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Teachers' Readiness and Practices in School-Based Assessment Implementation: Primary Education in Malaysia

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ABSTRACT

Recently, the Malaysia education system instigated a school-based assessment (SBA) for the primary educational level. SBA is an aggregate assessment of the cognitive, psychomotor, and affective features. The teacher's role is a very important factor that will determine the success of the SBA practice. This study identifies the influence of primary school teachers' readiness in terms of knowledge, ability, facilities, and time adequacy given on their practices of SBA implementation in the teaching and learning (T&L) process. In this quantitative study, an electronic questionnaire was used to collect the data from 181 primary school teachers in Chemor, Perak, Malaysia. Multiple linear regression (MLR) analysis was used to describe the relationship between teachers' readiness and teachers' practices. Besides, the independent t-test was used to identify the difference in teachers' practices of SBA among different gender and school area (urban and rural). The result found that there was a significant influence of teachers' ability and time adequacy on teachers' practices in implementing SBA during T&L. Furthermore, the level of teachers' practices SBA have no difference between different teachers' gender and school area (urban and rural). This study offers an insight to the top management and policymakers in improving policy and encouraging teachers to efficiently implement SBA in the T&L process.

Keywords:
School-based; assessment; primary;
education; teacher; readiness; practice;
teaching; learning

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1. Introduction

The first curriculum implemented in Malaysia for the primary educational level was KLSR which uses many types of assessment to evaluate students' performance. However, those assessments such as Ujian Lisan Bahasa Melayu (LCE), Ujian Diagnostik Darjah Tiga, Sijil Rendah Pelajaran (SRP), and Assessment Test Standard Five faced many. In 1982, KBSR is established where students need to achieve a satisfactory level in Bahasa Melayu besides focusing on 3R's core abilities (writing, reading, and arithmetic). KBSR principles focus on accomplishing grade A's in an examination, but the aim to produce skillful individuals was not met as they failed to gain more experiences, knowledge, and skills in the T&L process. In 2011, KSSR is implemented in primary education to give more focus on 4R's basic skills but yet still based on the subject matter and learning standards.

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In 2019, SBA is officially being implemented to Level 1 students (Standard 1, 2, and 3). SBA was an aggregate assessment of the cognitive (intellectual), psychomotor (physical), and affective (emotional and spiritual) features. This is in line with the National Philosophy of Education. SBA focuses on students' performance and moral values. SBA helps to strengthen the development of human capital and creates a more effective environment for the assessment of T&L [1]. SBA provides solid and continuous carefree assessment, lowers the dependence on standardized examination and increases independent learning. SBA also provides new learning occasions for increasing students' strength and interests [2] and students also will be able to develop a positive learning attitude through SBA [3].

As the system is still new to the teachers at primary school, it is uncertain about teachers' readiness for the implementation of SBA at the primary educational level [4]. SBA's new assessment system practices require active involvement by teachers [1]. The teacher's role plays will determine the success of the assessment practice [5]. SBA also requires the teachers to have various skills of teaching to achieve the objective of the assessment [6].

Teachers' readiness is important to ensure the success of SBA's implementation [3]. However, some of the teachers are lack knowledge on SBA and uncertain about the types of assessment used for SBA [1,7-10]. Teachers' ability in implementing SBA are still at a poor level [11-12]. The majority of teachers also believe that the facilities such as physical and ICT equipment in primary schools are not suitable to conduct laboratory sessions and limiting SBA activities with students in T&L [2, 13-14]. The time constraint also becoming a problem to the teachers in implementing SBA [4, 8, 15-16].

Although much work has been done to date, more studies need to be conducted related to SBA implementation in the primary education system. The purpose of this study is to investigate the teachers' readiness and their practices in conducting an SBA in primary school. This topic was identified as being important to the teachers, management team, and policy-makers in providing them the necessary background of the factors affecting the success of SBA's implementation.

