KML6066 RESEARCH PAPER
MEASURING TEACHERS READINESS IN IMPLEMENTING VLE (VIRTUAL LEARNING ENVIRONMENT) IN PRIMARY CLASSROOM

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Statement of Originality

The work described in this Final Year Project, entitled
“MEASURING TEACHERS READINESS IN IMPLEMENTING VLE
(VIRTUAL LEARNING ENVIRONMENT) IN PRIMARY
CLASSROOM”
is to the best of the author’s knowledge that of the author except
where due reference is made.

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ABSTRACT

This study aims to investigate the extent to which primary school teachers in Simunjan District are prepared in rolling out VLE (Virtual Learning Environment) as part of e-learning to extend the efforts of institutionalize ICT in education. The specific objectives of this study were to: To assess the extent which teachers are prepared to use electronic technology in teaching, determine their skills and training received in using electronic technology in learning and To assess constraints and hindrances to use of E-learning in primary schools. This study adopted a quantitative research design. The target respondents are in the population of primary school teachers in 50 primary schools in the Simunjan District. A total of 150 questionnaires were distributed. Purposive sampling was used to select samples. This gives a sample of 99 respondents. The questionnaire used in this study to collect data. The data is then compiled and coded for analysis. Percentages, frequency distributions and means were used to analyze the data collected with the help of Microsoft Excel and the Statistical Package for Social Sciences. Data were presented using tables, histograms and pie charts. The findings show that most of the primary schools in Simunjan have Internet access but the service is not satisfactory, teachers lack of skills to use technology in learning is an indicator that they are not yet ready to launch E-learning in primary schools. Overall, the findings suggest that primary schools in the district studied Simunjan are not ready for e-learning. It is recommended that funding for ICT equipment in primary schools in the rural areas should be emphasized again and teachers should be trained to E-learning.
ABSTRAK

CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter gives the background to the study, statement of the problem, purpose of the study, study objectives, research questions and significance of the study. It also highlights limitations of the study, and conceptual framework and operational definition of terms.
1.1 BACKGROUND STUDY

In this era of information paced rapidly, ICT is very important. This technology is already dominated globally. Almost every time people use the technology and it is the reason we can dominate and control almost everything in the fingertips. The country lags behind in ICT will be the mainstream of development. ICT development has brought many benefits to individuals, communities and nations. Of the various sources of knowledge, the discovery of ICT has successfully stepped civilized world into a more competitive situation. ICT technologies have made real gains to justify human especially in the field of knowledge and information of the most sophisticated.

ICTs provide a huge potential to create job opportunities, improve delivery and access to economy growth, social, community, health and education. They facilitate information sharing and knowledge creation. Education is one of the areas where use of electronic technology provides very useful benefits. Report by UNESCO (2009) stated that use of technology in and for education is now seen worldwide both as a necessity and an opportunity). It plays a great role in the three fundamental aspects of education policy that is access, quality and cost.

ICT helped to increase access to education through distance learning. They provide new and innovative information to bring educational opportunities to a larger number of people of all ages, especially those who have always been excluded such as the population living in rural areas, women facing social barriers and students with disabilities (UNESCO, 2009). The use of ICT in education promotes E-learning. E-learning is learning that is supported by electronic technology. It involves use of Interactive multimedia; Internet based learning (online). E-learning integrates ICTs in the
learning process. This gives rise to different modes of learning such as Computer Based Learning (CBL), Synchronous and Asynchronous learning and Distance Education (DE). E-learning is a promising tool for expanding and widening access to education. It allows people to participate in education by increasing flexibility of participation compared to traditional face to face method. It allows working students and adults, people living in remote areas, students and even foreign students to participate easily in education. In addition; online learning relieves the constraints of face to face learning such as size of rooms and student as well as teachers.

The use of the internet to access different websites promotes various sharing of knowledge, materials and databases quickly and cheaply beyond distances. Previous studies had indicated that use electronic technology in schools has positive impact on student’s performance. The survey by British Educational Communications and Technology Agency (BECTA, 2007) showed that, “schools with high level of e-maturity demonstrate a more rapid increase in performance scores than those with low levels”. Furthermore, the report indicates that the digital generation is learning more by using ICT in everyday life. Teachers need to be part of this and educational institutions need to take it fully. Teachers who are key role in the education system need to have knowledge and skills in the utilization of ICT and E-learning as mode of education delivery.

