**SUZANA ABD MUTALIB & JAMIL AHMAD**

# The Geography Teacher Practices in Implementation of Formative Assessment: A Case Study

***ABSTRACT:*** *Teachers need the necessary skills and further awareness and understanding in order to implement formative assessment activities effectively in their T&L (Teaching & Learning) process. Formative assessment is an ongoing process during the process of teaching and learning. A proper implementation of the true concept of formative assessment will have positive impacts on students' learning and motivation. This paper reports the findings of a qualitative study undertaken to determine whether formative assessment is accurately implemented as per recommendation of experts in the teaching and learning process of the subject of geography. Data was obtained through classroom observations and interviews with two Geography teachers. Fieldwork was done at a secondary school in the state of Perak, Malaysia. Overall, the findings of the study show both teachers practises formative assessment as recommended by experts. Both teachers also displayed outstanding performance in their application of some of the concept of formative assessment. However, there are also rooms for improvements especially in the area of implementation of formative assessment activities. Therefore, all concerned parties must sit together to discuss necessary steps that must be taken to ensure the implementation of high quality formative assessment. Efforts must be undertaken to ensure that teachers are properly educated of the proper concept of formative assessment and its implementation in the classroom.*

***KEY WORDS:*** *Formative assessment, the implementation of formative assessment in teaching and learning process, formative assessment in geography.*

## INTRODUCTION

Formative assessment occurs every day in teaching and learning process. It is carried out continuously, integrated into the teaching and learning with a view of measuring the students' level of understanding. It is emphasized to improve students' learning with the hope to build on the wider potentials of the students (Ishak, 2011).

To ensure the implementation of formative assessment runs smoothly and accurately, teachers need to understand the concept of formative assessment as a whole (Tomlinson, 2008). Weaknesses and constraints in the application of formative assessment are due to teachers' insufficient understanding of the concept and theory of formative assessment (Black & Wiliam, 1998; and William & Leahy, 2007).

A study by T. Eckhout *et al.* (2005) found that there was a need for teachers to be trained in classroom-based formative assessment practices. The result of their study indicated that training can increase teachers' confidence in different aspects of classroom assessment, including developing learning targets, developing and using different types of assessment, involving students in assessment, and communicating effectively about students' achievement.

Based on the objective of providing a clear picture of the whole concept of formative assessment, experts have produced a variety of concepts, approaches, methods, strategies,

***About the Authors:*** **Suzana Abd Mutalib** is a Student at the Faculty of Education UKM (National University of Malaysia); and **Dr. Jamil Ahmad** is a Lecturer at the Faculty of Education UKM, Bangi, Selangor Darul Ehsan, Malaysia. For academic purposes, the authors can be contacted via e-mails at: suzanaalea@yahoo.com.my and jamil3191@yahoo.co.uk

***How to cite this article?*** Abd Mutalib, Suzana & Jamil Ahmad. (2014). "The Geography Teacher Practices in Implementation of Formative Assessment: A Case Study" in *EDUCARE: International Journal for Educational Studies*, Vol.7(1) August, pp.75-84. Bandung, Indonesia: Minda Masagi Press and UMP Purwokerto, ISSN 1979-7877. Available online also at: http://educare-ijes.com/the-geography-teacher-practices/

***Chronicle of the article:*** Accepted (November 23, 2013); Revised (April 1, 2014); and Published (August 17, 2014).

and techniques for implementing formative assessment in the teaching and learning process. Specifically for this study, the concepts, approaches, methodologies, strategies, and techniques of implementing formative assessment are included for the purpose of obtaining implementation guidelines which are more practical and informative in terms of characteristic. These include as follows:

*First*, clearly stating the learning standards to students (Black & Wiliam, 1998; Laud *et al.*, 2010; Stiggins, 2001 and 2002; and Stiggins & Chappuis, 2006).

*Second*, using the pre assessment strategy before beginning the teaching and learning process to diagnose the needs of the students (McTighe & O'Connor, 2005).

*Third*, using appropriate formative assessment designs or techniques or activities to assess student learning. The technique used must be appropriate to measure the students achievement based on the learning standard. The level of activities also must be appropriate to the learning standard and students' ability (Stiggins & Chappuis, 2006; and Brookhart, 2007).

*Fourth*, provide the students with effective feedback to help enhance their learning (Black & Wiliam, 1998; Overall & Sangster, 2006; and Hall, 2007).

*Fifth*, encourage self-assessment and peer assessment, especially to help achieve the learning objectives (Black & Wiliam, 1998; Stiggins, 2002; McTighe & O'Connor, 2005; and Laud *at al.,* 2010).

*Sixth*, proper management of teaching and learning time is important to make sure the application of formative assessment is smooth and effective (Brookhart, 2007).