2. Methodology

2.1 *Study Design*

This quantitative study used a cross-sectional design. The target population is 339 primary school teachers in Chemor, Perak, Malaysia. By using stratified sampling technique, 108 teachers from urban school and 73 teachers from rural schools are selected as target samples. For schools in the urban area, SK Haji Mahmud, SK Seri Kelebang, and SK Kelebang Jaya were selected while for the rural area, SK Chepor, SK Syed Idrus, and SK Tanah Hitam were selected. The selected respondents were given the electronic questionnaire through Google Form to be filled up.

Table 1
Summary of Questionnaires

Section	Construct	No of Item	Source
A	Demographic Profile		
B	Teachers' knowledge	4	The Implementation of School-Based Assessment in Primary School Standard Curriculum [9]
C	Teachers' ability	4	
D	Teachers' perception of facilities given	4	
E	Teachers' perception of time adequacy given	4	
F	Teachers' practices in implementing SBA	8	Teachers' Perception of School-Based Assessment Questionnaire [10]

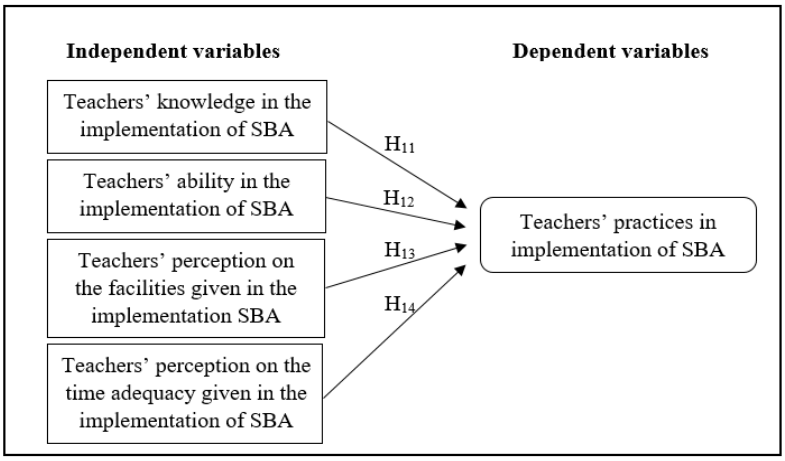

Fig. 1. Research Framework of the Study

The questionnaire consists of 6 sections as in Table 1. The study involves four independent variables (teachers' knowledge, ability, perception of the facilities, and time adequacy given) and one dependent variable (teachers' practice) as in Figure 1.

2.2 Data Analysis

This study uses Multiple Linear Regression to describe whether there is a significant relationship between the primary school teachers' readiness (knowledge, ability, perception of the facilities, and time adequacy given) and the teachers' practices of SBA. An Independent t-test is used to check whether there is a difference in teachers' practice of SBA between the male and female teachers. Independent t-test also uses to examine whether the urban and rural school teachers have different teaching practices in implementing SBA.

3. Results

3.1 Descriptive Analysis

Table 2 and Table 3 summarise the descriptive statistics for respondents' demographic profiles. There are 75.4% of female respondents while another 24.5% are male respondents. Besides, 32.6% of the respondents are teachers from SK Kelebang, 25.4% of the respondents are teachers from SK Seri Kelebang, 17.4% of the respondents are teachers from SK Tanah Hitam, 15.2% of the respondent are teachers from SK Chepor, and another 9.4% of the respondent are teachers from SK Syed Idrus.

Table 2
Summary of Descriptive Statistics for Categorical Variables

Variable		Frequency (n)	Percentage (%)
Gender			
	Male	34	24.5
	Female	104	75.4
School Name			
	SK Kelebang Jaya	45	32.6
	SK Seri Kelebang	35	25.4
	SK Chepor	21	15.2
	SK Syed Idrus	13	9.4
	SK Tanah Hitam	24	17.4

The minimum age of the respondents is 26 years old while the maximum age of the respondents is 58 years old. The average age of the respondents is 42.12 years old with 7.210 of standard deviation. Besides, the minimum year of teaching experience of the respondents is 1 year, and the maximum year of teaching experience of the respondents is 34 years. The average year of teaching experience among the respondents is 16.34 years with 7.504 of standard deviation.

