

Chapter #3

GENDER DIFFERENCES IN THE IMPLEMENTATION OF SCHOOL-BASED ASSESSMENT IN A MALAYSIAN STATE

Arsaythamby Veloo¹, Ruzlan Md-Ali², & Hariharan N. Krishnasamy¹

¹*School of Education and Modern Languages, Universiti Utara Malaysia, Malaysia*

²*Institute for Advanced Research in Education, Awang Had Salleh Graduate School, College of Arts and Sciences, Universiti Utara Malaysia, Malaysia*

ABSTRACT

This study aims to identify the differences in assessment knowledge, school support, teacher readiness, teacher skills and challenges faced by male and female Grade 8 teachers who are involved in implementing School-Based Assessment (SBA) and the interrelationship among these five factors. In addition, this study explores the teachers' views with regards to these five factors. This study uses a quantitative questionnaire designed by the researchers, and a total of 243 Grade 8 teachers answered the questionnaire. Qualitative data was then collected via semi-structured interviews which were conducted with 20 teachers. The findings show that male teachers are more ready to implement SBA compared to female teachers. Compared to the female teachers, the male teachers view school support as more important. In terms of knowledge, skills and challenges towards the implementation of SBA, there are no gender differences. The findings also show that there exist significant relationships among the five factors except between school support and challenges faced in SBA. Although male and female teachers share many similar views, the predominant view among female teachers when compared to the male teachers is that many challenges and issues need to be addressed in the implementation of SBA. The findings from the interviews also suggest that male teachers are more willing to accept changes when compared to the female teachers. This study has implications for the implementation of SBA in Malaysia because 63% of the teachers implementing SBA are females.

Keywords: School-Based Assessment (SBA), gender, teachers' knowledge, school support, teachers' skills, teachers' readiness.

1. INTRODUCTION

School-Based Assessment is a form of holistic assessment which assesses the cognitive (intellectual), affective (emotions and spirituality) and psychomotor (physical) aspects. "School Based assessment is regarded as a tool to more accurately reveal the true ability of a student, reduce the limiting effects of 'exam fright', and to increase the confidence of students as they have already learnt and brought to practice the examination contents and skills during the conduct of their SBA projects" (Barley, 2013, p. 24). SBA assesses the process and product of the learning process formatively and summatively based on the concept of 'assessment for learning' and 'assessment of learning'. In Malaysia, the earlier emphasis on an exam-oriented system is moving towards on-going assessment in which teachers continuously assess their students (Azlin-Norhaini, Ong, Mohamad-Sattar, Rose-Amnah, & Nurhayati, 2013). SBA is planned, evaluated and reported in a systematic manner according to procedures set by the Malaysian Examination

Council. In order to ensure the quality of the implementation of SBA, the mechanisms for coordinating and monitoring SBA were implemented to increase the reliability and validity of the assessment scores. Furthermore, the success of SBA is based on the assumption that teachers have undergone formal training and attended refresher courses to acquire skills in their professional development career .

Since the end of the 90s and the beginning of the year 2000, SBA has slowly made its way into the Malaysian education system (Chan, & Sidhu, 2012, p. 1). The assessment transformation that took place starting from 2010 marked a shift from an exclusively common centralized exam-driven system to one that partially introduced a school-based assessment system. SBA has been implemented for selected subjects such as Geography, History, English (oral), Science, Religious Studies and Living Skills. Within each of these subjects, SBA has been implemented partially, which is approximately 30% of the total marks. Thus, this shift should be understood in the larger context of the Malaysian education policy in which the Malaysian Examination Council and the schools cooperate to conduct assessments in a more holistic manner. Thus, SBA can be likened with a catalyst to reform the education assessment in Malaysia.

