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Customising to Singapore Primary Schools Assessment needs: The scenario in 3 schools

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In a recent review of the primary education in Singapore, the Primary Education Review and Implementation (MOE, 2009) Committee recommended that changes be made in order to realise a more holistic primary education. Many of these changes were encouraged at the school-level to prepare our young for the future. Within the constraints of this paper, three primary schools needs and approaches were highlighted vis-à-vis revisions made within the schools so as to place greater emphasis on formative assessments- One school focused on training all teachers, another focused on teaching the Activists (n=7) and the third focused on teaching how to use rubrics in P3. In a series of professional development workshops, each school's objectives as well as the terms and concepts used for educational assessment were discussed. Interviews, lesson observations and surveys were used to help uncover the situation too. Triangulation of these data was made. Findings included the need on boosting the teachers' competencies on the 'what' and 'how' of administering alternative modes of assessment. It was also found that for these schools to sustain such efforts, application and implementation of the knowledge acquired needed coherent and consistent systemic infrastructure.

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Introduction

The education system in Singapore has been evolving so as to deliver an education that ensures that 'pupils are well prepared for the future' [Ministry of Education (MOE), 2009]. With the ministry's acceptance of Primary Education Review and Implementation (PERI) Committee recommendations, schools are actively looking into their teachers' continuous professional development for a 'good grasp of curriculum content as well as a sound mastery of the variety of teaching methods and assessment modes' (MOE, 2009). In this study, three schools needs and practices undertaken to raise their teachers' assessment literacy are shared.

Background

Professional development that brought about changes to teachers' classroom practices had incorporated features for success. These features included apt course content delivered through specialized expertise over extended periods of time, careful consideration over outcomes needed and the support rendered by the various stakeholders concerned (Adey, 2004; Guskey, 2000; Joyce & Showers, 1988; Lydon & King, 2009).

Though so, researchers of this field seemed to differ in their ways on coining such features. Adey (2004) for instance had expounded on fourteen factors ranging from theory-based consideration to teachers having time to reflect. Guskey (2000) on the other hand, had four main points, namely participants' reaction and learning, organisational support for change and lastly, the use of knowledge as acquired by the participants. Such a phenomenon seemed to suggest that factors such as 'context' could have affected the researchers' personal choices or ways of elaborating what were most likely, similar.

To make matters more interesting, the series of professional development (PD) for the three schools involved issues on assessment. This meant that understanding the schools and teachers' needs in terms of what they had known or would like to know more about assessment became critical. Pitching the various PD sessions at the right chord would become an immediate contextual factor in other words.

As for the field of assessment, having literacy that informed the difference in purposes between summative and formative assessment and of the late decade, assessment of learning, assessment for learning, assessment is of learning and assessment as learning (Black & Wiliam, 2004; Lee, 2008) would be a fundamental consideration. Understanding this particular rationale then, would be the basic building block to the using of a variety of assessment modes needed vis-à-vis Singapore's own assessment system of continual assessments (CAs) and semestral assessments (SAs) practices.

Laying all these down, the research questions for this study would be:

(1) What are the three schools needs with regards to assessment?
(2) How do we know if these needs are met?

Methods

In order to uncover the schools needs and aims for PD, meetings with the school personnel were conducted. This was to better understand the schools written proposals on what was

needed. Further communication was also expedited with emails, msn messenger, telephone calls and short message services. The course content were then customized and conducted for each school.

Oral and written feedback was collected after and/or during each PD session for each school. This was to ascertain if the course content had met the needs of the audience and any doubt raised was discussed and answered by the next PD session.

A survey was also designed and administered to ascertain a certain collective view from the three schools with regards to assessment. Please see appendix A for a few of these items from the survey. For ease of discussions, the three schools would be referred as Schools A, B and C.

For post-intervention, the same survey was administered to determine if there was any change. Descriptive statistics and effect sizes were calculated. Classroom observations, teacher and student interviews were also conducted for triangulation of data. Please see appendices B and C for the sample of questions for both teachers' and students' interview.

Results and Discussion

Identifying school PD needs via discussions and meetings conducted

The needs of the schools were found to be different and varied. The following information was gathered:

School A

From the discussion with the school, it was determined that school A would require assessment literacy on purposes of assessment. In order to facilitate better understanding for all the teachers and to weed out distraction from addressing a large group, PD was conducted by aggregating two different levels in the second phase. The mother tongue teachers were addressed together for more interaction as there were Chinese, Malay and Tamil language teachers trying to make sense of materials given in English and working on rubrics into their respective languages. Provisions were made by the school to accommodate teachers' training.

School B

This school had made prior attempts with alternative assessment such as portfolio and performance tasks. This was a noble move, aimed at value-adding to their P1 and P2 students' learning processes. Though so, not willing to succumb to what had become of this attempt, a mere filing process, acquisition of action research skills was the target for a group of seven activists identified. This group was to then, troubleshoot and resolve the issue for the school. PD sessions were then customized to help them meet this need. The school had thus, empowered this group of activists to take charge.

