

Promoting Assessment as a Tool for Effective and Collaborative Teaching and Learning in Special Education at Primary School Level

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Abstract

Since 2016, the Ministry of Education (MoE) Malaysia has implemented Primary School Alternative Assessment (PSAA) where learners with learning disabilities carry out tasks based on two authentic and integrated instruments, ProKhas 1 and ProKhas 2 to develop their living, communication and collaborative skills. The tasks enable learners to apply the knowledge and skills that they have acquired in their primary schooling. PSAA provides a comprehensive and profound reporting of the learner's abilities that can be used by the secondary school teachers and parents to understand and help them in their learning. The paper presents data analyses of learners' acquisition of the skills assessed in PSAA for the last three (3) years of implementation. Five (5) main constructs (Literacy, Numeracy, Living Skills, Basic Science Skills and Values) were assessed and analyzed based on three (3) levels of competencies; competent, partially competent and not yet competent. The data used are of the total population. The results revealed the strengths and weaknesses of learners' acquisition of the skills being assessed. Furthermore, they provide useful information for the teachers to plan effective teaching and learning activities, and for the MoE to improve the assessment designs and approaches that are meaningful and of beneficial to learners. The paper deals at length with the concept of PSAA, challenges in its implementation and data analysis of learners' learning acquisitions for the past three (3) years.

Keywords: alternative assessment, integrated assessment, authentic assessment, learning disabilities

Introduction

Every learner, including those with special needs, has the right to quality education. Referring to Convention on the rights of the child, the education of the child shall be directed to the development of the child's personality, talent, mental & physical abilities to their fullest potential (UNESCO, December 12, 1989).

Beginning 2016, the Ministry of Education Malaysia (MoE Malaysia) through the Examinations Syndicate (ES) has introduced an assessment under a central assessment component (PP) known as the Primary School Alternative Assessment (PSAA) or *Pentaksiran Alternatif Sekolah Rendah* (PASR) as part of its attempts to achieve the national education aspirations as indicated in the Malaysia Education Blueprint 2013-2025; mainly on every child having equal accessibility to quality education (MoE Malaysia, 2013). This assessment is conducted specifically for special needs learners with learning disability (LD) at primary school level, in the last year of their schooling. The implementation of PSAA for LD learners is also in-line with the UNICEF Strategic Plan, 2014-2017: Realizing the rights of every child, especially the most disadvantaged (UNICEF, 2014)

The main objective of this assessment is to measure the achievement of special needs learners through an integrated, authentic and holistic assessment approach to promote meaningful learning and involvement through some elements of the skills in the real life situation of learners' life.

PSSA also provides comprehensive reporting on the achievement of special needs learners in primary school. These LD learners have difficulties in demonstrating their acquisition or achievement of learning standards when assessed using paper and pencil tests, even after some accommodations have been made. They usually require intensive individualized instruction and guidance in order to acquire and generalize knowledge. Thus, PSAA is designed to suit their needs to be assessed for a meaningful learning.

As a central assessment, PSAA is conducted and administered by teachers in schools using instruments, scoring rubrics, guidelines, time line and procedures prepared by the ES. It is carried out in classroom setting and administered during teaching and learning process in Year 6 or LD learners' final year in the primary school.

PSAA is the first standardized assessment for these learners. This approach, which integrates the assessment of multiple topics and processes in realistic scenarios, provides a bridge connecting the learner, secondary education, and the real life situations (Brown, cited in Mandell & Michelson, 2004, p. 2). Therefore, learners are required to perform real-world, hands-on tasks that demonstrate meaningful application of essential knowledge and skills in PSAA. After three (3) years of its implementation, ES has collected sufficient data and information to come up with a preliminary report on learners' performance in PSAA, suggestions on how this information can be used to help teachers to plan effective teaching and learning activities, and for the ES to further improve the assessment designs and approaches that are meaningful and beneficial for learners.