A new assessment approach called SBA was introduced in Malaysian secondary schools in 2011. It was launched with the intention to produce world class human capital. SBA consists of two components, that is, academic and non-academic. The academic category consists of School Assessment (SA) and Centralized Assessment (CA) whereas the non academic category consists of Psychometric Assessment (PA) as well as Cocurricular, Physical and Sports Activities Assessment (CPSAA) (Khodori, 2012). Hence, SBA has been integrated as a component of the school assessment system. The assessment is conducted on an ongoing basis by subject teachers according to the stipulations outlined by the Malaysian Examinations Board (Nor-Hasnida, 2012). However, the Malaysian SBA cannot be viewed as a new form of assessment in the global context as SBA has been accepted and implemented in countries such as Australia, New Zealand, England, Scotland, Canada and South Africa (Barley, 2013). Further more, study by Arsaythamby, Hariharan and Ruzlan (2015) shows that majority of teachers are knowledgeable in implementing SBA in Malaysia secondary school. SBA is seen to be advantageous as it can reduce students' anxiety because students would have obtained a certain percentage of their marks before they sit for the actual examination (Kerr-Phillips, 2007). Additionally, this strategy is based on an effort to make schooling more fun and mark a shift away from examination-oriented national educational assessments (Ministry of Education, 2009). Educational leaders, administrators, and teachers are faced with challenges regarding the best ways to motivate students and accurately report their progress (Popham, 2011).

It is widely accepted that teachers play a significant role in student assessment. Brown (2004) had conducted a study that investigated teachers' conceptions of assessment in the context of improvement of teaching and learning, school accountability, student accountability, and treating assessment as irrelevant. His findings indicated that teachers were frequently identified as having a positive or negative impact on students' achievements, attitudes towards mathematics or English, and on future career directions. Generally, male teachers perceived themselves to be more skillful in analyzing test results compared to female teachers. Although males reported a higher level of self-perceived assessment skills in constructing and administering tests than female teachers, the difference between male and female teachers was smaller. Female teachers perceived themselves to be more skillful in communicating assessment results than male teachers (Alkharusi, 2011).

1.1. Problem statement

The implementation of SBA poses some challenges to teachers. Teachers are now required to use the online reporting system, document files and manage various forms of assessments. Teachers encountered problems in completing the assessment according to schedule and ensuring the authenticity of assessment; hence leading to the question of whether the teachers are capable and have sufficient knowledge to carry out SBA (Kamil, 2008). The overall impact of these new developments is that assessments for excellent students might not meet the original objectives of the SBA. Teachers could be satisfied with the implementation of a test at the highest difficulty level to determine the student's achievement. On the other hand, teachers who teach the low achievers or students from the weaker classes might feel more stress. Some teachers might take shortcuts by helping students to answer questions that are beyond the students' abilities and show this as evidence of high achievement levels (Utusan Malaysia, 2014). Furthermore, the weak implementation of SBA has led to more teacher criticisms because they are burdened with additional clerical work. This study considers gender differences in the implementation of SBA in Malaysia because from a total of 178,080 secondary school teachers, 69% of the teachers are females (Ministry of Education, 2013). Hence, it is deemed appropriate to consider gender in this study because of the large numbers of male and female teachers serving in Malaysian secondary schools.

1.2. Gender differences in assessment knowledge, school support, teacher readiness, teacher skills and challenges faced by teachers

Some research has been conducted to evaluate school support for the implementation of SBA based on gender. A study was conducted by Yusof and Mohd-Musa (2011) in all national schools in selected districts in Johor, the southern most state in Peninsular Malaysia. The aim of the study was to determine school head teachers' support to implement SBA based on gender. The findings showed that there were no gender differences. A study by Rosni and Siti-Fatihah (2010) on 60 secondary school teachers who taught examination classes in Grade 9 and Grade 11 in Kota Bharu (Peninsular Malaysia's north-eastern state) showed no gender differences in teacher readiness to implement SBA.