*Seventh*, encourage student-centred activities (Cizek, 2010) and active participation of students in all activities (Crooks, 1988; Black & Wiliam, 1998; Scherer, 2005; Stiggins & Chappuis, 2006; and Stiggins, 2008).

*Eighth*, use information derived from formative assessment activities to decide what to do next during the process of teaching and learning (Stiggins, 2008; Phelan *at al.*, 2009; and Laud *at al.,* 2010).

*Ninth*, practise effective communication (Stiggins & Chappuis, 2006; and Stiggins, 2008).

## STATEMENT OF THE PROBLEM, OBJECTIVE, RESEARCH QUESTION, AND METHODS

One of the results of the transformation exercise on the national education system in Malaysia recently has been the change in the national curriculum: from the integrated curriculum to the standard-based curriculum. The changes are being implemented in stages beginning with secondary one in 2011. The transformation brings about certain changes to the curriculum content and practices, including the assessment system.

The change from summative assessment, which emphasizes tests and examinations, to formative assessment advocated by the concept of School Based Assessment (SBA) has attracted many complaints from teachers, especially those teaching secondary 1 and secondary 2. There appears to be a feeling of confusion among teachers in conducting formative assessment during the process of T&L (Teaching & Learning).

The age old practice of teaching and assessing pupils separately still holds sway among teachers who consider practices of formative assessment as something new and should be implemented separately even though all these concepts, approaches, methodologies, strategies, and techniques of implementing formative assessment have always been part of their teaching and learning (T&L) practices (Black & Wiliam, 1998; Hall & Burke, 2004; and Brookhart, 2007).

A research conducted by Mohamad Azhar & Shahrir Jamaluddin (2007) found that teachers generally use formative assessment activities as a teaching technique and not as an assessment technique. This is supported by Suzana Abd Mutalib & Jamil Ahmad (2012) who noted that teachers tend to confuse and mix up formative assessment activities with T&L activities. Zamri Mahamod & Nor Razah Lim (2011) found that teachers' use of formative assessment activities, especially questioning techniques to enhance students learning, was still low.

Teachers do not realize that they are already practising formative assessment in their T&L process. In actual fact, they are applying the concept, approaches, methodologies, strategies,



***ISSN 1979-7877** and website: **www.educare-ijes.com***

and activities of formative assessment every time they evaluate the status of their students' level of understanding against the stated objectives. The same is also true when they use the information derived from practices of formative assessment to help them modify their instructions and to plan the next lesson.

More information with regards to formative assessment practices is needed to alleviate teachers' confusion and reservation in conducting formative assessment in the classroom. This is important, especially because formative assessment activities can also function as activities for the T&L process. Teachers need "hands-on" experience on the use of formative assessment practices to guide them in their effort to conduct formative assessment successfully.

Presently, clear guidelines are not always readily available to teachers to help them distinguish between formative assessment practices and the process of T&L. Teachers are sometimes not aware that both activities can move simultaneously, in tandem and are embedded to one another (Stiggins & Chappuis, 2006; Azhar & Jamaluddin, 2007; and Brookhart, 2007). The distinction between the two, as asserted by D. Fisher & N. Frey (2009), is that formative assessment practices are used after the content and concept of the subject have been explained.

The objective of this study is to examine the practices of formative assessment in the teaching and learning of Geography in secondary schools before the implementation of the standard-based curriculum for secondary three.

The study was conducted to clarify the question "How do teachers implement formative assessment practices during the process of T&L in the subject of Geography in secondary three?"

This study used a qualitative case study approach to address the research question posed. The method was chosen based on the desire to understand the phenomenon in depth (Yin, 2003) and to get a clear picture (Yusoff ed., 2004) of the application of formative assessment practices in the subject of Geography for secondary 3. One secondary school, located in Perak, Malaysia was selected as the site for the study.

The selection of the participants was done through purposive sampling to address the need of the researchers to explore, learn, and understand the phenomenon effectively. For this to occur the participants selected must possess good knowledge and information regarding the phenomenon being studied (Merriam, 2009). Selecting participants with these characteristics also helps to improve the credibility of the findings (Patton, 2002).

Two Geography teachers were chosen as participants in this study. They were chosen based on strict criteria: the participants must have at least more than ten years of teaching experience; must possess reliable and excellent knowledge about formative assessment; and must possess current and up to date information on the use of formative assessment techniques.

Data was collected through non-participant observations and interviews conducted in the classroom. This was to provide a true picture of the application of formative assessment practices in the T&L process (Yusoff ed., 2004). The two techniques were chosen as data obtained from these two techniques could complement and strengthen each other (Yusoff ed., 2004; Bogdan & Biklen, 2007; and Merriam, 2009). Information that was not clear or difficult to obtain during observations could easily be obtained through interviews (Patton, 1987).