Background

PSAA is designed based on five subjects from the Primary School Standard Curriculum for Special Education (LD) or *Kurikulum Standard Sekolah Rendah Pendidikan Khas (Masalah Pembelajaran)* for LD learners. PSAA consists of two authentic and integrated instruments; ProKhas 1 and ProKhas 2. ProKhas is an acronym derived from the Malay term *Projek Pendidikan Khas* or Special Education Project. These assessment instruments are developed by integrating two to three subjects in one task. Of the five subjects and two instructional instruments, five (5) main constructs are measured and reported namely Living Skills, Malay Language Literacy, Numeracy, English Language Literacy and Basic Science Skills and Values as shown in Figure 1. These five main constructs are then detailed to 20 smaller constructs.

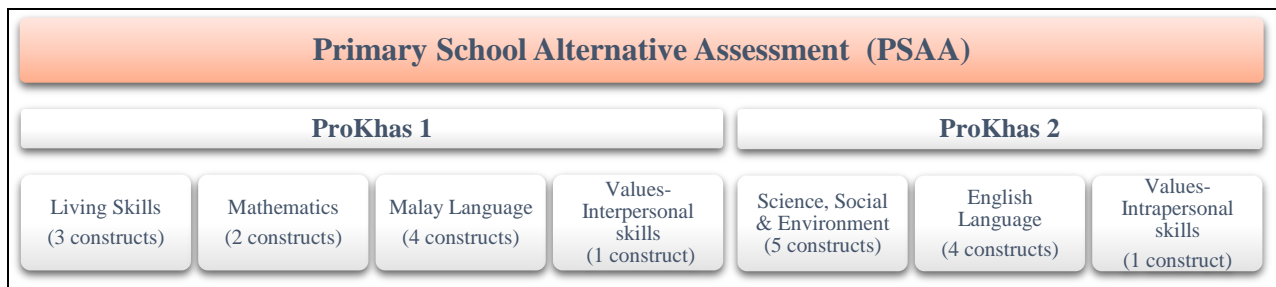


Figure 1: PSAA Instruments and constructs

The number of tasks in each instrument is between the minimum of two to the maximum of four. Learners have to fulfill all the tasks in both instruments in which knowledge, skills and values are assessed. The assessment tasks in PSAA may include hands-on projects such as cooking, gardening, petting zoo, article sewing, making big book, diorama, poster, scrap book, postcard, sketches, board game and simple science experiments.

Learners do the tasks either individually or in group, depending on the nature of the tasks whenever appropriate but are assessed individually. These assessment tasks are relevant to real-life situations, while still allowing assessors to do summative reporting. Teachers cum assessors will guide learners through the whole process of the assessment where learners have to understand and do the tasks according to the assessment plan. Learners are given the opportunity to redo the tasks within the allotted time frame to enable them to improve their performance.

PSAA promotes collaborative teaching and learning among teachers involved. During the assessment process, there will be time when two or more teachers will be in the same class, assessing different constructs on one single task. In this situation, teachers are encouraged to discuss and share their perceptions of learners' performance before making the final judgement. The assessment model is developed based on criterion reference. Learners' performance is no longer marked using marks or grades to indicate the level of achievement but instead according to the level of competency based on assessment criteria established by the ES for every construct. Three competency levels are defined for each construct in Table 1 below.

Table 1: Competency Levels

Competency Level	Description
Competent	Learners able to be self-sufficient in performing tasks, doing little mistakes and requiring very little guidance from teachers.
Partially competent	Learners are able to achieve the minimum level of all criteria in the construct. Learners need continuous guidance from teachers to carry out tasks.
Not competent	Learners do not reach the minimum level and need teachers' help in almost all tasks

To be a PSAA learner, it is compulsory for LD learners to meet these six (6) criteria:

- i. Registered in Special Education Integration Program or *Program Pendidikan Khas Integritasi* (PPKI) or in partial inclusive education;
- ii. Learn Primary School Standard Curriculum for Special Education (LD) Level 2;
- iii. Being in the final year of primary schooling;
- iv. Age does not exceed 14 years old on January 1st of assessment year
- v. Possess a card for Persons With Disabilities (*kad* OKU) / doctor's verification of having learning disabilities
- vi. Register to sit for PSAA only.

ProKhas 1

ProKhas 1 comprises tasks based on three subjects; Living Skills (LS), Malay Language (ML) and Mathematics. From these subjects, 10 constructs of Malay literacy, numeracy, living

skills and interpersonal skills are assessed. Learners are given 8 weeks (two months) to fulfill all the tasks in ProKhas 1. Table 2 shows the constructs being assessed and example of the tasks given in ProKhas 1.

