help with decisions on whether any changes or improvements is necessary to achieve the goals of the programme and/or to determine whether the programme meets the current needs of the education system.

Usually for in-service teacher training programmes in Malaysia, organisers would generally gather feedback from course participants by conducting evaluation or surveys that are usually carried out with the focus of several variables that could directly influence the outcomes of the training program, for future improvements or “explicitly formative purposes” (Norris [20], p.175) namely: 1. The organization of the course (management), 2. The teacher (trainer), 3. The course contents (modules), and 4. Post-training report (course participants).

However, to evaluate whether the proposed strategy (additional “Assessment Moderation” component in the CBA training program) had addressed the problem, the evidence of learning, skills and knowledge acquired by CPs and changes in CPs’ practice after the training need to be measured. Considering that the present paper concerns evaluating the effectiveness of in-service training (Dorri et al. [21]) programme for teachers, the Kirkpatrick ([23]; Tamkin et al. [23]) evaluation model will be adapted for this purpose, which includes four stages: 1. Participant reactions, 2. Learning (knowledge and skills acquired as well as attitude changes), 3. Behaviour (changes in on-the-job behaviour), and 4. Final programme results (contribution of the training). Kirkpatrick’s four-level model of training evaluation is a pragmatic and straightforward method that begins with course participants’ reaction to a training experience and ends with organizational impact (Tamkin et al. [23]). As shown in Fig. 4:
**Level 1: Reaction**

This aspect can be measured by using reaction questionnaires after the training session, as well as teacher (trainer) questioning techniques to elicit evidence/feedback while training.

Reaction questionnaires can include questions that can be rated based on self-reported perceived confidences with Likert scale: 1 – Not confident, 2 – Somewhat confident, 3 – Confident, 4 – Highly confident.

Example questions can be divided according to subtopics for the training course, such as:

a) My understanding of the concept CBA moderation.
b) My understanding of the purpose CBA moderation.
c) Am I able to apply moderation procedures for CBA?
d) Am I able to disseminate information (explain) about CBA moderation procedures to colleagues?
e) Am I able to demonstrate and guide other colleagues in moderating CBA?

**Level 2: Learning**

This aspect can be measured with respect to the “changes in knowledge, skills, or attitude in regard to the training objectives” (Tamkin et al. [23], p.3). To measure this progress, a questionnaire can be done before the training session, and again at the end of the training module of “Assessment Moderation” in the CBA Teacher Training Programme. Questions can include:

a) What is CBA moderation?
b) Who should be involved in CBA moderation?
c) Why moderate? / The purpose of moderation in CBA
d) When should moderation be applied in CBA?
e) How can moderation be applied:
   i. before CBA?__________
ii. After CBA?

Level 3: Behaviour

This aspect concerns the “changes in job behaviour resulting from the programme, to identify whether learning is being applied” (Tamkin et al. [23], p. 3). To gather evidence for this, the course participants should be observed in the process of assessment moderation in preparing CBA materials or instruments, and also how they apply assessment moderation in evaluating the pupils’ work during the preparation of their pupils’ Performance Level Report for CBA. The observations could be carried on-the-job by supervisors or peers and the observation reports could range from instruments as simple as using checklists of whether moderation was carried out, time and location of the event, to more complex and subjective self-reports by participants on how moderation was carried out for their CBA.

Level 4: Results

Tamkin et al. [23] described this aspect as “bottom-line contribution of the training programme” (p. 3). This could be seen in the validity and reliability of the observable CBA procedures and data reports prepared by the course participants. The ultimate result that could show that the addition of “CBA moderation” component in the training programme module has successfully solved the initial problem is that the inconsistencies of pupils’ performance levels reports are completely eliminated or kept to the minimum. In addition, any odd cases of data that stood out from the overall CBA students’ Performance Level Report during analysis should be justifiable by the course participants with the support and shared accountability from multiple moderators.

6 Implications and Limitations

By adopting “assessment moderation” as an additional standalone module in the CBA Teacher Training Programme, teachers can be provided with more insights and clarity to apply the concept of moderation in the process of designing assessment tasks to ensure validity and also in the process of judgement after an assessment task is carried out to ensure reliability and transparency of the students’ performance-level report (See 4.2.2.2 for moderation before CBA and moderation after CBA). Given the significance and growing stake that Student Performance Level Reports in CBA hold in the current educational landscape since the abolishment of public exams, teachers need to be more accountable in the aspect of designing CBA materials and also ensure transparency in their judgments and comparability in their CBA instruments and Student Performance Level Reports. However, it is also important to understand that moderation practices cannot completely devoid assessments of validity and reliability issues due to the subjective nature of assessment (Beutal et al. [11]). Nevertheless, Beutal et al. [11] explained that it is through ongoing collaboration and communicative discussions and critiques within a community of practice that ensures progress toward developing more valid, fair and reliable student assessments. The proposed additional standalone component of “assessment moderation” in this study is only to better prepare teachers for CBA by providing them a set of frameworks to go guide them in practising moderation in CBA in the hope to ensure better quality assessments in CBA implementation by minimising the validity and reliability concerns from other stakeholders. The answer to the question of how well
the teachers are able to apply the moderation process in their CBA back in schools lies on the efficacy in which the course content is delivered through various tiers (see Fig. 1) of the whole training programme.

7 Concluding Remarks

Curriculum is a living entity (Hoang, [24]), an ongoing process which evolves and changes over time. Hoang [25] stated that planning and developing a curriculum is a “fuzzy problem” (p.1) and we need to be flexible and embrace the “messiness” (p.1) of the process. This paper incorporated the problem-solving approach to identify and analyse the underlying problem of the CBA Teacher Training Programme for Malaysian in-service teachers since 2019, proposed a solution and curriculum evaluation procedures to evaluate the process and outcomes of the solution. To conclude, the curriculum of the training programme should not be static or regarded as one-size-fits-all. Teacher autonomy should be given to trainers to improvise and adapt training materials to better cater to their learners’ specific needs and adapt to the environmental constraints or settings across different tiers of the CBA Teacher Training Programme. Ultimately, the goal is to produce competent teachers in CBA practice which in turn contributes to the overall quality of the teaching and learning process of pupils nationwide.

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