A study by Ikhsan, Norila and Nurul (2013) on 157 school teachers found that there were no gender differences for teacher knowledge in the implementation of SBA. This means that male and female teachers had similar perceptions on the implementation of SBA. The study conducted by Rosni and Siti-Fatihah (2010) with 23 male teachers and 37 female teachers showed that there were no gender differences in terms of readiness to improve knowledge, skills and develop expertise in the implementation of SBA. Ikhsan et al. (2013) conducted a quantitative study on challenges faced by teachers in the implementation of SBA. The sample comprised 61 male teachers and 96 female teachers. Gender differences were evident in the challenges as time was deemed to be insufficient to implement SBA.

2. RESEARCH OBJECTIVES

Malaysia has implemented SBA since 2011 in public secondary schools. Teachers have been involved in the implementation of SBA for about five years. Hence, this study identifies the differences in assessment knowledge, school support, teacher readiness,

teacher skills and challenges faced by Grade 8 teachers based on gender. This study also identifies the interrelationship between knowledge, school support, teacher readiness, teacher skills and challenges that teachers face in the implementation of SBA. In addition, this study also explores these teachers' assessment knowledge, school support, teacher readiness, teacher skills and challenges faced by male and female teachers.

3. METHODOLOGY

This study adopts a mixed-method approach using the explanatory research design (Creswell, 2014), whereby the quantitative data is collected using a self-developed questionnaire and the qualitative data is collected via semi-structured interviews.

3.1. Sampling

A total of 243 teachers from the state of Kedah in Peninsular Malaysia, who taught Grade 8 in public secondary schools, were selected using systematic random sampling. These teachers comprised of 60 (25%) male and 183 (75%) female teachers who were involved in the implementation of SBA. This ratio of male to female teachers reflects the ratio of male to female teachers in Malaysia, which is 1:2.25 (Harian Metro, 2010). All the 243 teachers had responded to the questionnaire and 20 of them (10 males and 10 females) were then randomly selected to participate in the semi-structured interviews.

3.2. Instruments

The instrument used in this study is a questionnaire designed by a lecturer to measure the implementation of SBA on different dimensions. The questionnaire comprised items on the subject, gender, school support (12 items- $\alpha = .90$), teacher readiness (20 items- $\alpha = .90$), teacher knowledge (16 items- $\alpha = .94$), skill (12 items- $\alpha = .94$) and challenges (29 items- $\alpha = .94$). A 5-point Likert scale was used in the questionnaire. Numbers were assigned to each of the options, which are, strongly disagree (1), disagree (2), moderately agree (3), agree (4), and strongly agree (5). The correlation coefficient for each construct shows a score level of .70 or more that is generally accepted as a good level of reliability (Litwin, 1995). Interview sessions were held according to a schedule drawn up by the researchers. The questions for the semi-structured interviews are based on five themes, namely, school support, teacher readiness, teacher knowledge, teacher skills and challenges.

3.3. Procedure for collecting data

The data collection process was meticulously planned so that the researchers could get the data they needed. Preference was given to teachers who had taught a SBA subject for more than a year. Every teacher was given a period of one week to complete the questionnaire. This duration of time was given so that teachers had ample time to think and respond to the questions. As for the semi-structured interviews, individual teacher interviews were conducted after class hours according to an agreed upon schedule. The interviews allowed the teachers to express their views on SBA based on the five themes. The five themes are school support, teacher readiness, teacher knowledge, teacher skills and challenges.

4. RESULTS

4.1. Gender differences towards school support, teacher readiness, teacher knowledge, teacher skills and challenges in the implementation of SBA

Levene's test shows no significant differences ($p > .05$) between gender and school support, teacher readiness, teacher knowledge, teacher skills and challenges in the implementation of SBA. These results assume equal variances between male and female teachers towards school support, teacher readiness, teacher knowledge, teacher skills and challenges in the implementation of SBA. The independent t-test shows a statistical significant difference ($t(241) = 2.76, p < .05$) between school support and gender. The mean score for male teachers (3.57) is higher than the mean score for female teachers (3.29) for the school support in the implementation of SBA (Table 1). The independent t-test shows a statistically significant difference ($t(241) = 2.68, p < .05$) between teacher readiness and gender. The mean score for male teachers (3.47) is higher than the mean score for female teachers (3.23) for teacher readiness in the implementation of SBA (Table 1).