Table 2: *Example of constructs and tasks in ProKhas 1*

Construct	Task
Living Skills	E.g.: Poster, scrap book and cooking and entrepreneurship project
<ul style="list-style-type: none"> • Knowledge and Understanding • Application Skills • Critical and Creative Thinking Skills 	
Malay Language Literacy	
<ul style="list-style-type: none"> • Listening Skills • Speaking Skills • Reading Skills and Information Literacy • Writing Skills 	
Numeracy	
<ul style="list-style-type: none"> • Basic Mathematics Skills • Mathematics Knowledge Application 	
Values	
<ul style="list-style-type: none"> • Interpersonal Skills - application of positive moral values such as respect, tolerance and cooperation 	

ProKhas 2

Prokhas 2 encompasses tasks based on two subjects; Science, Social and Environment (SSE) and English Language (EL), where another 10 constructs of knowledge, understanding, and skills on English Language Literacy, Science Process, and Intra-Personal Skills are assessed. ProKhas 2 is carried out over a period of four (4) weeks (one month). Table 3 shows the constructs being assessed, and example of the tasks given in ProKhas 2.

Table 3: *Example of constructs and tasks in ProKhas 2*

Construct	Task
Basic Science Skills	E.g.: Diorama, big book and presentation
<ul style="list-style-type: none"> • Knowledge and Understanding • Science Process Skills • Science Application Skills • Communication and Social Interaction Skills • Critical and Creative Thinking Skills 	
English Language Literacy	
<ul style="list-style-type: none"> • Listening Skills • Speaking Skills • Reading Skills and Information Literacy • Writing Skills 	
Values	
<ul style="list-style-type: none"> • Intrapersonal Skills- neatness, independent and good manners 	

Quality Assurance

Quality assurance plays important role in the success of any school-based assessment and so does it for PSAA. Schools are monitored to ensure that the implementation of PSAA is according to proper procedures. Learners' performance is moderated to ensure that there is uniformity and reliability in teachers' recording and reporting of the assessment. The process of administering this assessment will be monitored by the ES and the assessment committee at school, district and state levels to ascertain that the scores awarded by teachers comply with the rules, guidelines, procedures and time line prepared by the ES as shown in Table 4. Teachers have to submit learners' achievement data to the ES. The ES also provides some allocation of money to the school for each learner registered for PSAA to buy the required resources.

Table 4: *Example of PSAA working schedule for 2017*

Process	Prokhas 1	Prokhas 2
Registration of learners 2017	1 - 31 March	
Release of materials list (for living skills projects)	June	
Instrument Coordination, Marking and Scoring Meeting (National Level)	14 - 15 June	22 - 23 August
Instruments Coordination, Marking and Scoring Meeting (State, District and School Level)	16,19 – 22 June	24 - 30 August
PSAA Administration	3 July – 25 August	4 – 29 September
Moderation and Verification of learners' Achievement Level	2 - 6 October	
Score submission	9 – 13 October	
Printing of PSAA result statements by school	20 – 22 November	
Release of results statements	23 November	

Data Analysis

The analysis focused on the ability of learners to demonstrate acquisition of knowledge, good skills and self-reliance in carrying out their tasks by achieving commendable competency level in all constructs. The data were collected using Assessment Management Application for PSAA known as PSAA Application at the end of the assessment period. The data used were of the total population from 16 states in Malaysia, with 3495 learners in 2018, 3095 learners in 2017 compared to 2529 learners in 2016.

The analysis of learner's achievement who achieved competent level in 10 constructs of ProKhas 1, 10 constructs of ProKhas 2 and in all 20 constructs of ProKhas 1 and 2 are shown in Table 5. Learners performed better in ProKhas 1 compared to ProKhas 2 in three years. The percentage of learners who succeeded in achieving competent level in all 20 constructs also increased by 1.6% (60) learners; 3.5% (109) learners in 2017 compared to 1.9% (49) learners in 2016 and increased by 1.1% (52) students; 3.5% (109) students in 2017 compared to 4.6% (161) students in 2018. Hence, the overall learners' performance is concluded to be better in 2018 compared to 2017 and 2016.