School C

With the original aim of equipping their P3 teachers with the skill on crafting rubrics so as to assess their students' oral abilities, teachers, then informed of the purposes of assessment, proceeded to craft the rubric during the sessions. PD sessions that gave the rest of the teachers' time to identify and decide on what they would consider as twenty-first skills were conducted too. Corresponding rubrics that assessed such twenty-first skills were

constructed too. In essence, PD time was also set aside for teachers to acquire such skills and found use of it.

The positive oral and written feedback given by the participants and school personnel during and after each of the PD sessions served to inform that the school needs that were found to be complex and varied were identified and attended to.

From the pre- and post surveys

Though the PD sessions seemingly addressed different needs, there were fundamental issues that underpinned these sessions. Please see a sample of the items of the survey in appendix A. Only items that registered teachers' ways of giving feedback were discussed in this section.

The impact of the intervention (PD sessions) in terms of workshops conducted for all of the teachers was being registered by the effect size as shown in Table 1.

Table 1. Descriptive Statistics of sample examined with effect size calculated

item	Pre-mean n=100	Pre-SD n=100	Post-mean n=88	Post-SD n=88	Effect size
10	2.8	0.5	3.1	0.4	0.6
11	2.8	0.5	3	0.3	0.4
12	3.2	0.4	3.2	0.4	0
13	3	0.5	3.2	0.5	0.4
14	3.1	0.4	3.3	0.4	0.5
15	3	0.3	3.1	0.4	0.3
16	3	0.3	3.2	0.4	0.7
17	2.4	0.6	2.6	0.5	0.3
18	3.2	0.4	3.2	0.4	0
19	3.2	0.4	3.3	0.4	0.3
20	2.3	0.7	2.6	0.7	0.4

Effect size was the quotient calculated from the difference between the post- and pre-mean divided by the standard deviation (SD) of the pre-sample.

From the pre-mean column of Table 1, the highest mean of 3.2 was obtained for items 12, 18 and 19. These items indicated that teachers most frequently used 'written comments', 'marks' and 'grades' respectively as feedback to their students in their classes. This phenomenon however, seemed to change after the intervention. Observing the post-means of Table 1 cautioned that not only did these written comments, grades and marks remained frequently used, there was an increase with teachers using all ways but two (items 12 and 18). Choosing to determine the impact of this intervention, the effect sizes were calculated. According to Hopkins' (2002) table, both items 10 (rubrics) and 16 (Open-ended oral questions) registered that the intervention had produced moderate impact of 0.6 and 0.7 respectively. This means that the intervention, or PD sessions had created for the teachers, increased use of both rubrics and open-ended oral questions as ways of giving feedback in class.

From the teachers' and students' interviews

Teachers' interviewed indicated that they could be best supported with training, time set aside and infrastructure where support on sharing of practices with regards to assessment were given:

> Yes. It is also good that we are building up our competencies because most of us who have gone through the training are very grateful in the sense that we

> know, hey, now I know a bit more… maybe now we can improve on it right
> (Teacher A)

> we need experts like you to really guide us in planning rubrics because for us, when we first started, we were really at a loss (Teacher C)

> sharing of best practices… what are they doing and also some workshops whereby we know how to come up with good rubrics (Teacher D)

Students interviewed found that rubrics and checklists helped them understood what were needed and how to achieve them:

> It will tell me a lot about what I am supposed to do and I have points which will guide me to write. (Student A)

> I feel that using the rubrics, it is good for us as it can let us know where are our mistakes and when we do the writing again, we can know where to improve in (Student B)

> A rubric is like what must you do to get one point and what must you do to get two points and what must you do to get three points. A checklist is what you must have. (Student C)

From the classroom observations

There was no coding done for the classroom observations except that it was taped and observed that feedback in the form of 'thumbs-up' , 'show-cards', 'rubrics' and 'checklists' were used. Informal oral feedback was given during the Chinese language lesson observed where the teacher explained the use of certain vocabularies on the whiteboard.

Conclusion

The three schools needs were varied, different and complex. School A adopted a whole school approach with provisions made to accommodate teachers' training needs. School B empowered their group of research activists on trying out their action research skills. School C created time for their teachers to try out their knowledge acquired. Fundamental issues that governed the assessment arena permeated the seemingly different yet similar PD sessions and registered moderate impact on teachers' increased use of rubrics and open-ended oral questions. The needs of the schools were met through the discussions prior to the customization of the PD sessions, teachers' interviews that called for training that heighted competencies and the development of skills (Joyce and Showers, 1988). Students' interviews supported the help they received and classroom observations confirmed the forms of feedback used. Such positive feedback would continue to require schools provisions made on supporting their teachers in the pursuit of assessment literacy and competencies.

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Appendix A

Survey sample items

	I use the following to give feedback to my pupils on their learning progress in class:	SA	A	D	SD
10	rubrics				
11	checklists				
12	Written comments				
13	quiz				
14	Oral opinions				
15	Close-ended oral questions				
16	Open-ended oral questions				
17	portfolio				
18	marks				
19	grades				
20	Social networking sites (e.g. facebook, twitter)				

Appendix B

Teachers' interviews sample questions

5. What and how do you incorporate these assessments into your teaching?

6. What are some of the ways that you think teachers like us could be best supported with regards to assessment?

Appendix C

Students' interviews sample questions

3. How do you feel when your teacher uses rubrics and checklist?

4. Do rubrics and checklist help you learn better?