Table 3
Summary of Descriptive Statistics for Continuous Variables

Variable	Minimum	Maximum	Mean	Standard Deviation
Age	26	58	42.12	7.210
Year of teaching experience	1	34	16.35	7.504

3.2 Indicator Reliability

The purpose of factor loading is to describe the variability among observed and correlated variables in terms of a potentially lower number of unobserved variables. All the factor loading in each variable involves indicating acceptable loading value (above 0.7) as in Table 4.

Table 4
Factor Loading value

Variable	Item	Factor Loading
Teachers' Knowledge	K1	0.948
	K2	0.948
	K3	0.967
	K4	0.907
Teachers' Ability	A1	0.928
	A2	0.955
	A3	0.971
	A4	0.945
Teachers' Perception of Facilities Given	F1	0.954
	F2	0.973
	F3	0.963
	F4	0.961
Teachers' Perception of Time adequacy	T1	0.883
	T2	0.917
	T3	0.890
	T4	0.363
Teachers' Practices	P1	0.888
	P2	0.930
	P3	0.934
	P4	0.941
	P5	0.925
	P6	0.886
	P7	0.739
	P8	0.826

3.3 Pearson Correlation

Pearson Correlation analysis is used to estimate the strength of a relationship between the two quantitative variables of interest. Table 5 above shows that all the independent variables have a significant relationship with the dependent variable of the study.

Table 5
Summary of Pearson Correlation Analysis

Variable	Knowledge	Ability	Perception of Facilities	Perception of Time Adequacy Given
Teachers' Practices (p-value)	0.741 (<0.001)	0.808 (<0.001)	0.668 (<0.001)	0.753 (<0.001)

3.4 Model Adequacy

Figure 2 indicates that the linearity assumption is satisfied whereas all the independent variables which are teachers' readiness (knowledge, ability, perception of the facility, and perception of the time adequacy) have a linear relationship with the dependent variable (teachers' practices of SBA).