Data was analyzed in two stages. The first analysis was done during the field work; and, the second, a content analysis was carried out after the completion of the field work. Manual frequency calculation technique was used to establish the patterns of formative assessment techniques often used by the participant (Murad Saleh, 2003). A Matrix is used for inference analysis. The Findings are descriptive with regards of practices of formative assessment (Lebar, 2009) but cannot be generalized outside of the context, participants, and the study.

## THE FINDINGS AND DISCUSSIONS

The practices of formative assessment being practiced by both teachers are based on the guidelines suggested by experts in the field. These include:


***ISSN 1979-7877*** *and website:* ***www.educare-ijes.com***

***About the Use of Pre-Assessment Strategy.*** Oral questioning activities which functioned as pre-assessment strategy were carried out by both participants to commence their T&L (Teaching & Learning) process. Open ended and closed ended oral questions were presented to students.

Teacher R asked a few questions connected to the previous lesson in order to gauge students' level of understanding of the concept of contour. Teacher R connected the students' answers to the topic they were about to learn. Teacher R started the T&L process by drawing three types of contours on the board. These are contour with lines closely grouped together, contour with lines sparsely grouped together, and contour with lines both closely and sparsely grouped together in alternating arrangement. Using the drawing, teacher R conducted oral question activities with the students.

> Teacher R: "*If the lines are close to each other, then the slope is …"*
> Students: "*Steep*".
> Teacher R: "*If the lines are far from each other, the slope is …*"
> Students: "*Gentle*".
> Teacher R: "*If some of the lines are close to each other, followed by lines far from each other, then close to each other again, what type of slope is it?*"
> Students: "*Steps*" (classroom observation note, 19/9/2013).

Satisfied with the students' answers, teacher R proceeded to inform the students the topic of the lesson they were about to learn. "*OK, today we are going to identify geographical shapes based on contour lines*".

Teacher S also used oral questioning technique as an induction set to start the T&L (Teaching & Learning) process. Teacher S started by drawing two points on the board which were marked A and B. Teacher S then asked the students four questions in a row without the students being given the chance to respond.

> Teacher S: "*What is the bearing from A to B?; How do we calculate the bearing?; Where do we start measuring?; and Is it point A or point B?*"
> Only after the fourth question did, the students get the chance to respond, "*Point B*".
> Teacher S then asked another question followed by a respond from the students, "*Where do we put the compass points?*"
> Students: "*B*" (classroom observation note, 20/9/2013).

Teacher S then drew the compass points on point B. Then, teacher S continued with the oral questioning activity, asking the students the location of North, South, East, and West on the compass point, while pointing to the drawing on the board. Teacher S then proceeded to mark the points on the board based on the students' answers. After that, teacher S asked more questions punctuated by students' replies.

> Teacher S: "*Where do we start measuring? N, S, E, or W*?"
> Students: "*S*"
> Teacher S: "*S to E or S to W?*"
> Students: "*S to E*" (classroom observation note, 20/9/2013).

Teacher S confirmed the students' answers and demonstrated the measuring process which resulted in the reading of S47°T. Teacher S then informed the students that for the lesson they were going to learn how to calculate bearings.

***About Design of Assessment***. Through observation, it was discovered that both teachers utilized five different formative assessment techniques in their T&L (Teaching & Learning) processes. Four of the techniques, namely: seatwork, exercises, observations, and homework, were conducted after the teachers had given explanation of the concepts and contents of their lessons. The other technique, oral questioning technique, was used throughout, including during the stage of the lessons where both teachers were giving explanations of the concepts and contents of their lessons.

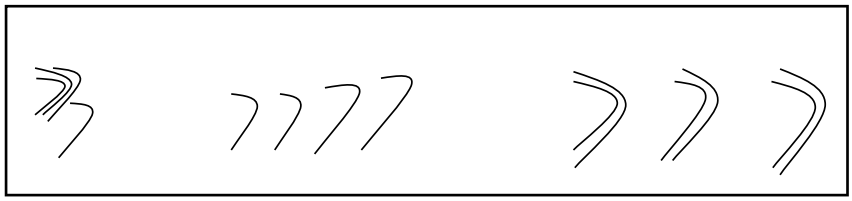
The seatwork and exercise techniques were used to assessed students' geography skills, where they were required to independently draw cross section of a geography location based on contour lines, calculate heights, and bearing on a topography map, calculate distance and size of a place based on the scale on a map, organize data, draw and complete different graphs, and interpret maps.

