

## EFFECT OF MALAY LANGUAGE PORTAL-BASED ASSESSMENT

Adenan Ayob  
Lajiman Janoory

Universiti Pendidikan Sultan Idris

**Accepted Date:** 30 October 2017

**Published Date:** 3 April 2018

**To cite this document:** Ayob, A., & Janoory, L. (2018). *Effect of Malay Language Portal-Based Assessment*. International Journal of Education, Psychology and Counseling, 3(9), 30-36.

---

### **Abstract**

*In this era of information and communication technology, one great mission shows that portal, digital and virtual element contributes to the development of assessment orientation structure. From that mission, researcher was trying to carry out related research. Thus, this research was conducted to review student's achievement in Malay Language subject before and after exposed to portal-based assessment. Quasi-experimental method was used to review the mean difference before and after the students was exposed to the portal. The sample is 30 standard five primary students in the Federal Territory, Kuala Lumpur, Malaysia. The sample is an intact group that was determined by the school. The descriptive data are mean and standard deviation, while the inferential data is Paired Samples T Test. The results showed that there was significant difference between pre-test and post-test. As a conclusion, the Ministry of Education, Malaysia has to create a comprehensive portal-based assessment in the classroom in all states in Malaysia. It aims to activate the information technology implementation in the classroom. In terms of implication, this study can generate innovation in digital-based assessment in the classroom too.*

**Keywords:** Digital technology, portal-based assessment, achievement, Malay Language subject.

---

### **Introduction**

The skill of answering questions was the main focus by a teacher in primary school level. Thus, the skill needed a student to achieve high score in Malay Language subject. In this new era of technology, the assessment design is still given a special emphasis by some teachers in primary schools. This is because a large percentage of student achievement depends on the assessment that has been practiced for long time (Abdul Rasid Jamian & Zulkafli Abu Zarin, 2008).

Malay Language subject was selected and used as an instruction in schools since the independence achieved by Malaysia. According to Adenan Ayob and Khairuddin Mohamad (2012), the Malay Language subject is moving in line with the requirements stated in the Razak Report (1956) and Rahman Talib Report (1960). They added that the basis of those report was focused on the efforts of the Ministry of Education (MOE) for a drastic and dynamic changes in assessment structure.

In 1961, the assessment of teaching and learning Malay in primary schools has been carried out intensively to upgrade student’s achievement (Adenan Ayob & Khairuddin Mohamad, 2012). Malay Language subject was a core subjects in public assessment, such as the Primary School Assessment Test or *Ujian Penilaian Sekolah Rendah (UPSR)*.

**Problem Statement**

Several studies on the use of multimedia in assessment can help student to structure ideas in concrete answers (Nadzeri Isa, 2001). Portal-based assessment helps the students to be exposed to the assessment material through a vast virtual reference when thinking any answer. Students are also having the opportunities to create a schematic answer. The effect of using the conventional method in assessment contributed to the limitation of input for the student to generate ideas in answering questions (Nadzeri Isa). This is because students were not helping by the structured scheme and systematic digital-based technology in the assessment system (Hashim Othman, 2003). The significant impact of the limitations inherent the student’s ability to answer questions easily and systematically (Suhaimi Yunus, 2009). From new oriented innovation in virtual examination, Suhaimi Yunus also said that students are able to get the right answer. According to him, student can think of the answers correctly and consistently. Thus, this study attempts to examine the effect of portal-based assessment towards the achievement of Malay Language subject for standard five students. The other cause is the absence of broader access that refers to a virtual examination (Adenan Ayob et al., 2010).

**Objective of the Study**

Three objectives were formulated in this study. The general objective of this study was to investigate the effect of digital-based assessment towards student’s achievement in Malay Language subject. The specific objectives of this study are to identify:

- i. the student’s achievement in Malay Language subject before and after exposed to portal-based assessment; and
- ii. significantin student achievement in Malay Language subject before and after exposed to portal-based assessment.