The independent sample t-test [$t(241) = .61, p > .05$] shows that there is no significant difference in teacher knowledge towards the implementation of SBA based on gender. The independent sample t-test shows that there is no significant ($t(241) = 1.75, p > .05$) gender difference in terms of teacher expertise and also no significant ($t(241) = -1.01, p > .05$) gender difference in challenges faced by teachers in the implementation of SBA.

Table 1. Results for male and female teachers towards school support, teacher readiness, teacher knowledge, teacher skills and challenges in the implementation of SBA.

Themes	Gender	N	Mean	SD	df	t	p
1.School support	Male	60	3.57	.67	241	2.76	.01*
	Female	183	3.29	.69			
2.Teacher readiness	Male	60	3.47	.67	241	2.68	.01*
	Female	183	3.23	.57			
3.Knowledge	Male	60	3.64	.60	241	.61	.55
	Female	183	3.58	.58			
4.Teacher skills	Male	60	3.53	.72	241	1.75	.08
	Female	183	3.37	.58			
5.Challenges	Male	60	3.65	.50	241	-1.02	.31
	Female	183	3.71	.43			

$p < .05, p > .05$

4.2. Relationship between assessment knowledge, school support, teacher readiness, teacher skills and challenges faced by teachers

The Pearson correlation test shows that there is a significant positive relationship ($r = .40, p < .01$) between school support and teacher knowledge in the implementation of SBA. This positive relationship shows that strong school support will enhance the level of teacher knowledge in the implementation of SBA while weak support from the school will result in a lower level of knowledge in the implementation of SBA. The relationship between school support and teacher knowledge is low ($r = .40$).

The Pearson correlation shows a significant positive relationship ($r = .65, p < .01$) between teacher readiness and teacher knowledge in the implementation of SBA. This positive relationship shows that when the level of teacher knowledge is high, the level of teacher readiness is also high to implement the SBA, and vice versa. The relationship between teacher readiness and teacher knowledge is average ($r = .65$). The Pearson

correlation shows a significant positive relationship ($r = .65, p < .01$) between teacher skills and teacher knowledge in the implementation of SBA. This positive relationship shows that when the level of teacher knowledge is high, the level of teacher skills is also high, to implement the SBA, and vice versa. The relationship between teacher skills and teacher knowledge is average ($r = .65$). The Pearson correlation test shows a significant negative relationship ($r = -.15, p < .05$) between the challenges faced by teachers and teacher knowledge in the implementation of SBA. This negative relationship shows that when the level of teacher knowledge is high, the levels of challenges faced by teachers to implement SBA are low, and vice versa. Nevertheless, the relationship between challenges faced by teachers and teacher knowledge is weak ($r = .15$).

Table 2. Results for teacher knowledge, school support, teacher readiness, teacher skills and challenges faced by teachers in the implementation of SBA.

	(1)	(2)	(3)	(4)
Teacher knowledge	.40**	.65**	.65**	-.15*
School support (1)	1	.54**	.52**	-.11
Teacher readiness (2)		1	.74**	-.26**
Teacher skills (3)			1	-.25**
Challenges (4)				1

** $p < .01, p > .05$

4.3. Teacher Perception on school support, teacher readiness, teacher knowledge, teacher skills and challenges in the implementation of SBA according to gender

Semi-structured interviews were conducted to elicit information on five factors in the implementation of SBA in Malaysian secondary schools according to gender. These factors are teacher knowledge, school support, teacher readiness, teacher skills and challenges. These themes run parallel to the themes investigated under the initial quantitative phase of the study. The responses of 10 male and 10 female teachers are discussed below.