The activities under these two techniques were set at a moderate to high levels which

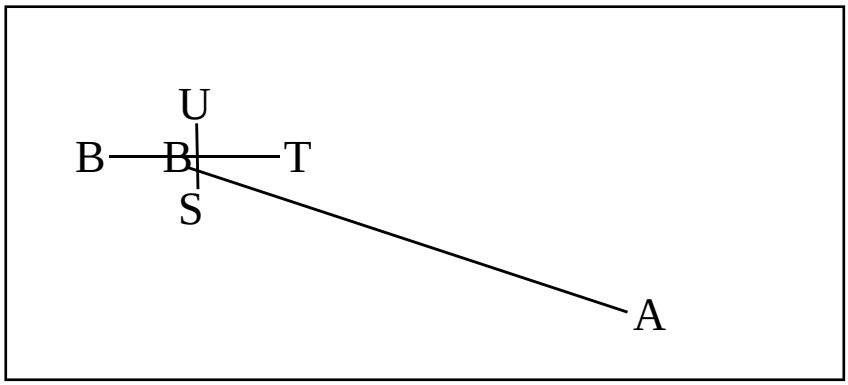


***ISSN 1979-7877*** *and website:* ***www.educare-ijes.com***

require application, analysis, synthesis, and evaluation skills. First students were involved in seatwork activities. After the teachers were convinced that the students have mastered the skills, the students were then given exercises. During these activities, both teacher R and teacher S conducted observations to assessed students' level of understanding and mastery of the concepts and contents of the lessons. Homework was then given as extra exercise when it was felt that the students have not mastered the concept and content of the lesson sufficiently.



**Picture 1:**
Geographical Shapes Based on Contour Lines




**Picture 2:**
How to Calculate Bearings

Oral questioning was conducted at the beginning, middle, and end of the lesson by both teacher R and teacher S. While giving explanation on the concept and content of the lessons, both teacher R and teacher S asked oral questions to gauge students' level of understanding. They did this by asking questions designed to connect the concepts and contents of their lessons to the students' previous knowledge from the previous lessons.

During the middle stage of their lessons, both teacher R and teacher S used oral questioning to help make the flow of their lessons smoother. For example, teacher S started the seatwork activity by giving instructions and asking oral questions.

> Teacher S: "*Draw two points, one slightly above the other, and mark this point as A. Mark the lower point as B*".
> Teacher S then walked around the class observing the students completing the task. Satisfied that all the students had managed to complete the task successfully, teacher S then asked three oral questions one after another.
> "*OK, now calculate the bearing from A to B. Where do we put the compass point?*"
> "*Is it on point A or point B?*"
> The students responded with "*B*" (classroom observation note, 20/9/2013).

Teacher S then proceeded by giving instruction for students to start with the task of drawing the compass point on point B. This was followed by more oral questions punctuated by students' responses.

> Teacher S: "*What do we do after that?*"
> Students: "*Connect the dots*"
> Teacher S: "*Then what do we do?*"
> Students: "*Put the projector on point B*"
> Teacher S: "*Now, can you count the bearing?*"
> (classroom observation note, 20/9/2013).

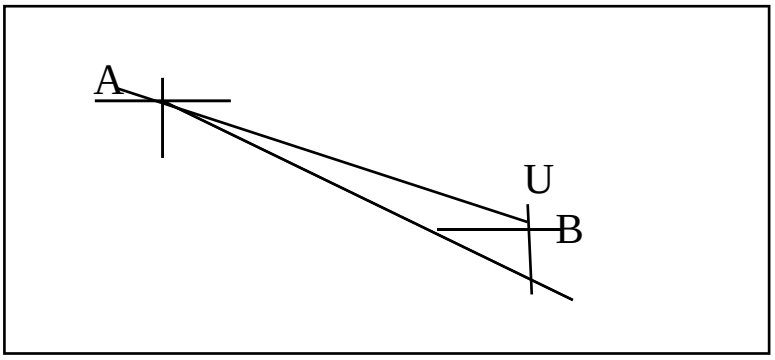
While doing this, teacher S moved around the class to observe how the students carry out the task. Teacher S made immediate corrections and explanations whenever students made mistakes while completing the task, or when students gave different answers to the question.

> Teacher S: "*Ok, some of you get 310, while others get 320. This is determined by the position of the points you drew. Do you understand?*"
> Students: "*Yes*" (classroom observation note, 20/9/2013).

Teacher S then presented other questions for the seatwork activity.

Teacher R also started the seatwork by giving instruction which was immediately carried out by the students.