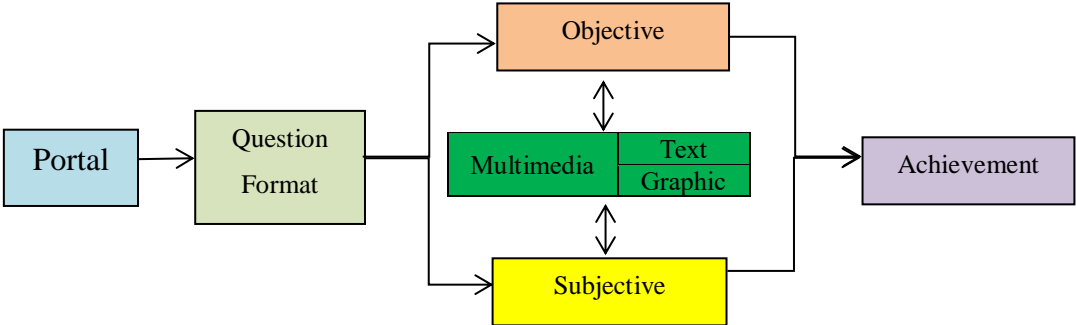
**Research Question**

The research questions are formulated in accordance with the objectives above. The research questions as follows:

- i. What are the mean scores of pre-test and post-test for the group?
- ii. Is there any significant difference between pre-test and post-test that based on portal assessment?

**Theoretical Framework**

For this study, portal-based assessment theoretical framework was created. It is shown in Figure1.



**Figure 1: Portal-based assessment theoretical framework.**

Figure 1 shows the portal-based assessment theoretical framework for this study. The portal consists of online assessment for Malay Language standard five students in primary school. The question formats are objective and subjective. It refers to the integration of multimedia interactive text and graphic. The final goal for the framework is the student's achievement. This framework is referring to the theoretical framework that assigned from Hannafin and Peck (1988).

### **Operational Definition**

This study aims on student achievement in portal-based assessment in the pre-test and post-test scores. The digital assessment unites text and graphics element to measure student achievement in Malay Language.

Therefore, the achievement in this study is operationalized in the form of scores. In this study, the pre-test was conducted based on conventional assessment. The post-test was carried out after the students were exposed to digital-based assessment. Comparison between pre-test and post-test score was identified.

### **Literature Review**

#### ***Testing and Evaluation Curriculum***

Assessment curriculum in the 21st century was drawn up by the Ministry of Education. It is important to highlight the country's education landscape (Curriculum Development Division, Ministry of Education, Malaysia, 2008). Student who had entered primary school in 2000 have begun to face the virtual world in 2020.

What is the method of computer-based assessment in information technology to be used and practiced? It is confidence that in 2020, the basis of an assessment in the information technology will become the new norm in the teachers and students community (Adenan Ayob et al., 2010). Therefore, student effort to achieve success in their studies by applying a technological-based assessment is the best way to support a wide diffusion of knowledge.

Upon an advances in information technology and communication-based on the existence of smart schools, responsible authorities have to reconsider the appropriateness of an assessment methods to be practiced, especially for the Malay Language as a core subject in primary schools. These developments have also forced the curriculum department to examine a new method of assessment practiced in the classroom.

Malay Language is the subject that is considered difficult by most students. They consider that to obtain the best scores requires knowledge and skills in answering any question. This is because in an assessment, there are some specification guidelines that to be practiced by a teacher (Adenan Ayob & Khairuddin Mohamad, 2012).

#### ***Previous Studies***

Nadzeri Isa (2001) conducted a study on the impact of digital graphics-based assessment of student achievement in writing. Nadzeri Isa also explains that the digital examination that based on graphic design suited to help student's revision on any question. This method is considered to emphasize focus towards any question.

Yarbrough (2001) showed the student achievement in digital vocabulary that based virtual assessment. In his study, a group of students who were exposed to that assesment can manage

to think brilliantly in answering the questions, compared to the group of students doing conventional assessment.

Computers are one of the leading technology-based tools. The ability to use computer-based assessment in information technology in teaching is associated with digital and virtual functions (Noor Azliza & Lilia, 2002). Suitability of use of a computer-based assessment in information technology also can encourage student's thinking in answering any questions.

Mayer (2003) found that during the assessment process in conducting student's examination scripts, there's new experience for teachers to become a critical appraisal in detecting the strengths and weaknesses of students. Parveen and Rajesh (2011) also conducted a study on language assessment that based on multimedia for standard two students. The results of their study showed that the students were able to intensify answering questions freely. Student who has paid an attention can focus on answering the questions. It also shows that the academic changes have occurred within a short period.