4.3.1. Teacher knowledge

The responses of the teachers generally suggest that SBA is a good assessment approach for Malaysian secondary schools though most of them feel that there are certain gaps when it comes to its implementation. Most of the male teachers interviewed have a more positive view of SBA compared to their female counterparts who have several concerns regarding SBA. A majority of the male teachers see the benefits of implementing SBA, which is a shift away from the fully centralised examination-oriented approach. They feel that the implementation of SBA would be better if sufficient time is given for them to complete and manage the tasks related to SBA. Although female teachers, too, acknowledge the benefits of SBA, they raised several issues such as doubts about proper ways in implementing SBA, the need for a consistent system, the continuous preparation of assessment and the excessive homework that may result from its implementation.

4.3.2. School support

Male teachers perceive that their schools are trying very hard to help the teachers. They, however, do not deny that more needs to be done, especially with regard to facilities. The female teachers agree with their male counterparts. Nevertheless, they feel that they did

not receive enough inhouse training and all the necessary details they would like to have regarding SBA. The female teachers perceive that even the school is not sure what needs to be done. Furthermore, female teachers raised more issues related to school support by giving more specific examples, such as updating information required and providing details where necessary. A major difference between male and female teachers is that female teachers see a greater need for more details in the actual procedures and microlevel management. The male teachers on the other hand, though they do recognize problems with the implementation of SBA, feel that the prevalent problems are within manageable limits.

4.3.3. Teacher readiness

In comparison to the male teachers, female teachers mentioned more issues regarding their readiness to implement SBA. For example, female teachers are very concerned about the frequent changes that they have to endure during the process of preparing and implementing SBA. The female teachers raised issues of tiredness among them. They also perceive that many students are not happy with SBA because they seem to have so many things to do for the assignments and there are so many subjects. The female teachers also think that SBA would result in students not being able to focus on learning. The female teachers expressed strong views which imply that the very purpose of SBA might not be achieved. Typical remarks express the core idea that there would be a shift from actual learning and understanding to completing the tasks assigned on time. On the other hand, male teachers, too, generally expressed their concern, but did not perceive the issues to be as severe as their female counterparts. Nevertheless, both male and female teachers believe that cooperation among teachers would contribute meaningfully to the implementation of SBA.

4.3.4. Teacher skills

Female teachers believe that they have the teacher skills because they are trained in marking and assessing assignments. However, they feel that the guidelines given to them are still unclear. Male teachers perceive that they had received appropriate training, although some SBA based practices are still unclear for them. Nevertheless, they generally feel that they could adapt themselves to meet the requirements of SBA. Thus, it can be seen that most of the female teachers emphasize the need for more guidance if they are required to conform to SBA requirements.

4.3.5. Challenges

Male teachers accept the fact that they would face challenges in implementing SBA. They have the general view that any new system will definitely face some problems. Notably, they acknowledge that things would improve after a series of discussions among the policy makers. They remain optimistic that eventually, better solutions would be found. The female teachers see the challenges in the implementation of SBA whereby some feel that parents still give importance to final scores. Several female teachers also feel that there is less purpose or motivation to learn for the students, because there are no terminal examinations. Hence, the pressure to academically perform is lacking.

5. DISCUSSION AND CONCLUSION

This section discusses the findings from the quantitative and qualitative investigations. The discussion focuses on gender differences in assessment knowledge, school support, teacher readiness, teacher skills and challenges faced by Malaysian secondary school teachers in implementing SBA. It also discusses the relationship between school support, teacher readiness, teacher skills and challenges faced by them towards teacher knowledge in the implementation of SBA.