Advances in technology have always transformed the education system. From the abacus to make teaching math a lot easier, for word processing are changing the way how the research paper written and presented, technological advances have affected the development of education. While technological change has developed from early education, the digital revolution has certainly increased dramatically change education.
Technology has been developing pedagogy, or teaching art. Today, the instructor can create and implement their lessons better. For example, online video conferencing allows teachers to speak directly with the experts who cannot personally visit the classroom. Interview with figures like can be incorporated into lessons with the help of software such as Microsoft PowerPoint™ presentation.

Communication has improved as a result of technological progress. Teachers can use e-mail, texting, instant messaging, video chat and much more to make them more available to students who need help with their school work. Tutors can provide additional assistance in the same way. As a result, students can get the help they need outside of the classroom more accessible than ever before. Teachers can review online to help students who have problems in learning and help them prepare for the exam. Instructors can create online forums and blogs where students out of the classroom, can discuss what they have learned. Examples could be multiplied, and the way teachers teach will continue to change as new software and made other improvements made.

Developments in the classroom of the 21st century are a productive environment in which students can develop the skills they will need in the workplace and teacher facilitators of learning. The focuses of the 21st century classroom is preparing students for the technological environment and develops higher order thinking skills, effective communication skills, collaboration skills, and make them familiar with the technology and all the other skills they need in the workplace of the 21st century. Teachers need to develop new teaching strategies that vary with a modern classroom more focused on students and teachers need to take the role of facilitator and guide rather than providers of knowledge. They should ensure that they should involve their students in learning and
effective teaching using a variety of teaching methods and follow different pedagogical approach supported by technology.

“The integration of ICT in educational institutions has encouraged the use of ICT to respond to individuals’ learning and training needs. In the case of distance education or open and distance learning institutions, ICT has been used to deliver either parts of the curriculum or the total curriculum. In addition, ICT plays an important role in informal learning and provides a channel for harnessing the usefulness of informal content knowledge. The use of ICT in this manner has generally been referred to as e-Learning.” (Kaur and Abas, 2004)

The use of technology in education will help attain the one of the education goals in the country’s vision, which is to provide globally competitive education, training and research for development. This is to be achieved through reducing literacy rates, increasing access to education and raising the quality of education. In the context of Malaysian education system, the Ministry of Malaysia via Educational Technology Division has taken numerous efforts to initiate and support the implementation of ICT in teaching and learning in all primary and secondary schools in Malaysia. To implement use of ICT in school, Information and Communication in Technology (ICT) in education was widely introduced by Ministry of Education in 2002, covering from preschool, primary, secondary and tertiary education. Under the ICT program in schools, there are four main projects that have been executed namely, Smart School, Bestari School Project, Schoolnet, Computer Lab and Educational Television. The latest government initiative is the inception of 1BestariNet, a VLE ecosystem equipped with high speed 4G mobile Internet will be made available in all schools in Malaysia. In this context, advanced
teaching and learning materials developed through the 1BestariNet, helps to proliferate teaching and administrative process in VLE implementation in schools. However, The Preliminary Report of the Malaysia Education Blueprint 2013-2025 revealed that despite having spent RM6 billion on Information and Communication Technology (ICT) in initiatives like the Smart Schools, around 80% of teachers were found, in 2010, to spend less than one hour per week using ICT. At this rate, even if the government’s plan to provide all 10,000 schools in Malaysia with Internet access and “virtual learning environments” succeeds, history will probably repeat itself and these facilities will be wasted.

Hence, there is a need to support the stakeholders in fortifying their roles in VLE ecosystem. Teachers will need to change their role in the virtual classroom from being information providers to facilitators to help students develop know how and judgment to select information sources. Parents as the stakeholder will gain access to monitor and access the academic progress and content management of their children via this new VLE ecosystem. Via VLE, teaching and learning process in Malaysia is not merely regurgitation of information and set of data but a holistic approach on how knowledge distribution can be optimized via VLE.