Computers help teachers to improve student achievement, either in terms of test. Another goal is to reduce the burden of teachers in assessment practiced, and enabling assessment systematically to take place in line with the aspirations of the national education curriculum (Adenan Ayob & Khairuddin Mohamad, 2012).

## **Methodology**

Quasi-experimental method was used in this study that based on the quantitative design. The reason for choosing the research design is because the method was measured and determined the subject as an intact group. This reason is relevant to Cook and Campbell (1979) opinion.

The real sample for this research is 30 standard five students in one of the school in Federal Territory, Kuala Lumpur. The procedure that the samples were selected is according to one group of sample in research design and statistic as mentioned and advised by Cook and Campbell (1979). The samples were selected based on basic criteria. The criteria are the same stream in national schools and the average in age.

## **Research Instrument**

### ***Pre-test and Post-test***

In this research, the instruments used are pre-test and post-test. These instruments used to identify student's achievement respectively, before and after they exposed to portal-based assessment. One Malay Language teacher was appointed by the researcher as a panel for marking answering scripts. For this study, the formulation of the items was referred to the national syllabus.

### ***Instruments Validity***

Both instruments were being used in the final examination for standard five Malay Language in 2015. This is to show that the instruments were standard and already published as mentioned by Cook and Campbell (1979).

### ***Portal Validity***

For the portal, the validity was justified by two Malay Language teachers who are expert in their education niche. The observed validity is content and construct.

### **Data Collection Procedure**

The data was collected from the pre-test and post-test. It was accumulated through specific assessment implementation that involved assistant teacher who was acted as trained invigilator and expert examiner. To conduct the data collection, certain period was given in the study. The pre-test is conducted before the student being exposed to the portal assessment. Next, six weeks after the pre-test, the students were exposed to the portal assessment for post-test. The pre-test was given using manual oriented assessment. The implementation of collecting data is similar to the maturity effect as stated by Cook and Campbell (1979).

### **Data Analysis**

The analysis of quantitative data in this study is guided from the research questions. Analysis was performed on descriptive and inferential data by SPSS Version 20. Inferential data was analyzed that based on Paired Sample T Test.

### **Finding**

#### **Respondent Demographic**

The total respondents are 30 students with 20 female students and 10 male students.

#### **Q1. What are the mean scores of pre-test and post-test for the group of students?**

Mean scores of pre-test and post-test were identified. The mean score and standard deviation are shown in Table 1.

**Table 1. Mean score and standard deviation (SD) of pre-test and post-test.**

Test	(n=30)	
	Mean	Standard Deviation
Pre	51.80	8.03
Post	78.07	5.51

In Table 1, the pre-test score of group was 51.80 (SD = 8:03). The post-test scores were 78.07 (SD = 5.51).

#### **Q2. Is there any significant difference in pre-test and post-test for the group?**

The researcher attempted to explore whether there are significant difference between pre-test and post-test. Paired Samples T Test was used for inferential data analysis. Table 2 shows the difference.

**Table 2. The difference between pre-test and post-test for the group.**

Test	(n=30)			
	Min	SD	t	Sig.
Pre	51.80	8.03	-1.13	0.00**
Post	78.07	5.51		

\*\*p < .05

Table 2 above shows the mean score in pre-test, 51.80 (SD = 8.03). For the post-test, 78.07 (SD = 5.51). The results found that there is a significant difference between pre-test and post-test. The tests showed that,  $t(29) = -1.13$ ,  $p < 0.05$ .

## **Discussion**

### ***Difference in Score Mean***

The results showed that there is a significant difference in the mean scores. Results based on the analysis of data through Paired Sample T Test. It shows a significant difference in pre-test and post-test.

The results of this study also support Noor Azliza and Lilia opinion (2002) that revealed computer-based assessment and information technology capability of providing virtual environments, interactive, and has a potential to stimulate creative and critical thinking, thus earning good achievement.