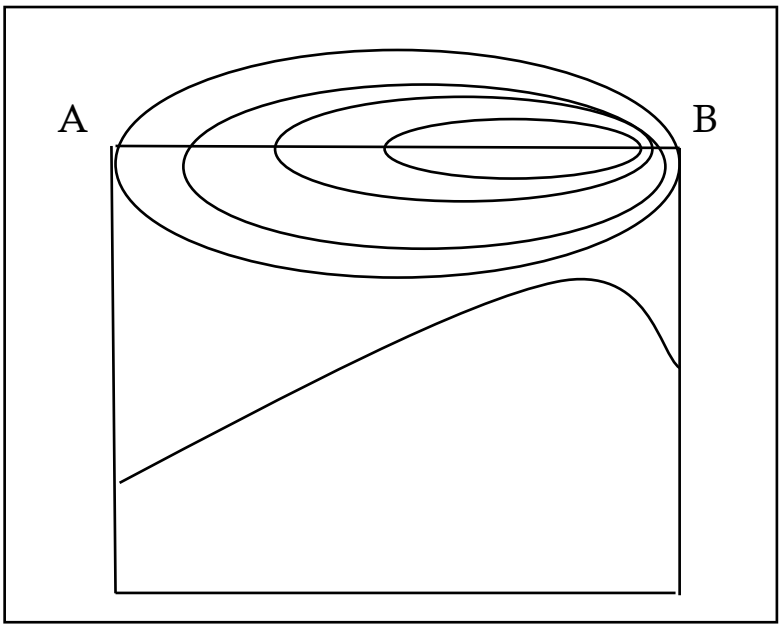
> Teacher R: "*OK, now I want you to draw the contour lines. Draw the outside lines first. Make it a big, oval shape*".
> Teacher R: "*Now draw the inside lines. Draw three lines close together on the right hand side but far apart on the left hand side*" (classroom observation note, 19/9/2013).




**Picture 3:**
Count the Bearing

Teacher R also asked oral questions to check whether students had completed the task successfully before proceeding with further instruction related to the task. Teacher R said, "*Now draw a line across the middle. Mark the ends A and B*"; and "*Now draw a cross section*" (classroom observation note, 19/9/2013).

Teacher R then proceeded with oral questions to make sure the students had understood the concept and content of the lesson. Students' responses to each questions indicated their level of understanding of the lesson.




**Picture 4:**
Learning the Contour Line

> Teacher R: "*What is the shape of the landscape? Anybody knows?*"
> Students: "*Slope*"
> Teacher R: "*Ok. What is the value of the outside contour lines? Is it high or low?*"
> Students: "*Low*"
> Teacher R: "*Ok, so how many?*"
> Students: "*15 metres*"
> Teacher R: "*What is the value between the contour lines?*"
> Students: "*15 metres*"
> Teacher R: "*Ok, what is the value of the second contour line?*"
> Students: "30 metres"
> Teacher R: "*Ok, how about the third contour line?*"
> Students: "*45 metres*"
> Teacher R: "*Ok, what is the value of the fourth contour line?*"
> Students: "*60 metres*" (classroom observation note, 19/9/2013).

***About the Feedback.*** Both teacher R and teacher S frequently gave immediate feedback to their students, either orally or in written form on the board. Observations carried out while the students were completing the tasks for seatwork and exercise provided them with information on the status of the students' level of understanding and mastery of the skills related the topic of the day. This information was used to rectify any misunderstanding among the students through feedback. This was done by re-teaching the concept using different techniques, demonstration, or giving extra guidelines.



***ISSN 1979-7877*** *and website:* ***www.educare-ijes.com***

Through oral questioning activities, both teacher R and teacher S provided feedback to their students very frequently that the activities became a dialog between the teachers and the students. While teaching the sub-topic of interpreting the topography map, teacher R provided feedback by connecting the topic to the immediate surrounding and the students' general knowledge.

> Teacher R: "*If want to see an example of undulating landscape, look at the land around our school. For example, look at the Heawood area behind the school. That is undulating. What can you find there?*"
> Students: "*Oil palm and rubber trees*"
> Teacher R: "*Why oil palm and rubber? What type of soil do we have over there?*"
> Students: "*Literate*"
> Teacher R: "*Ok. Are any other reasons why it is suitable to plant rubber and oil palm over there?*"
> Students: "*Good drainage*"
> Teacher R: "*Good. Rubber and oil palm need good drainage. Do we plant oil palm and rubber in swamps?*"
> Students: "*No*"
> Teacher R: "*Why?*"
> Students: "*The drainage is not good*" (classroom observation note, 19/9/2013).

Teacher R provided feedback as guidelines after the students had completed the task of calculating the size of a paddy field in a topography map.

> Teacher R: "*Ok. We have learnt how to calculate the size of an area on a topography map? Anybody still do not understand how to do it?*"
> (No response from the students)
> Teacher R: "*Ok. In order to calculate the size, we must do it step by step. It is easy. First, we count all the squares. Second, we calculate the size of a square. Third, we multiply the size of the square to the number of squares available*" (classroom observation note, 19/9/2013).