Despite a stream of theories on VLE being adopted and adapted to support teaching and learning experience, the implementation of VLE in Malaysian schools is still new and not widely explored by Malaysian educators. The main concern on the use of VLE in Malaysian schools is due to the teachers' lack of experience and prior knowledge on applying the pedagogical aspects of their lesson via virtual learning platform. Hence, developing a holistic framework that holistically offer pedagogical and users support to
the teachers, students and parents in Malaysia is paramount in ensuring the success of VLE implementation in Malaysian schools.

In the context of Malaysian schools, the main polemic for the project success in Malaysian schools have always been the ineffective and limited ICT literacy among the teachers and learners. In this context, the main concern for any implementation on any new technology in school is the pedagogical implications, teachers' and learners' readiness on embarking any new technology used in schools. Most educators in schools had doubts on how to integrate pedagogical aspects of their teaching via the use of online instructional tools as there is disengagement between pedagogy and technology in the learning process.
1.2 PROBLEM STATEMENTS:

The use of electronic technology has been recognized as a key strategy in improving the efficiency, cost effectiveness and relevance of a sector. Its success in education sector is hinged not only on financing but also the preparation of adequate human resource. Because of the current revolution and impact of electronic technology, the Ministry of Education has been emphasizing the adoption of E-learning in educational institutions so as to lower the cost of education, increase access to educational opportunities and improve on the quality of education provided. Despite the strong emphasis given to E-learning in education, little has been done to evaluate how prepared these educational institutions are to roll out E-learning. It is in this context that this study sought to investigate the question: how prepared are the primary schools in implementing E-learning and in which condition to extent teachers’ readiness to implement E-learning in primary schools?

1.3 PURPOSE OF THE STUDY

The study investigated the extent to which primary school teachers in Simunjan District are prepared in rolling out VLE (Virtual Learning Environment) as part of e-learning to extend the efforts of institutionalize ICT in education provision and producing students who will impact positively the education system with e-technology.
1.4 OBJECTIVES OF THE STUDY

The objectives for this research are:

i. To assess the extent which teachers are prepared to use electronic technology in teaching, determine their skills and training received in using electronic technology in learning.

ii. To assess constraints and hindrances to use of E-learning in primary schools and,

iii. To suggest the documentation of measures that can hasten the implementation of E-learning in primary schools.

1.5 RESEARCH QUESTIONS

The study sought to answer the questions:

i. What is the status of internet connectivity in primary schools in Simunjan District?

ii. To what extent are primary school teachers utilizing electronic technology in learning?

iii. Are there any differences in teachers’ readiness by gender, age and teaching experience?

1.6 ASSUMPTIONS OF THE STUDY

The following were the assumptions of this study:

i. Teachers in primary schools of Simunjan District are currently utilizing ICT in their teaching and learning process even though at different levels.

ii. Teachers are using ICT in the teaching and learning process in primary schools
despite of the differences in gender, age and teaching experience.

iii. Primary schools in Simunjan District use E-learning as mode of education delivery even if on a limited scale.

1.7 CONCEPTUAL FRAMEWORK

E-learning readiness is defined not only in terms to an organization but also those to individuals. There is a need to generate a model for assessing individuals’ readiness for e-learning. Specifically, the factors that we intended to measure were identified after detailed analyses of the existing e-learning readiness models combined with the cultural and environmental characteristics of the educational institutions. There are many model to assess individuals’ or organizations’ readiness for e-learning, hence, it is important to have the assessment model that compatible to the current situation and associated to primary schools teachers in rural area. For this study, it had integrated the concepts that resulted in the model presented in Figure 1: Readiness for E-learning.

Figure 1.1: Readiness for E-learning.
This study has adapted the model of Kaur and Abas because the study aims to measure e-learning readiness in Simunjan District focusing on the teachers and the subject of theory and practice. There were four main factors, which are assumed to support the teachers associated with the subject of theory and practice and thus can be used for indicating their readiness for e-learning. They have been identified as technology, content, institution and people. Each sub-factor should be taken into consideration as much as possible during the assessment process. For instance, the sub factor for people, consist the attitude, confidence level and experience using the technology, while the sub-factors of technology are stability, hardware and software, whereas stability is essential for e-learning readiness. The other factors which is content, the sub factors are theory and practice, and for institution, the sub factor is the school, as in this study the primary schools in Simunjan District.