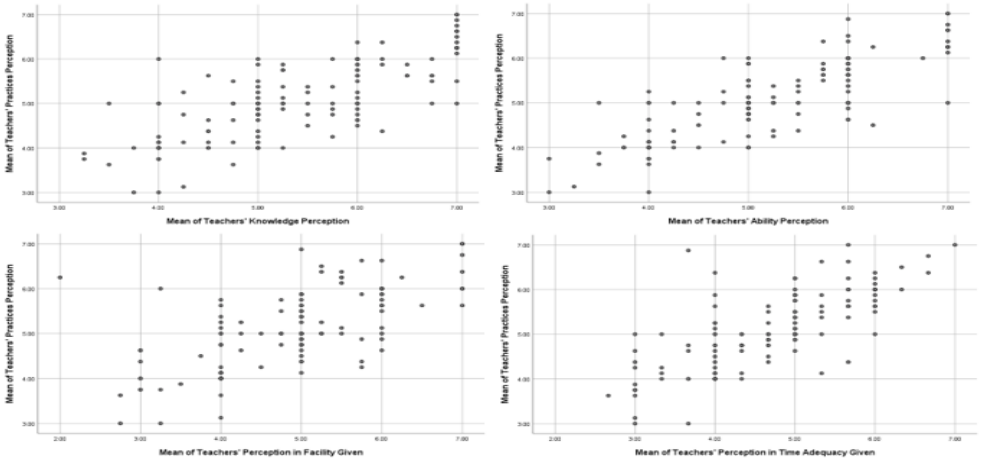

Fig. 2. Scatter Plots

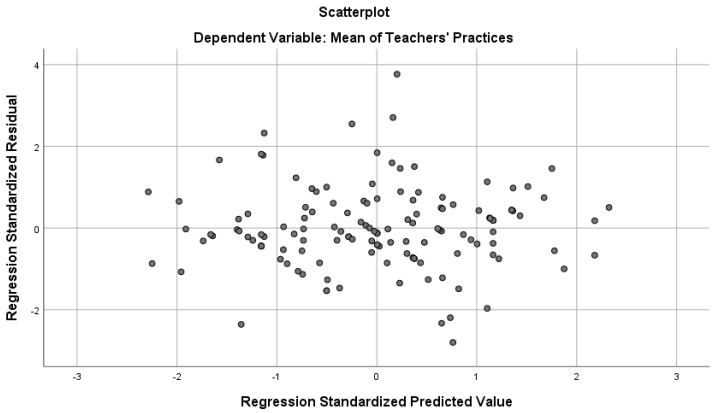

Fig. 3. Scatter plot of residuals versus the fitted value of the data

The homoscedasticity assumption refers to the fact that there is a constant variance along the regression line of all the independent variables. Based on figure 3, most of the plots are randomly scattered and there no pattern shown indicates that the homoscedasticity assumption is satisfied. Figure 4 shows that all the points lie along the straight line which indicates the data are approximately normal.

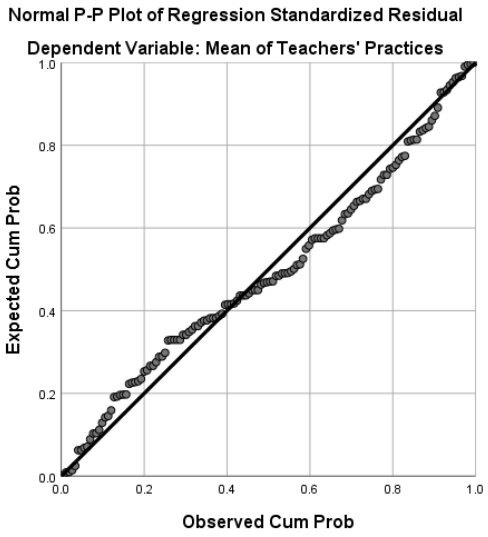

Fig. 4. Normal P-Plot

3.5 Multicollinearity

Table 6 shows the values of VIF for all variables are lower than 10 and the TOL values for independent variables are greater than 0.1. This indicates that there is no multicollinearity exist.

Table 6
Summary of VIF and TOL value

Variable	VIF	TOL
Teachers' Knowledge	4.814	0.208
Teachers' Ability	5.506	0.182
Teachers' Perception of Facilities Given	2.451	0.408
Teachers' Perception of Time Adequacy	2.584	0.387

3.6 ANOVA and Multiple Coefficients of Determination

Table 7 shows that the F-value (189.404) and the significance value is 0.000 is less than alpha 0.05. Thus, the regression model is significant to explain the dependent variable (teachers' practices). Multiple coefficients of determination is used to identify the total variation in the dependent variable that can be explained by the independent variables. The R-Square value of the model is 0.737 which indicates that 73.7% of the total variation in teachers' practices can be explained by teachers' ability and teachers' perception of the time adequacy given in the implementation of SBA while another 26.3% of the total variation is explained by other factors. R-Square values of 0.67, 0.33, and 0.19 are described as substantial, moderate, and weak respectively [17]. Therefore, it can be concluded that the model has a good fit.

Table 7
Summary of ANOVA

F-value	**Significance Value**	**Finding**	**R-Square**
189.404	< 0.001	There exists a significant model	0.737

3.7 The Direct Relationship between the Independent and Dependent Variable

Figure 5 summarise the result on the direct relationship between independent and dependent variables. The outcomes reveal that teachers' ability and time adequacy given have a significant influent on teachers' practice of SBA in the T&L process. Teachers have the ability to conduct SBA [9]. Based on the previous study, time constraints due to lots of duties and instrument preparation in implementing SBA was one of the problems faced by the teachers [8]. Later, Ruzlan *et al*., [7] asserted that time adequacy is closely related to teacher practice as there are many tasks to be performed in implementing SBA.

The result also revealed that teachers' knowledge and facilities have no significant influence on teachers' practices of SBA. This result is contrary to previous studies by Arsaythamby *et al*., [1], which reported that knowledge has a close correlation with SBA. Che Noraini *et al*., [9] also claimed that to make sure teachers do their job well, teachers need to be given clear knowledge on SBA requirements. Ikhsan *et al*., [4] claimed that having enough facilities will lessen the teachers' difficulties in implementing SBA. Adam *et al*., [18] stated that incompetent school facilities will also prevent teachers in their progress towards effective teaching.