According to Mayer (2003), there are two factors that the use of computer-based assessment in information technology is considered as a means of encouraging student's ability to answer questions. The first factor is the existence of competitiveness in thinking. The second factor is encouraging students to interact and communicate with the outside world. This is because the use of a computer-based assessment in information technology can help students to apply the innovative structure of answering questions that based on digital resources and virtual. In reality, students are able to exploit the resources to suit the requirements of syllabus (Parveen & Rajesh, 2011).

The findings also are constituent to Piaget's theory. Student's achievement increases when the assessment is systematic in nature. Performance increases when student has the opportunity to gain any access through stimulation process that focused on interactive-based assessment (Adenan Ayob et al., 2010).

Adenan Ayob et al. (2010) argue that the virtual tests and assessment reflected better thinking for student to answer questions. According to them, student can easily understand the concept and meaning with intuitive process when exposed to an interactive assessment.

Student achievement was increased after using a computer-based assessment in information technology is also closely related to the practical and systematic testing tools (Adenan Ayob et al., 2010). This facility can shape the student's skill to absorb a broad response that based on interactive multimedia elements (Parveen & Rajesh, 2011).

The digital-based assessment system proved to help student to improve achievement in Malay Language subject. This finding can be attributed to the advantages of portal-based assessment system in the classroom. Among them, the digital-based assessment has advantages in online multimedia display, accessibility and dissemination of global information. In other example, with the ease of online access, student was able to gain an access to structure new thinking ability (Parveen & Rajesh, 2011).

### **Implication and Recommendation**

Student achievement was increased after using a computer-based assessment in information technology is also closely related to the practical and systematic tools (Adenan Ayob et al., 2010). This facility can shape the student's skill to absorb a broad response that based on interactive multimedia elements (Parveen & Rajesh, 2011). The digital-based assessment system proved to help student to improve achievement in Malay Language subject. This finding can be attributed to the advantages of digital-based assessment system in the classroom. Among them, the digital-based assessment has advantages in online multimedia display, accessibility

and dissemination of global information. In other example, with the ease of online access, student was able to gain an access to structure new thinking ability (Parveen & Rajesh, 2011).

### **Conclusion**

In order to expand the method of assessment and evaluation in the classroom, teachers' expertise in the field of computer and information technology is needed. With this in mind, the ministry should provide the opportunity for teachers to enhance their knowledge in the field of computer and information technology through intensive courses.

### **References**

- Abdul Rasid Jamian & Zulkaflī Abu Zarin (2008). Ability of reading and writing skills among Malay primary school students in Rural Areas. *Working Paper of the National Education Convention*, Sultan Idris Education University. June, 2 to June, 4 2008.
- Adenan Ayob et al. (2010). *Multimedia in teaching Malay Language*. Emeritus Publications: Tanjung Malim.
- Adenan Ayob & Khairuddin Mohamad (2012). *Method of teaching Malay Language*. Oxford Fajar: Shah Alam.
- Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis for field settings*. Chicago, IL: Road McNally.
- Curriculum Development Divisions (2008). *Primary School Malay Language Syllabus*. Kuala Lumpur: Ministry of Education, Malaysia.
- Hannafin, M. J. & Peck, K.L. (1988). *The design, development and evaluation of instructional software*. New York: Macmillan Publishing Company
- Hashim Othman (2003). *Writing skills based on communicative approach*. Kuala Lumpur: DBP.
- Mayer, R. E. (2003). The Promise of multimedia learning: Using the Same Instructional Design Methods Across Different Media. *Learning and Instruction*, 13, pp. 125-139.
- Nadzeri Isa (2001). The Stimulus Effect on Student's Essay Writing Performance Level in Lower Secondary. *Master Science Project*. Universiti Putra Malaysia, Serdang, Selangor.
- Noor Azliza & Lilia (2002). The Effectiveness of Constructivism Learning Approach Based on Interactive Multimedia for Science. *Journal of Technology* 36 (E), 19-38.
- Parveen, J. J., & Rajesh, V. (2011). Multimedia in English Language Teaching: An Empirical Study. *Journal of Technology for ELT*, 1(4).
- Suhaimi Yunus (2009). Learning Problems in Malay Language Writing among Aboriginal Students. *Master Science Project*. Universiti Putra Malaysia, Serdang, Selangor.