

## Bahasa Malaysia: E-Learning Acceptance among Year One Pupils at Sekolah Kebangsaan Jengka 11, Bandar Tun Abdul Razak Jengka, Pahang Darul Makmur

Azmi Salim<sup>1\*</sup>, Zulkafle Kamarudin<sup>2</sup>, Marsyida Bahar<sup>3</sup>, Hamidah Mohd. Shah<sup>4</sup>

<sup>1,4</sup> Faculty of Business Management, Universiti Teknologi MARA Cawangan Pahang, Kampus Jengka, 26400 Bandar Tun Razak Jengka, Pahang, Malaysia  
azmibinsalim@gmail.com, hamidahshah@pahang.uitm.edu.my

<sup>2,3</sup> Faculty of Education and Languages, Open University Malaysia, 25200 Kuantan, Pahang, Malaysia

zulkafle.ajoi@gmail.com, marsyidabahar@yahoo.com

\* Corresponding Author

**Abstract:** Electronic learning (E-Learning) is a type of technology that can support education or learning where the medium used for teaching and learning (T & L) is using computer technology. A quantitative research method (descriptive) was adopted and designed to reflect the level of acceptance of E-Learning among the pupils of Year One Arif, Sekolah Kebangsaan Jengka 11, Bandar Tun Abdul Razak Jengka, Pahang. This study also aimed to investigate whether there were significant factors in students' intention to use E-Learning. Measurement model TAM (reduced) was used as a measurement tool in this study. Based on the model, a set of questionnaire was designed as an instrument to obtain information from respondents of this study. This instrument was divided into five (5) parts which were Demographic Information, the Use of Computers and the Internet, Measuring the Perception of E-Learning as Easy to Use, Measuring the Perception of E-Learning is Useful, Measuring the Attitude Towards Using E-Learning and Measuring the Behavior on Intention to Use. Social Science Statistical Package Software (SPSS) version 20 was used to analyze the data. The results showed that the level of acceptance of the pupils to the concept of E-Learning was high. For future studies, it is suggested that qualitative research methods be adopted by conducting interviews and observations. It is also recommended that subsequent studies take a larger sample size. In addition, different measurement tools should also be used to see the difference in the findings on the level of acceptance.

**Keywords:** E-Learning, E-Learning Method, Primary School, School

### 1. Introduction

E-Learning is going to be an essential part of the process of teaching and learning in schools. The Ministry of Education has also recognized the importance of IT by introducing ICT across the Curriculum plan (KPM, 2011). However, whether or not pupils are ready to grasp the concept of E-Learning in the classroom is still in question.

#### 1.2 Definition of E-Learning

Through literature review, researchers found that there were quite a lot of definitions in respect of E-Learning. The abundance of information technology and telecommunications and applications developed for educational purposes especially has given new space to define the meaning of E-Learning in accordance with the context of the needs and development of the new technology developed. This was agreed by Moore, Dickson-Dean and Galyen (2011) who stated that many researchers were still not agreeable in respect of definitions and terminologies used. They divided the terms and definitions into three namely E-Learning, Distance Learning and Online Learning. For example, the term Distance Learning has been used in the education system since the 1950s in order to clarify the term of E-Learning at the present time (Clark, 2000). Jenkins and Hanson (2003) in Umrani-Khan and Iyer (2013) in general defined E-Learning as learning with the help and support through the use of information and

communication technology (ICT). For this research, we found that the definition by Masrom (2007) is the most appropriate for our study. He stated that when we use information and communication technology (ICT) for the purpose of gaining knowledge or conveying knowledge, then the method is said to be E-Learning.

### 1.3 The Significance of the Study

In the 10<sup>th</sup> Malaysia Plan (RM10), it has been mentioned that the system of learning in schools will be revamped and further emphasis given to students' performance (significantly) through improved Information and Communications Technology (ICT) (KPM, 2011). Therefore, teachers need to prepare themselves with the knowledge and skills in information technology, including the concept of E-Learning. In the future, E-Learning is going to be more important not only to students in universities but also pupils in schools. According to Poelmans (2002), the learning process consists of a repository for courses, guidance, training, interactive options and also the function of mass communication that can help the review process of an individual or group of students. Students can also manipulate the potential of E-Learning for quick reference in the process of completing their assignments. This study is important to schools because the findings can be used to provide input in identifying a suitable method of E-Learning acceptable to students in order to enhance their overall achievement.