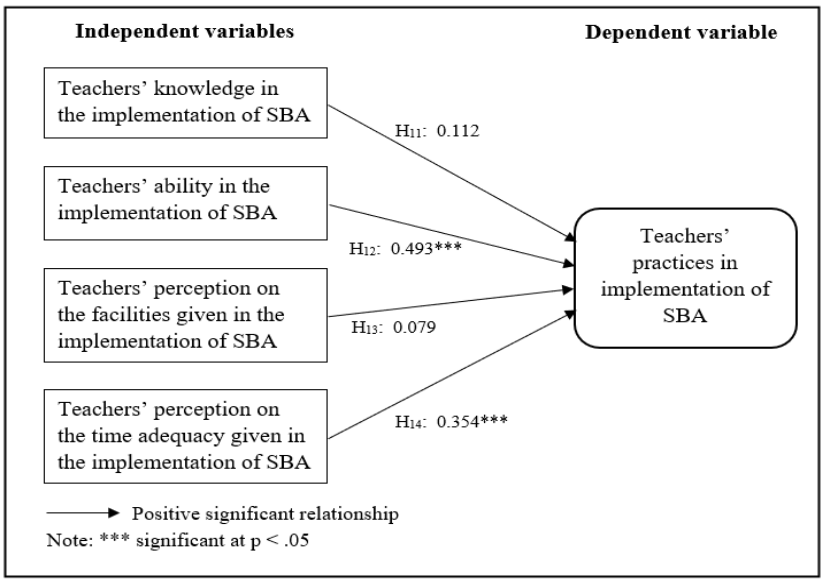

Fig. 5. Result for Teachers' Practices in Implementation of SBA

3.8 Differences in Teachers 'Practices among Different Gender and School Area

Table 9 shows the p-value for Levene's test is above 0.05 for both gender and school area indicates that equal variances are assumed. For gender, the significance value for the t-test is 0.259 (>0.05), which is greater than alpha 0.05 concluded that there are no significant differences in teachers' practice of SBA between different gender. This is similar to a study conducted by Arsaythamby *et al*., [1] indicates that the male and female teachers have no difference in implementing SBA. Fatima *et al*., [19] also confirmed that gender had no significant impact on the overall teachers' teaching practices.

Table 9
Test for Equality of Variances and Means

Levene's Test	Statement	Significance Value	Finding
P=0.957	Male teachers and female teachers have different teaching practices	0.259	Not Supported
P=0.473	Urban school and rural school teachers have different teaching practices	0.976	Not Supported

For the school area, the significance value for the t-test is 0.976 (p-value<0.05), which is greater than alpha 0.05 concluded that there are no significant differences in teachers' practice of SBA between teachers from the different school areas. This result is consistent with Nusran *et al*., [20] where the difference between rural and urban schools does not affect the SBA's implementation.

4. Conclusions

The analyses from the study found that two variables do not significantly influence the dependent variable, which is the teachers' knowledge and perception of the facilities given. However, the teachers' ability and perception of the time adequacy given in the implementation of SBA are found to significantly influence the teachers' practice of SBA. Teachers' ability in the implementation of SBA has a strong relationship with the teachers' practices of SBA while the teachers' perception of time adequacy given has a moderate relationship with the teachers' practices. The finding also showed that the male and female teachers' gender and school area did not have a significant difference in the level of teaching practices of SBA.

Although this research had confirmed the observed relationship between the dependent and independent variables, it is important to examine the results considering the limitations of the research. Since the scope of this study provides very little generalizability as it was considered mostly from the national primary school teachers in Chemor, Perak and it does not include the Chinese schools (SJK(C)) and Tamil school (SKJ(T)). Therefore, to generalize the outcome, future studies are needed to include teachers from various schools. Also, future studies need to focus on other possible factors that could affect the teachers' practices in the implementation of SBA.

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