***About the Self and Peer Assessment.*** In order to solve the task given for seatwork, exercise, and homework, students could assess themselves to identify their weaknesses and misunderstanding related to the concepts and contents of the lesson. They could interpret their own achievement, whether or not they have mastered the knowledge and skills presented by the teacher.

During the study, it was evident that both teacher R and teacher S assisted the students to do self-evaluation. They did this by frequently asking questions to gauge students' level of understanding. These were open questions which allowed the students to assess themselves. These include:

> "*Do you understand?*"
> "*Anybody does not understand?*"
> "*Is everything ok?*"
> "*Is it right or not?*"
> "*Are you able to do it?*"
> "*Does everyone understand?*" (classroom observation notes, 19/9/2013 and 20/9/2013).

Both teacher R and teacher S also frequently asked those students who have mastered the knowledge and skills to assist other students who had not done so. Through the oral questioning activities, the students were able to assess their own level of understanding apart from helping their friends to better understand the concept and content of the lesson.

***About the Time Management.*** During the study, it was clear that both teacher R and teacher S maximize the time use for teaching of concepts and contents of their lessons, while conducting formative assessment activities through oral questioning, seatwork, exercise, and observations. The time used for teaching of concepts and contents and the time used for formative assessment activities were adjusted in accordance to the length of time available for the lesson. In a two period lesson (80 minutes), the percentage of time allocated for formative assessment activities was higher compared to a single period lesson (40 minutes).

***About the Students Centred Activities.*** Through observation, it was established that both teacher R and teacher S actively involved students in the T&L (Teaching & Learning) process. In all the activities that the students had to undertake, both teacher R and teacher S acted as observers and facilitators to ensure the activities proceeded smoothly as planned. From the nine observations carried out, all the activities conducted were students centred and the students were actively involved.

***About the Use of Information from the Assessment Activities.*** Both teacher R and teacher S used information derived from the

formative assessment activities to provide feedback to the students and modify the T&L (Teaching & Learning) process to improve students understanding. While the students were involved in seatwork and exercise, both teacher R and teacher S moved around the class making observations of the students' progress. Both then provided necessary feedback accordingly, either to individuals or the whole class. At times, both teacher R and teacher S provided feedback by re-teaching the concepts and contents, demonstration, or simply through oral explanation.

***About the Practising Effective Communication.*** Both teacher R and teacher S practised effective two ways communication. For example, all instructions and questions were given verbally and students were given plenty of opportunities to respond, which they did. All responses given by the students were also responded to by both teacher R and teacher S, and clearly this had a positive effect on the students. This type of two ways communication is effective, easy to implement and especially suitable when there is a time constraint, such as teaching a difficult concept in a single or double period lesson.

The formative assessment practices of both teacher R and teacher S were in accordance with good practices of formative assessment suggested by experts in the field. However, there are still rooms for improvements, especially in the area of implementation for both teacher R and teacher S. These include:

*First*, specify the learning objectives, the students have to achieve. These objectives must be reflected in the content of the lesson as well as the teaching and learning activities as a whole. Even if the objectives are not overtly stated, the students must be able to figure out these objectives through the learning activities conducted. They must have a sense of direction in terms of what they are supposed to learn and master.

*Second*, both teacher R and teacher S should utilize the pre-assessment strategy more effectively. This is because pre-assessment strategy enables the teacher to identify students' weaknesses earlier and this gives him the opportunity to take the necessary steps to solve the problem during the lesson (McTighe & O'Connor, 2005). During the study, even though both teacher R and teacher S utilized the pre-assessment activities, the potential of the strategy was not fully exploited. Not enough time was spent on the activities to allow problems to be really identified and dealt with accordingly in the T&L (Teaching & Learning) process that proceeded.

*Third*, the formative assessment activities must be suitable to the learning objectives, especially with regards to the level of the questions and tasks given (Black & Wiliam, 1998; Stiggins, 2001; and Fisher & Frey, 2009). During the study, even though the questions and tasks given for oral question activities, seatwork, exercises, and homework were largely relevant and helpful to students, there was perhaps a need to pay attention to the level of these questions and tasks. There was not enough variety in terms of the cognitive level requirement to answer the questions and tasks given. Most of the questions and tasks were too straight forward and did not present too much of a challenge to the students.

*Fourth*, both teacher R and teacher S conducted formative assessment on individual students to assess students' level of understanding as suggested by D. Fisher & N. Frey (2010). Both the T&L (Teaching & Learning) process and the formative assessment activities conducted were student centred in nature (Cizek, 2010); and students were actively involved. This was commendable as students' active involvement in the T&L process would help them to understand the lesson better (Crooks, 1988; Black & Wiliam, 1998; Scherer, 2005; and Stiggins & Chappuis, 2006). Also, the oral questioning activities help to improve the students inter and intra personal skills (Hamm & Adams, 2009).