### 1.4 The Techniques of E-Learning

Learning technique is one of the strategies in the teaching and learning process in which the strategy used will determine whether pupils or students are able to obtain optimum knowledge. E-Learning method is a type of strategy in the teaching and learning process where information and communication technologies are used in the process. This method has changed from the traditional teacher-centered methods of teaching and learning process to student-centered methods as emphasized by Bhatiasevi (2011) and Lee et al. (2009). According to Dr. Abdullah Ibrahim (2013), the term *learning strategies* is absolutely familiar to the education profession. However, the effectiveness of the strategy has been a major concern. He also agreed that the student-centered learning strategy has the potential to build the generic skills of students. However, if the E-Learning methods adapted are not able to capture students' interest, it will result in the students being distracted (Gardner & Amoroso, 2004). Below are some methods that can be adapted to the E-Learning initiatives based on three general terms as distinguished by Moore, Dickson-Dean and Galyen (2011); E-Learning, Distance Learning and Online Learning.

**Table 1.** Three general terms as distinguished by Moore, Dickson-Dean and Galyen (2011)

<b>E-Learning</b>	In the E-Learning method, it does not only cover the use of CD-ROM, internet or Intranet as suggested by Benson et al. (2002) and Clark (2002) but also includes an audio-tape and video-tapes, satellite transmission and interactive TV as recommended by Ellis (2004).
<b>Distance Learning</b>	Distance Learning is usually associated with providing convenience to those who are far from the learning center. It uses both electronic media and print media technologies as suggested by Moore (1990) as a tool for delivering teaching materials.
<b>Online Learning</b>	Carliner (2004) and Conrad (2002) found that most of the researchers described Online Learning as an access to experiential learning by applying the advantages of technology.

### 1.5 Level of Acceptance of E-Learning Technology

There are many studies carried out regarding the level of acceptance of E-Learning technologies from both the point of views of educators and students alike. Waheed (2009) conducted a study from the point of view of teachers and Babić (2012) also did a similar study but focusing on teachers in the mixed (blended) learning environment. Examples of research

carried out on the level of acceptance of E-Learning technology from the point of view of students/pupils are by Yiong, Sam and Wah (2008) which focused on distance learning students and Jung et al. (2008) from Lulea University of Technology, Lulea, Sweden who looked at the issue from the point of view of the students of the university itself. Alenezi (2011) conducted a study from the perspective of students/pupils of higher learning institutions in Saudi Arabia and this later became the title of his PhD dissertation.

### 1.5.1 Teachers/Educators' Point Of View

In their study among the academic staff in Jordan, Al-Alak and Alnawas (2011) identified a positive relationship between Perceived Usefulness, Perceived Ease of Use, Knowledge of Computers, Management Support and Intention to Use. Similarly, a study by Waheed (2009) carried out to examine the level of acceptance of the instructors and educators in Allama Iqbal Open University, Pakistan towards Virtual Learning Technologies (Virtual Based Learning System) found that the instructors were ready to change from the traditional to the E-Learning system. However, in his article written on the summary of past studies, Babić (2008) concluded that teachers' acceptance of E-Learning was very slow.

### 1.5.2 Students' Point of View

Yiong, Sam and Wah (2008) found that most distance-learning students (PJJ) in the Open University Malaysia had a medium level of acceptance of E-Learning methods. In another study, Alenezi (2011) found that there was a significant difference statistically in respect to the acceptance of students of higher learning institutions in the Islamic Kingdom of Saudi Arabia on E-Learning based on the students' area of specialization as well as their experience using the Internet. Jung et al. (2008) showed that "Perceived Usefulness" was the key determinant among Business Studies students at the Swedish University (Sweden) in accepting the E-Learning method. The study also found that "Perceived Ease of Use" and "Perceived Usefulness" were significant determinants of the decisive-attitude towards E-Learning. This means that students will have the notion that the system will be more useful if it is not difficult to use.

## 1.6 Models For Measuring the Level of Acceptance of E-Learning Technology

Sharma and Chandel (2013) listed a few models that could be used as a measurement of the level of acceptance of E-Learning technology. Among the recommended models were Theory of Reasoned Action (TRA), Social Cognitive Theory, Technology Acceptance Model (TAM), the Motivation Model Innovation Diffusion Theory (IDT), Theory of Planned Behavior (DTPB), Combined TAM and TPB (C-TAM-TPB), Technology Acceptance Model 2 (TAM2), the Unified Theory of Acceptance and Use of Technology (UTAUT). Other than these, there are four more models to measure the level of acceptance of E-Learning technology as derived from previous research as follows:

**Table 2.** Other models to measure level of acceptance

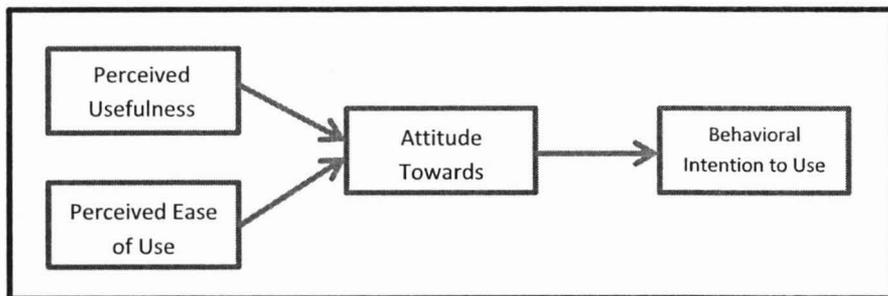
Model	Reference
Technological Acceptance Model (TAM)	(Park, 2009; Rose & Fogarty, 2006)
E-Learning Acceptance Model (ELAM)	(Selim, 2006; Umrani-Khan & Iyer, 2013)
Critical Success Factor (CSF)	(Selim, 2007; Goi & Ng, 2009)
Extended TAM (E-TAM)	(Yatigamma, Md. Johar & Gunawardhana, 2012)

## 2. Methodology

### 2.1 Research Design

This is a quantitative research (descriptive) and is designed to examine the level of acceptance of E-Learning technology in the teaching and learning sessions of “Bahasa Malaysia” subject among pupils of Year One Arif, Sekolah Rendah Kebangsaan Jengka 11, Bandar Tun Abdul Razak Jengka, Pahang. This study also aims to examine whether there are significant factors in their willingness to use E-Learning among the pupils. Measurement model TAM (reduced) by Gardner and Amoroso (2004), based on the Model of TAM by Davis (1989) was used as a measurement tool in this study. Researchers decided to use this model as a tool of measurement as it has been recognized as the standard tool for measuring the level of acceptance of technology.

In addition, this tool is used because of its basic and simple nature and therefore is more suitable for primary school pupils as respondents. Measurement model TAM (reduced) was used by many researchers in their previous studies, among others are Masrom (2007), Sundarraj and Wu (2005) and Al-Raisi, A., Amin, S. and Tahir, S. (2013). Venkatesh and Davis (2000) as cited in Rose and Fogarty (2006) mentioned that TAM had become an established and robust model for predicting the acceptance of users. TAM is currently one of the most influential research models used in selecting new information systems to install and also the study on the acceptance level of information technology. Figure 3.1 shows the research model for this study: TAM (reduced), which does not include the Actual Use of the System and the External Variables to suit this study.



**Fig. 1** Research model (reduced TAM) (Gardner & Amoroso, 2004)

## 2.2 Population and Samples

### 2.2.1 Sample Frame

The sample frame for this study was based on a list of names of students of Year One Arif, Sekolah Rendah Kebangsaan Jengka 11, Bandar Tun Abdul Razak Jengka, Pahang Darul Makmur.

### 2.2.2 Population

The population of this study was all pupils of Year One Arif, Sekolah Rendah Kebangsaan Jengka 11, Bandar Tun Abdul Razak Jengka, Pahang Darul Makmur, who took the subject of Bahasa Malaysia under the supervision of the researchers. Based on the sample framework, the population for this research was 26 pupils.

### 2.2.3 Sampling Technique

Due to the small population of only 26 students in the class of Year One Arif, Sekolah Rendah Kebangsaan Jengka 11, Bandar Tun Abdul Razak Jengka, Pahang Darul Makmur, there

was no specific random sampling technique used. All the pupils in the class of Year One Arif were selected as samples.

#### 2.2.4 Sample Size

Due to the small population, and there was no specific random sampling technique used, the researchers took the number of all pupils in the class of Year One Arif who took the Bahasa Malaysia subject which was a total of 26 people as the sample size.

### 2.3 The Instruments

Based on the framework model TAM (reduced), a set of questionnaire was designed as an instrument to obtain information from the respondents. A set of questions was developed and designed with a simple language approach, taking into account the respondents' level of understanding. This instrument was divided into six (6) parts as follows:

PART A:	Demographic information
PART B:	The use of computers and the internet
PART C:	Measuring perceived E-Learning easy to use (Perceived Ease of Use)
PART D:	Measuring the usefulness of E-Learning (Perceived Usefulness)
PART E:	Measuring attitude to use E-Learning (Attitude Towards Using)
PART F:	Measure Behavior on intention to use e-learning (Behavioral Intention to Use)

Based on the Likert Scale, a scale of 1-5 (Strongly Disagree – Strongly Agree) was used to determine the closest answer.