Table 5: Analysis on learner's achievement who achieved competent level in ProKhas 1, ProKhas 2, and in both ProKhas 1 and 2

Year	ProKhas 1	ProKhas 2	ProKhas 1 and ProKhas 2	Total Learner
2018	370 (10.6%)	277 (7.9%)	161 (4.6%)	3495
2017	373 (12%)	171 (5.5%)	109 (3.5%)	3096
2016	150 (5.9%)	90 (3.6%)	49 (1.9%)	2531

Learners' Performance by Constructs

Learners' performances in ProKhas 1, based on four (4) constructs of Malay Language Literacy, three (3) constructs of Basic Life Skills, two (2) constructs of Numeracy as well as Interpersonal Skills in 2016 to 2018 are shown in Table 6. Analysis shows that the construct with the highest increase in percentage of learners who achieved partially competent level and above is Interpersonal Skills with 96.2% learners in 2018, 97.8% learners in 2017 compared to 55.1% learners in 2016. The lowest achievement was in the construct of Reading Skills and Information Literacy (ML), where 77.7% learners achieved at least partially competent level in 2018 and 80.8% in 2017 compared to 73.9% in 2016.

Table 6: Learners' performance by constructs in ProKhas 1

Construct	Year	Competent		Partially Competent		Not Competent	
			%		%		%
Listening Skills (ML)	2018	1,681	47.4	1,684	47.5	122	3.4
	2017	1592	51.5	1,436	46.4	66	2.1
	2016	1044	40.8	1,366	53.3	115	4.5
Speaking Skills (ML)	2018	1,299	36.6	1,891	53.3	296	8.4
	2017	1218	39.4	1,674	54.1	203	6.5
	2016	799	31.2	1,459	57	264	10.3
Reading Skills And Information Literacy (ML)	2018	1,030	29.0	1,728	48.7	728	20.5
	2017	989	32	1,530	49.5	575	18.6
	2016	546	21.3	1,348	52.6	634	24.8
Writing Skills (ML)	2018	1,109	31.3	2,090	58.9	287	8.1
	2017	1047	33.8	18,488	59.7	199	6.4
	2016	633	24.7	1,509	58.9	384	14.9
Knowledge and Understanding (LS)	2018	1,558	43.9	1,737	49.0	190	5.4
	2017	1569	50.7	1,401	45.3	123	4.0
	2016	964	37.6	1,390	54.3	172	6.7
Application Skills (LS)	2018	1,453	41.0	1,793	50.6	236	6.7
	2017	1447	46.8	1,499	48.5	147	4.8
	2016	922	36	1,380	53.9	219	8.6

Construct	Year	Competent		Partially Competent		Not Competent	
			%		%		%
Critical and Creative Thinking Skills (LS)	2018	889	25.1	1,978	55.8	617	17.4
	2017	837	27.1	1,808	58.5	448	14.5
	2016	410	16.0	1,514	59.1	598	23.4
Basic Mathematics Skills	2018	1,547	43.6	1,618	45.6	317	8.9
	2017	1565	50.6	1,358	43.9	170	5.5
	2016	288	11.3	1,355	52.1	900	35.1
Mathematics Knowledge Application	2018	1,071	30.2	1,815	51.2	593	16.7
	2017	1103	35.7	1,693	54.7	297	9.6
	2016	494	19.3	1,371	53.5	654	25.5
Interpersonal Skills	2018	1,977	55.7	1,436	40.5	72	2.0
	2017	1813	58.6	1,211	39.2	69	2.2
	2016	133	4.4	1,298	50.7	1104	43.1

For ProKhas 2, learners' achievement is based on four (4) constructs of English Language Literacy, five (5) constructs of Science Process Skills, and Intrapersonal Skills. Analysis shows that in 2016 to 2018, learners performed best in Intrapersonal Skills where the percentage of learners achieved partially competent level and above increased in 2018 with 95.6%, 97.0% learners in 2017 compared to 58.5% learners in 2016. The lowest achievement was in the construct of Reading Skills and Information Literacy (EL), where 69.3% learners achieved at least partially competent level in 2017 compared to 84.2% in 2016. Analysis shows that in 2016 to 2018, percentage increase in Knowledge and Understanding (SSE), where 70.4% learners achieved at least partially competent level in 2016, 89.7% in 2017 and 91.1% in 2018. Detailed analysis is as shown in Table 7.