However, both teacher R and teacher S did not provide individual students with enough opportunities to provide feedback on the tasks they had completed. Even though the tasks and questions were given to students to be completed individually, both teacher R and teacher S only elicited answers from the class as a whole instead of individual students. This means some of the students who may have had problems with the tasks and questions were not identified; therefore, denying them



***ISSN 1979-7877*** *and website:* ***www.educare-ijes.com***

the opportunity of being given extra help and attention by the teachers.

*Fifth*, effective communications like asking questions and giving and following instructions provide teachers with the opportunity to respond to students' problem (Black & Wiliam, 1998; and Stiggins & Chappuis, 2006). Effective communication also allows students to provide feedback regarding what they have mastered. During the study, both teacher R and teacher S practised effective communication, but there are rooms for improvement in terms of implementation. Both teacher R and teacher S could probably have spent more time on this stage to really be sure of the students' real problem and understanding.

**CONCLUSION**

With respect to the finding, it can be concluded that teachers need the necessary skills and further awareness and understanding in order to implement formative assessment activities effectively in their T&L (Teaching & Learning) process. Data from the study indicates that there are rooms for improvements, with teachers' insufficient understanding and awareness of the importance of formative assessment as a whole affecting the effectiveness of implementation.

In relation to the study, apart from being a significant addition to previous studies on formative assessment, it has contributed significantly to the literature of formative assessment, especially in Malaysia, where such materials are urgently needed. There is a real requirement for studies on formative assessment to be conducted in Malaysia, in order to expose teachers to the concept. This is especially important as the School Based Assessment (SBA), being implemented by the Ministry of Education in stages beginning with secondary one in 2012, is based on the concept of formative assessment.

The study has also significantly provided a true picture of the importance and implementation of formative assessment in the classroom and how formative assessment can easily be integrated as part of the T&L process. This should dispel the notion among many teachers that formative assessment is difficult to implement and is nothing more than an extra burden to teachers. Teachers should now be aware that when they apply the concept of formative assessment in their T&L process, they indirectly help to improve the quality of students learning.

Lastly, teachers must be aware of the importance of implementing formative assessment properly based on proper guidelines to ensure the assessment is of high quality and validity. This is very important because such assessments are capable of detecting changes in students' academic achievements (Stiggins, 2008). Therefore, all concerned parties must sit together to discuss necessary steps that must be taken to ensure the implementation of high quality formative assessment. Efforts must be undertaken to ensure that teachers are properly educated of the proper concept of formative assessment and its implementation in the classroom.

# References

Abd Mutalib, Suzana & Jamil Ahmad. (2012). "The Use of Formative Assessment Techniques in Science Subject in Primary One: A Case Study" in *Proceedings* the Asian Conference on the Social Sciences in Osaka, Japan.

Azhar, Mohamad & Shahrir Jamaluddin. (2007). "Assessment for Learning Practices in Secondary Schools" in *Journal of Educational Research, Faculty of Education of Universiti Malaya,* 27(1), pp.19-54.

Black, P. & D. Wiliam. (1998). *Inside the Black Box: Raising Standards through Classroom Assessment*. London: School of Education, King College.

Bogdan, R.C. & S.K. Biklen. (2007). *Qualitative Research for Education: An Introduction to Theories and Methods.* Boston: Allyn & Bacon.

Brookhart, S.M. (2007). "Expending Views about Formative Classroom Assessment: A Review of the Literature" in J.H. McMillan [ed]. *Formative Classroom Assessment: Theory into Practice.* New York: Teachers College Press, pp.43-62.

Cizek, J.G. (2010). "An Introduction to Formative Assessment: History, Characteristics, and Challenges" in H.L. Andrade & G.J. Cizek [eds]. *Handbook of Formative Assessment*. New York: Routledge, pp.3-17.

Crooks, T.J. (1988). "The Impact of Classroom Evaluation Practice on Pupils" in *Review of Educational Research,* 58(4), pp.438-481.

Eckhout, T. *et al*. (2005). "A Method for Providing Assessment Training to In-Service and Pre-Service Teachers". *Paper* presented at the Annual Meeting of the Southwestern Educational Research Association in New Orleans, LA.

Fisher, D. & N. Frey. (2009). "Feed Up, Back, Forward" in *Educational Leadership,* Vol.67(3), pp.20-25.

Fisher, D. & N. Frey. (2010). *Checking for Understanding: Formative Assessment Techniques for Your Classroom*. USA: Association for Supervision and Curriculum Development.