5.1. Gender differences in assessment knowledge, school support, teacher readiness, teacher skills and challenges faced by teachers

The results show that school support is very important in the implementation of SBA. Male and female teachers view school support differently. Male teachers feel that school support is more evident in the implementation of SBA, unlike most of the female teachers. The semi-structured interviews provide further evidence that female teachers have more issues regarding the school support that they receive or expect to receive. This result contradicts with the findings of a study conducted by Yusof and Mohd-Musa (2011) which showed that there were no gender differences among teachers in Johor, the southernmost state in Peninsula Malaysia. The level of teacher readiness, too, shows differences. The results show that male teachers are more ready to be totally engaged with the SBA when compared to female teachers. Additionally, the semi-structured interviews lend support to this view. This finding contradicts with the findings in Rosni and Siti-Fatihah's (2010) study.

Table 2 shows that there are no gender differences in terms of knowledge. This shows that the teachers involved in SBA have the experience and knowledge in their respective subjects. This finding concurs with the findings in Ikhsan et al. (2013) study which show that male and female teachers have the same perception on the implementation of SBA. The findings show that there are no differences in terms of teacher skills in the implementation of SBA based on gender. These findings are similar to the findings in a study conducted by Rosni and Siti-Fatihah (2010).

According to McMillan (2000), teachers who are knowledgeable on assessment are able to integrate assessment effectively in their teaching and plan their teaching strategies well. Furthermore, they are able to motivate their students. The findings show that there are no significant gender differences in the challenges they face.

5.2. Relationship between school support, teacher readiness, teacher skills and challenges faced by teachers towards teacher knowledge in the implementation of SBA

The results of the Pearson correlation test shows a weak or average positive test between school support, teacher readiness, teacher skills and teacher knowledge in the implementation of SBA. The only negative relationship is between challenges faced by teachers and teacher knowledge in the implementation of SBA and the negative relationship is weak.

SBA is a form of holistic assessment which assesses the cognitive (intellectual), affective (emotions and spirituality) and psychomotor (physical) aspects. "School based assessment is regarded as a tool to more accurately reveal the true ability of a student, reduce the limiting effects of 'exam fright', and to increase the confidence of students as they have already learnt and brought to practice the examination contents and skills during the conduct of their SBA projects" (Barley, 2013, p. 24).

SBA is seen to be advantageous as it can reduce student anxiety because students have obtained a certain percentage of their marks before they sit for the actual examination (Kerr-Phillips, 2007). Additionally, this strategy is based on an effort to make schooling more fun and mark a shift away from examination-oriented national educational assessments (Ministry of Education, 2009). Educational leaders, administrators, and teachers are faced with questions regarding the best ways to motivate students and accurately report their progress (Popham, 2011).

SBA has been designed and implemented so that the standard of education in Malaysia is able to further improve and meet world standards. The results of this current study show that there are weaknesses in the implementation of SBA. The responsibility to ensure that quality measures are maintained in the development and implementation of educational assessment lies with all the stakeholders who are involved with this system. Policy-makers can make use of the results in this study to make appropriate changes or amendments to existing processes and procedures in the implementation of SBA so that teaching and learning in schools are aligned to the assessments that are conducted. Instruments used in the assessments, too, can be further improved so that teachers are able to contribute more to the teaching and learning experience of students.

Teachers on the whole are aware of their role in the implementation of SBA. The successful implementation of SBA will be determined by the commitment shown by teachers and the cooperation of all the stakeholders in the Malaysian education system. Similar to many other parts of the world, female teachers make up a larger proportion of the Malaysian teaching force when compared to the male teachers. The implication here is that if female teachers are not prepared or sufficiently ready to implement SBA, the implementation of SBA could be adversely affected.

All stakeholders, especially teachers are responsible and play a critical role in the implementation of SBA to ensure the quality and standard of assessment. A combination of a dual system in assessment poses new challenges. The interviews reveal that in principle, most of the male and female teachers are in agreement that SBA should be implemented. However, female teachers express more reservations and are less positive compared to their males counterparts.