### 2.4 Data Collection Procedures

Questionnaires were distributed by hand to all respondents. Respondents were given sufficient time to complete the survey with the guidance of researchers considering the fact that the respondents were only seven (7) years old. This technique was used to ensure that all information filled in the survey forms will be completed and returned without error.

### 2.5 Analysis of Data

Statistical Package for Social Science (SPSS) version 20 was used to analyze the data. Data were analyzed using descriptive statistics, which included finding the mean, percentage and frequency. Figure illustrations and charts were also used to support the findings.

## 3. Discussion of Findings

### 3.1 Distribution of Respondents

Gender distribution of respondents in this study was well balanced. Similarly, the distribution of the occupation of the respondents' parents was balanced i.e. half of them were self-employed and the rest were either working in the government or private sector. Distribution of respondents' mothers who worked was well balanced with those whose mothers were fulltime housewives. The findings also showed that the majority of respondents had a modest number of siblings, or having an average-sized family. In previous studies, not much was discussed on the relationship between the distribution of the respondents from the aspect of parents' or guardians' employment, mother's employment status and family size with the level of acceptance of E-Learning among the primary school pupils. However, these were discussed a lot in research among university students and secondary school students. Among them were

Elyazgi, Mohd Naz'ri, Nor Zairah and Md Athar (2014), Muhammad S.S., Mohd Anuar A. R. and Shiung, Ting Kung (2007) and Yiong, B. L. C., Sam, H. K. and Wah, T. K. (2008).

**3.2 The Use of Computers and the Internet**

The findings showed that a large majority (76.9%) of the respondents had a computer at home. The findings also showed that a large percentage (76.9%) comprised students who were frequent, regular and medium regular users of computers. Similarly, the findings revealed that majority (69.2%) of the pupils had access to the Internet at home but a low percentage of students who regularly used the Internet. The high level of computer usage was probably due to the fact that most of them had their own computers at home. This could also be the reason why their level of acceptance to E-Learning was high. Poon et al. (2004), Folorunso, Ogunseye and Sharma (2006), Selim (2005), Volery and Lord (2000) as cited by Yiong, Sam and Wah (2008) reported that the level of self-confidence was one of the features that affected the level of acceptance of the students to E-Learning.

**3.3 The Level of Acceptance of the students to the Concept of E-Learning**

Table 3 shows the mean score range and its level based on Yiong, Sam and Wah (2008).

**Table 3.** Mean score range based on Yiong, Sam and Wah (2008)

Range	Level
1.0 to 2.9	Low
3.0 to 3.9	Medium
4.0 to 5.0	High

Table 4 shows that the mean reading for the level of acceptance among pupils of the concept of E-Learning is 4.7 and according to the interpretation given by Yiong Sam and Wah (2008) in Table 3, this is considered to be high. Therefore, the level of acceptance of the pupils to the concept of E-Learning is at a high level. This finding is in contrast with the findings of Poon et al. (2004) who found that students in some local universities were accepting E-Learning concept at a moderate level. This was supported by a study by Yiong, Sam and Wah (2008) who also found that the level of acceptance of distance-learning (PJJ) students in Malaysia was at a moderate level.

**Table 4.** Mean level of acceptance of the concept of E-Learning

	Min	Standard Deviation
E-Learning	4.70	0.13

In Table 5, a high percentage (76.9%) of students had their own computers at home and a majority (53.9%) of them frequently used the Internet. This could lead to perception that students with experience in using computers would affect their level of acceptance to the E-Learning concept. Low exposure to the Internet could be the reason why Poon et al. (2004) and Yiong, Sam and Wah (2008) reported that the level of acceptance of E-Learning concept at that time was at a medium level.

**Table 5.** Computer and Internet Usage

	Frequency	Percent (%)
<i>Do you have a computer at home?</i>		
Yes	20	76.9
No	6	23.1
<i>Frequency of Internet Usage</i>		
Frequent	14	53.9
Moderate	4	15.4
Not Frequent	8	30.8

### 3.4 Factors that Most Influence the Attitude towards Using E-Learning

Table 6 shows the mean of variables that influence attitudes towards using E-Learning. There are four variables used in this study. The first variable is "Ease of Use" with a mean reading of 4.48; the second variable is "Usefulness" with a mean of 4.71; the third variable "The Attitude of Using E-Learning", mean of 4.78 and "Behavioral Problems in Using E-Learning", mean of 4.9.

All the four variables show the mean readings between 4.0 and 5.0 and according to Yiong, Sam and Wah (2008), this was considered as high. Therefore, all the four variables are at a high level in influencing attitudes of pupils towards using E-Learning. However, the most influencing factor is "Behavioral Intention to Use" as its mean reading is the highest.