Hall, K. (2007). "Assessing Children Learning" in J. Moyles [ed]. *Beginning Teaching: Beginning Learning.* England: Open University Press, pp.196-203.

Hall, K. & W. Burke. (2004). *Making Formative Assessment Work: Effective Practice in the Primary Classroom*. Maidenhead: Open University Press.

Hamm, M. & D. Adams. (2009). *Activating Assessment for All Students: Innovative Activities, Lesson Plans, and Informative assessment.* United Kingdom: Rowman & Littlefield Education.

Ishak, Na'imah. (2011). "School Based Assessment as Transformation in Educational Assessment". *Keynote speaker* at the International Seminar on Measurement and Evaluation (ICMEE 4) at USM [Universiti Sains Malaysia] in Pulau Pinang, Malaysia, on 9-12 October.

Laud, L. *et al*. (2010). "Maximize Student Achievement with Formative Assessment" in *ASCD Espress*, 6(1).

Lebar, Othman. (2009). *Penyelidikan Kualitatif: Pengenalan kepada Teori dan Metod (Qualitative Research: Introduction to Theory and Methods).* Tanjung Malim: Penerbitan UPSI [Universiti Pendidikan Sultan Idris].

Mahamod, Zamri & Nor Razah Lim. (2011). "Kepelbagaian Kaedah Penyoalan Lisan dalam Pengajaran Guru Bahasa Melayu: Kaedah Pemerhatian" in *Jurnal Pendidikan Bahasa Melayu,* Vol.1(1), pp.51-65.

McTighe, J. & J. O'Connor. (2005). "Seven Practices for Effective Learning" in *Educational Leadership,* 63(3), pp.10-17.

Merriam, S.B. (2009). *Qualitative Research: A Guide to Design and Implementation*. San Fransisco: Jossey-Bass.

Murad Saleh, Abd. (2003). "Proses Penganalisisan Data Kajian Kes secara Kualitatif (The Process of Data Analysis in a Qualitative Case Study)". *Paper* presented in Seminar on Qualitative Research: Teory and Practices. Kuala Lumpur, Malaysia: 10 October.

Observation note, based on the T&L (Teaching & Learning) process conducted by Teacher R, at Secondary School in Perak, Malaysia, on 19 September 2013.

Observation note, based on the T&L (Teaching & Learning) process conducted by Teacher S, at Secondary School in Perak, Malaysia, on 20 September 2013.

Overall, L. & M. Sangster. (2006). *Assessment: A Practical Guide for Primary Teachers.* London: Continuum.

Patton, M.Q. (1987). *How to Use Qualitative Methods in Evaluation*. Newbury Park, CA: Sage.

Patton, M.Q. (2002). *Qualitative Research & Evaluation Methods.* Thousand Oaks: Sage Publication, 3rd edition.

Phelan, J. *at al*. (2009). "Some Aspects of the Technical Quality of Formative Assessment in Middle School Mathematics". Available [online] also at: http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/contentstorage01/0000019b/80/45/d2/9b.pdf [accessed in Bangi, Malaysia: April 10, 2014].

Scherer, M. (2005). "Reclaiming Testing" in *Educational Leadership,* 63(3), pp.9-20.

Stiggins, R.J. (2001). *Student-Involved Classroom Assessment*. Upper Sadler River: Merrill Prentice Hall, 3rd edition.

Stiggins, R.J. (2002). "Assessment Crisis: The Absence of Assessment for Learning" in *Phi Delta Kappan,* 83, pp.758-765.

Stiggins, R.J. (2008). "Assessment for Learning, the Achievement Gap, and Truly Effective Schools". *Paperwork* presented in Educational Testing Service and College Board Conference in Washington, D.C. Available [online] also at: http://www.ets.org/Media/Conferences_and_Events/pdf/stiggins.pdf [accessed in Bangi, Malaysia: April 10, 2014].

Stiggins, R.J. & J. Chappuis. (2006). "What a Difference a Word Makes?" in *Journal of Staff Development,* 27(1), pp.10-14.

Tomlinson, C.A. (2008). "Learning to Love Assessment" in *Educational Leadership,* 65(4), pp.8-13.

William, D. & S. Leahy. (2007). "A Theoretical Foundation for Formative Assessment" in H.J. McMillan [ed]. *Formative Classroom Assessment: Theory into Practice.* New York: Teachers College Press, pp.29-42.

Yin, R.K. (2003). *Case Study Research: Design and Methods.* Thousand Oaks: Sage Publication, 3rd edition.

Yusoff, Marohaini [ed]. (2004). *Qualitative Research: Fieldwork Experience.* Kuala Lumpur: UM [Universiti Malaya] Publication.



***ISSN 1979-7877** and website: **www.educare-ijes.com***