If implementation is guided by the objectives and appropriate practices to achieve SBA, it will create a positive school environment in which students will be able to realize their potential in a harmonious environment. The positive school environment will be conducive to reduce social problems that are prevalent among school-going children and encourage school attendance. This will be a meaningful transformation to the educational experience in Malaysia. Moreover, studies such as this will provide additional input that can be used by curriculum designers, policy-makers and administrators to continually make improvements to the SBA.

6. FUTURE RESEARCH DIRECTION

The study points to a need to be more sensitive towards the challenges faced by teachers in the actual implementation of SBA in classrooms as there seems to be a gap between the aims of the SBA and the requirements to fulfill its noble objectives. This is prevalent in the in-depth views expressed by teachers regarding the challenges they face in the implementation of SBA. Hence, further studies, comprising larger samples of Malaysian secondary school teachers is deemed necessary. The results from these studies could inform the stakeholders and policymakers in planning and implementing relevant strategies towards the enhancement of SBA according to Malaysia's needs.

There is evidence from the responses in the interviews that both male and female teachers are concerned about the implementation of SBA and generally express their willingness to support the implementation of the new approach to assessment in Malaysian secondary schools. Future research on whether or not there exist significant differences between male and female teachers in their assessment strategies within the context of SBA could provide more insights on the role of gender in SBA.

Improved educational assessments will result in more accurate information on the level of student achievement while information on the challenges faced by teachers will provide useful input to improve on SBA practices. Hence, future studies related to assessment materials and challenges that teachers face in the implementation of SBA need to be conducted so that the quality of assessments carried out by secondary school teachers, irrespective of gender, can be improved.

ACKNOWLEDGEMENT

The authors would like to thank the Malaysian Ministry of Higher Education and Universiti Utara Malaysia for the financial funding of this project through FRGS Grant S.O. Code 13135 (2014).

REFERENCES

- Alkharusi, H. (2011). Self-Perceived Assessment Skills of Pre-service and In-service Teachers. *Jurnal Pendidikan Malaysia*, 36(2), 9-17.
- Arsaythamby, V., Hariharan, N. K., & Ruzlan, M. A. (2015). Teachers' Knowledge and Readiness towards Implementation of School Based Assessment in Secondary Schools. *International Education Studies*, 8(11), 193-203.
- Azlin-Norhaini, M., Ong, H. L., Mohamad-Sattar, R., Rose-Amnah, R., & Nurhayati, Y. (2013). The Benefits of School Based Assessment. *Asian Social Science*, 9(8), 98-106.
- Barley, S. Y. M. (2013). Perspectives of school-based assessment in the NSS curriculum through the eyes of the administrative and teaching stakeholders in Hong Kong. *Hong Kong Teachers' Centre Journal*, 12, 21-48.
- Brown, G. T. L. (2004). Teachers' conceptions of assessment: Implications for policy and professional development; *Assessment in Education*, 11(3), 301-318.
- Chan, Y. F., & Sidhu, G. K. (2012). School-Based Assessment among ESL Teachers in Malaysian Secondary Schools. *Journal of the Malaysian Education Deans' Council*, 9, 75-87. Universiti Sains Malaysia.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE: Los Angeles.