Table 7: Learners' performance by constructs in ProKhas 2

Construct	Year	Competent		Partially Competent		Not Competent	
			%		%		%
Listening Skills (EL)	2018	1,213	34.2	2,023	57	238	6.7
	2017	942	30.6	1896	61.7	237	7.7
	2016	271	10.6	1571	61.3	657	25.7
Speaking Skills (EL)	2018	811	22.9	2,071	58.4	587	16.6
	2017	540	17.6	1760	57.3	769	25.1
	2016	622	24.3	1469	57.4	408	15.9
Reading And Information Literacy Skills (EL)	2018	831	23.4	1,796	50.6	845	23.8
	2017	523	17	1609	52.3	942	30.6
	2016	857	33.5	1299	50.7	349	13.6
Writing Skills (EL)	2018	985	27.8	2,158	60.8	329	9.3
	2017	645	21	2137	69.5	292	9.5
	2016	541	21.1	1554	60.7	407	15.9

Construct	Year	Competent		Partially Competent		Not Competent	
			%		%		%
Knowledge and Understanding (SSE)	2018	1,400	39.5	1,830	51.6	246	6.9
	2017	958	31.2	1798	58.5	319	10.4
	2016	283	11	1520	59.4	698	27.3
Science Process Skills (SSE)	2018	1,101	31	2,000	56.4	372	10.5
	2017	758	24.7	1968	64	348	11.3
	2016	363	14.2	1621	63.3	518	20.2
Science Application Skills (SSE)	2018	1,034	29.2	1,974	55.7	465	13.1
	2017	662	21.5	1941	63.1	471	15.3
	2016	391	15.3	1633	63.8	480	18.7
Communication and Social Interaction Skills (SSE)	2018	1,232	34.7	1,915	54	327	9.2
	2017	572	18.6	1826	59.4	677	22
	2016	316	12.3	1518	59.3	667	26
Critical and Creative Thinking Skills (SSE)	2018	915	25.8	1,916	54	642	18.1
	2017	1074	34.9	1727	56.2	274	8.9
	2016	607	23.7	1497	58.5	395	15.4
Intrapersonal Skills	2018	1,903	53.7	1,487	41.9	88	2.5
	2017	1639	53.3	1343	43.7	93	3
	2016	116	4.5	1323	51.7	1062	41.5

Discussion

From the data analysis, Reading Skills and Information Literacy in both the Malay Language as well as the English Language came out as the hardest skills for learners to acquire. Learners' achievement in Speaking Skills for English, and Communication and Social Interaction Skills can also be considered low compared to other constructs. It is understandable why learners with LD find it hard to acquire language skills as they have difficulty in reading, and thus resulting in difficulty in understanding written texts. With low cognitive ability, acquiring a second language such as English too can be an uphill battle for some learners.

These results however did not come as a surprise because of the nature of learners themselves with significant cognitive disability that limits them from mastering certain skills. It is also a common trait of LD learners to face challenges in Communication and Social Interaction Skills. So, it is up to the teachers and also parents to help them to overcome these obstacles in order to succeed.

Different approaches in teaching and learning that are meaningful and beneficial to learners need to be explored. As PSAA promotes collaborative teaching, learning and assessing, teachers have to discuss and share their knowledge and views in interpreting and understanding the assessment criteria. Parents too must play their part in the assessment process by providing sufficient support and guidance for the learners at home.

PSAA reports reflect the validity of the instrument on how well the assessment aligned with the curriculum standards, and also in meeting the purpose of the assessment. It is necessary, for ES to do further data analysis and research in order to get more information and clarification to improve the instrument. PSAA could provide comprehensive, profound, fair and useful reporting for learners to develop their potential accordingly when they continue their study in secondary school. With the help and guidance from their secondary school teachers, learners and all other stakeholders will have a better understanding of their ability. After three (3) years of its implementation, PSAA is seen to be on the right track towards achieving the objective of the National Philosophy of Education and fulfilling the education aspiration in providing equal access to quality education. PSAA is hoped to equip LD learners with relevant and necessary knowledge, skills and attitudes to survive in this ever changing world.

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