The uses of E-learning in educational institutions, production of E-learning compliant teachers are dependent variables since they depend on level of ICT infrastructure and connectivity in schools and preparedness of teachers and students. From the above framework, the availability of ICT infrastructure, accessibility to ICT facilities in the schools, there connectivity to the internet and preparedness of teachers and students will lead to E-learning in colleges. This will lead to E-learning preparedness teachers, low cost of education, high quality of education and increased educational output since many people would have easy access to education.
1.8 DEFINITION OF TERMS

In this research there operational definition of terms that been used. The definitions are explaining;

**Measuring** – indication the degree of preparedness in implementing e-learning. E-learning readiness assessment helps organizations to design e -learning strategy as a whole and to implement effective ICT goals (Kaur , 2004). As teachers willing to use new technology is critical to the successful implementation of e -learning in schools, and it should be investigated to ensure that they are ready to embrace new technologies in teaching and learning activities.

**Teacher’s readiness** -Learners must be “e-ready” so that a coherent achievable strategy that is tailored to meet their needs may be implemented (Infodev, 2001). In other words, this readiness assessment provides information to organizations to supply solutions that can cater to the specific needs of each learning group (McConnell International, 2000).

**Implementing** - to embrace new technologies in teaching and learning activities

**Virtual Learning Environment (VLE)** - Virtual Learning Environments (VLE) provide students with different of benefits such as flexibility, convenience, and the opportunity to work closely and collaboratively with lecturers and other learners from different universities or even across the world. According to Ajlan and Zedan (2003), VLE is a form of e- learning that enables on-line interactions of various kinds to take place between teachers and students.

**Primary Classroom** – primary schools in Simunjan District and teachers are teaching lower level, year 1 to year 6 classrooms.
1.9 SIGNIFICANT OF THE STUDY

i. The findings from this study would help the government establish the status of Primary Schools’ preparedness to use E-learning and prepare teachers who will employ the skills to promote E-learning. This can help the Ministry of Education to accelerate implementation of E-learning in Teacher Training colleges.

ii. Given the practitioner that involve in this study which are teachers and administrators in the school and also Ministry of Education (MOE) aware the problem.

iii. The methodology that used in the study such as the instrument that been used in this research can be used by the other researcher for future research.

iv. The administrator can implement the approach that discovered from the research to enhance and improve teaching and learning in the classroom.

1.10 LIMITATION OF STUDY

i. The study was limited to the population of teachers from the primary school that taught primary classroom only in Simunjan District.

ii. The study was only covered the teacher’s readiness to implement VLE in the primary classroom.

iii. This study was using survey method of data collected.
CHAPTER TWO

LITERATURE REVIEW

2 Introduction

This chapter reviews literature on global overview of e-readiness and ICT use in Malaysia, e-learning, virtual learning environment, and e-Learning readiness in Malaysia.
2.1 Malaysia’s E-readiness Rankings

The Economist Intelligence Unit has assessed the world’s largest economies on their ability to absorb information and communications technology (ICT) and use it for economic and social benefit. In 2010 the study which had renamed as the “digital economy rankings” instead of “e-readiness ranking” is to reflect the increasing influence of ICT in economic and social progress. Seventy countries are covered in this annual benchmarking exercise. Among 70 countries from all over the world, Malaysia was ranked 38 in 2009 and rank 36th in 2010 for e-readiness (Economist Intelligence Unit, 2010). The study found that Malaysia has been able to transform its technology manufacturing industry into one of IT and Internet-friendly support service.

These rankings however consider E-readiness of the whole economy and not education specifically. There is need for e-readiness survey in education globally considering the role that education plays in development.

2.2 Overview of ICT use in Education in Malaysia

Malaysia had promoted the use of ICT in schools through the launching of the Malaysian Smart School Project in year 1997, by the goals of Smart School Education are “to provide opportunities to enhance individual strengths and abilities and to produce a thinking and technology-literate workforce” (MOE, 1997). This project emphasized the use of technology and also a transformation of the entire educational system which includes the enhancement of curriculum, pedagogy, assessment and teaching-learning materials in order to support student-centered teaching and learning approaches (MOE,