- Harian Metro (2010). Statistik Kementerian Pelajaran nisbah guru lelaki dan perempuan. [Ministry of Education statistics on male and female teacher ratio]. Malaysian Ministry of Education. Retrieved from <http://Document.tips/documents/factor-bilangan-guru-mengikut-jantina-tidak-seimbang.html>
- Ikhsan, O., Norila, M. S., & Nurul-Aida, M. N. (2013). The Implementation of School Based Assessment in Primary School Standard Curriculum. *International Journal of Education and Research*, 1(7), 1-10.
- Kamil, K. H. M. (2008). The Implementation of the School-Based Oral English Test: A Case Study. Unpublished master dissertation, *MARA University of Technology*, Malaysia.
- Kerr-Phillips, F. (2007). School-based assessment: The need, the reality, the future: A perspective from the independent examinations board of South Africa". Retrieved from http://www.iaea.info/documents/paper_1162d20227.pdf
- Khodori, A. (2012). Kepemimpinan pentaksiran holistik memacu modal insan kreatif dan inovatif [Holistic assessment leadership drives creative and innovative human capital]. Paper presented at the School Based Assessment Colloquium, Institute of Aminuddin Baki, Malaysia Ministry of Education.
- Litwin, M. S. (1995). *How to Measure Survey Reliability and Validity* (Vol. 7, pp. 5–60). Thousand Oaks, CA: Sage Publications Inc.
- McMillan, J. H. (2000). Fundamental assessment principles for teachers and school administrators. *Practical Assessment, Research & Evaluation*, 7(8). Retrieved from <http://PAREonline.net/getvn.asp?v=7&n=8>
- Ministry of Education (2009). Curriculum Development Division, Kuala Lumpur. Malaysia.
- Ministry of Education (2013). Gender differences among secondary school teachers. Kuala Lumpur. Malaysia.
- Nor-Hasnida, M. G. (2012). Why Do We Need To Change?': Teachers' Attitude Towards School-Based Assessment System, SCR London's 1st International Conference on Social Sciences and Humanities in the Islamic World on 28-30 May.
- Popham, W. J. (2011). *Classroom assessment: What teachers need to know*. Pearson. Boston.
- Rosni, Z. S., & Siti-Fatihah, M. S. (2010). Kesiediaan Guru Sekolah Menengah Di Daerah Kota Baharu Dalam Melaksanakan Sistem Penilaian Prestasi Pelajar Berasaskan Sekolah [The willingness of Secondary School Teachers in the Kota Baharu District to implement the School-Based System of Evaluating Student]. Universiti Teknologi Malaysia.
- Utusan Malaysia (2014). Antara Kefahaman Guru dan Penjelasan [Between teacher understanding and explanation]. Retrieved from http://www.utusan.com.my/utusan/Rencana/20140213/re_06/Antara-kefahaman-guru-dan-penjelasan
- Yusof, B., & Mohd-Musa, S. (2011). Kepimpinan guru besar dalam pelaksanaan pentaksiran berasaskan sekolah di Sekolah Kebangsaan Daerah Kota Tinggi Johor [Headmasters' leadership in the implementation of school-based assessment in the Kota Tinggi District National School in Johor] (pp. 1-9).

AUTHOR(S) INFORMATION

Full name: Arsaythamby Veloo

Institutional affiliation: Universiti Utara Malaysia

Institutional address: 06010 Sintok, Kedah. Malaysia

Biographical sketch: Associate Professor Dr. Arsaythamby Veloo has vast experience working in several government departments before joining Universiti Utara Malaysia as a lecturer in 2003. He pursued his PhD in psychometric and testing in mathematics. His current research interests include distance learning, assessment, testing, mathematics in education and research methodology.

A. Veloo, R. Md-Ali, & H. N. Krishnasamy

Full name: Ruzlan Md-Ali

Institutional affiliation: Universiti Utara Malaysia

Institutional address: 06010 Sintok, Kedah, Malaysia

Biographical sketch: Associate Professor Dr. Ruzlan Md-Ali has served in various capacities in Universiti Utara Malaysia. He specialises in Mathematics Education. His current research interests include curriculum and instruction, assessment, teacher education and research methodology. Currently, he is the Director of the Institute for Advanced Research in Education (IARE).

Full name: Hariharan N. Krishnasamy

Institutional affiliation: Universiti Utara Malaysia

Institutional address: 06010 Sintok, Kedah, Malaysia

Biographical sketch: Dr. Hariharan N Krishnasamy has been serving in Universiti Utara Malaysia since 1994. He has been teaching Malay and English for the past 30 years.