**Table 6.** Mean of variables that influence the attitude of students towards using E-Learning

Variable	Mean	Std Deviation
Ease of Use	4.48	0.34
Usefulness	4.71	0.22
Attitude Towards Using	4.78	0.19
Behavioral Intention to Use	4.90	0.14

Meanwhile, the mean for the factor "Ease of Use" scores the lowest among the other factors. Even though it scores the lowest, its mean value is rather high at 4.48. Nevertheless, it is concluded that the factor "Ease of Use" is the least influencing variable on the attitude of students towards using E-Learning.

### 3.5 Barriers Affecting Attitude towards Using E-Learning

In the previous section, it has been concluded that the factor "Ease of Use" is the factor that has the least influence. Therefore, "Ease of Use" is the factor that needs attention in order to improve the attitude of students toward using E-Learning.

Table 7 shows the questions used in "Ease of Use". The question that has the most influencing effect as a barrier towards Using E-Learning is "easy to get used to interact with the computer software that teachers use" with a mean score of 4.15.

**Table 7.** Mean of questions in easy to use factor (Ease of Use)

Question	Mean	Std Deviation
Easy to use	4.85	0.36
Easy to learn to use	4.65	0.48
The concept of education used by teachers are easy to understand	4.62	0.49
Get answer/information is easy by using software that teachers use	4.23	0.43

Easy to be skilled using it	4.38	1.09
Easy to get used to interact with the software that teachers use	4.15	1.04

#### 4. Summary and Recommendations

##### 4.1 Summary of Survey Results

**Table 8.** Summary of the overall findings

	% (Strongly agree)	Mean
Perceived Usefulness	100	5
Perceived Ease of Use	84.6	4.23
Attitude Towards Using	96.2	4.81
Behavioral Intention to	88.5	4.43
Average	92.33	4.7

Both variables of “Perceived Usefulness” and “Ease of Use” mark a very high score of 100% (Mean 5) and 84.6% (Mean 4.23). These variables theoretically are based on Davis (1989) and also Gardner and Amoroso (2004). The results of this study are in line with the above mentioned theories. In this study, researchers have proven that positive scores will also give positive effects to the variable “Attitude towards Using” where this variable scores 96.2% (Mean 4.81). The positive scores on variables “Attitude towards Using” will also give positive effects to “Behavioral Intention to use”. This study also proves that the theory is true where this variable is also scoring high at 88.5% (mean 4.43). The results show that the level of acceptance of the pupils to the concept of E-Learning is high. The study also shows that the factor “Ease of Use” is the least factor that influences the attitude of pupils towards using E-Learning among pupils of Year One Arif, Sekolah Kebangsaan Jengka 11, Bandar Tun Abdul Razak Jengka, Pahang.

In addition, the study also shows that the “Behavioral Intention to Use” has been identified as a factor that influences the attitude of pupils towards using E-Learning. The factor that has been identified to be a deterrent in influencing attitudes towards using E-Learning is the “Ease of Use” factor. Meanwhile, the question “easy to get used to interact with the computer software teachers use” is the least influencing question which becomes a barrier for influencing attitudes towards using E-Learning.

##### 4.2 The implications of the findings

**Implication on teachers:** The findings of this study are very important and demonstrate the importance of school teachers to equip themselves with computer skills and knowledge to face the present generation pupils and clearly through this study, the pupils seemed to be happy and excited during the teaching and learning session using E-Learning methods.

**Implication on schools:** This study also affects schools. A high level of acceptance of students on E-Learning method used by researchers gives an indication or signal to schools that E-Learning is a high potential learning technique.

**Implication on parents:** Parents need to be aware of the importance of Information and Communication Technology (ICT) knowledge in their children’s life. This is to ensure that their children are ready and well prepared for the concept or method of E-Learning in the classroom so that they will not be left behind academically compared to their other classmates.

##### 4.3 Suggestions for future research

**Experimental Study:** Experimental study is proposed for future research. In the design of the experimental study, investigators are able to systematically give treatment against a group

of students surveyed through random selection. Experimental study will ensure that the effect of the independent variables against dependent variables examined will be more accurate.

**A larger sample size:** In addition, the sample size should also be taken into account to ascertain its suitability with the study. For future research, it is suggested that a larger sample size be covered and should involve pupils from all levels (years 1 – 6) in order to obtain more accurate results.

**Measurement Model:** It is also proposed for future study that other measurement models or tools to measure the level of technology acceptance be used. By doing so, we would be able to see and compare different findings through different measurement models such as ELAM, CSF, E-TAM, UTAUT and many others.

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