Virtual Learning Environment and Use: Perceptions of Malaysian Teachers

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Abstract: This research explored the experiences of teachers using the FROG VLE, a virtual learning platform adopted by the Ministry of Education for all its 10,000 schools nationwide. This initiative is part of the 1BestariNet project under the newly released Malaysian Education Blueprint. It is aimed at upscaling the quality of education through ICT. The research adopted a qualitative approach using an open-ended survey. Several themes related to the benefits and challenges of teaching and learning through the virtual learning environment emerged from the findings. Several suggestions are proposed to improve the uptake of the VLE among the teachers in Malaysia.

Keywords: virtual learning environment, school teachers, perceptions, benefits and challenges

1. Introduction

The year 2013 saw the launch of the Malaysian Education Blueprint which is a detailed document that enlists the plan of actions to be taken place in the education landscape for the next 13 years (2013-2025). The preliminary report before the launch of the Blueprint stated that there was no evidence to suggest that ICT is being used to promote skills such as creativity, problem solving and critical thinking (Ministry of Education, 2012). One of the many initiatives identified under the first wave of the MEB (2013-2015) includes the setting up of the 1BestariNet project. It is a project led by the Ministry of Education (MOE) to provide access to cloud-based virtual learning platform known as the Frog Virtual Learning Environment (Frog VLE) and high-speed internet connectivity by June 2014 to all its 10,000 public schools. Its implementation will be carried out in three phases with the first phase running from 2013 till 2015. This phase includes access to ICT devices, the VLE and internet connection in all schools and provision of basic competency in ICT to all the teachers. Having assumed all the teachers have the necessary knowledge and skills by now, the second phase will strengthen its implementation by encouraging innovative ways of using ICT and the sharing of best practices. Finally, the last phase will witness ICT fully integrated in all the classrooms.

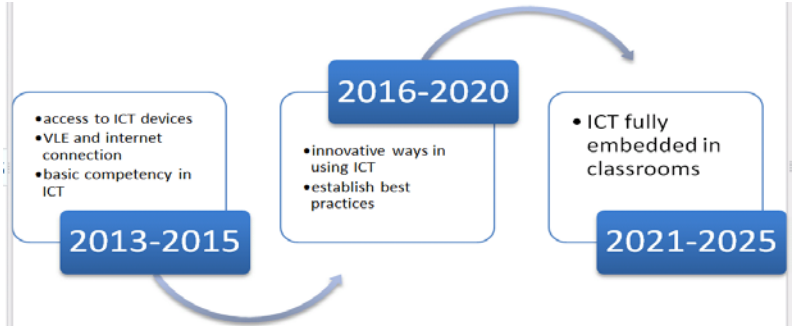


Figure 1: 1BestariNet Implementation Time Frame

2. Statement of the Problem

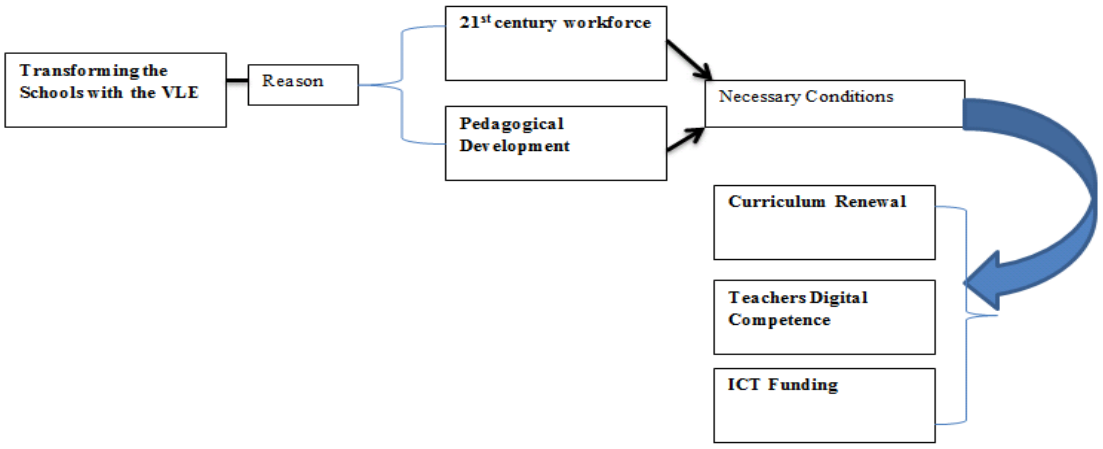
Despite the implementation of the 1BestariNet, teachers are still not showing progress in how they teach. The Auditor General Report (2013) revealed that only 5% are using the Virtual Learning Environment (VLE) platform. The report also found that usage was only between 0.01 and 4.69 percent among the teachers in the country.

Though electronic communications and digital networks are transforming our lives yet little has changed in the way schools work. In the Malaysian school setting, we are yet to experience this transformative effect in our teaching and learning. Schools are only now beginning to experience the VLE in its early forms and have much more to learn of its inherent capabilities. The VLE which encompasses e-learning is not simply another technology or add-on that will be quietly integrated or ultimately rejected (Garrison & Anderson, 2003). It has the opportunity to improve our teaching and learning experiences. More so in our Malaysian school context, with its high teacher student ratio, VLE enables us to cater for differentiated instructions in mixed-ability classrooms.

Still at its infancy stage of the web-enhanced learning environment in Malaysian educational environment, more studies that look at teachers' perceptions are needed because ultimately any educational change to a large extent will depend upon what teachers think and do. Perceptions is defined as interpretation of events among teachers due to past experiences, current understanding, present situation and information. Cuban (1990) in his seminal write-up observed that teachers will use technology based on their personal perspectives. The extent of their technology adoption lies within their goals and perceptions. In other words, teachers' perceptions of the VLE will determine its usage. Implementation from top-down without considering their perceptions will result in dissatisfaction (Wong, Hamzah & Hamzah, 2014). In fact, much of teachers' dissatisfaction arises from the challenges that are preventing them from fully embracing the technology. Consequently, poor usage of the RM4.077 billion adoption has caused unhappiness in the nation. This study aimed at exploring teachers' perceptions, which will lead to the understanding of what is preventing teachers from using the system. Perhaps, a more effective and reliable solutions can hopefully arrest the issue of lack of VLE usage.

Findings will provide policymakers and the other stakeholders, of information on what is working or missing in the school. As such, better design and implementation of both the teacher education curriculum and the continuous professional development programmes can be achieved. Perhaps as teachers gain better understanding of the VLE's potential and strength, it will be more welcoming in our classrooms. The FROG VLE has come to the second year of implementation. Teachers would have by now more feedback to offer regarding its benefits and challenges. It is against this context that this study is undertaken.

3. Importance of the Study



(adapted from Yang, 2012)

Figure 2: Theoretical Framework

Figure 2 visualises the need of a systemic approach in order to sustain any new innovation. According to Yang (2012), in order to transform our teaching and learning, we need to consider aspects like curriculum renewal, teachers' digital competence and sufficient funding. Without renewing the curriculum, teachers may have no reason to change their practices. Asking teachers to change their practices, without sufficient training, would not sustain the change. Adequate bandwidth, access to computers and technical experts, are among some of the pertinent factors in sustaining any new innovation. However, there are many other issues or aspects that only the key players are aware or concern with. As such, teachers' views and perceptions are of our main concern in this study.

At the point of study, there are limited studies on the adoption of the learning management system known as the FROG VLE in Malaysia (Sa'don, Mohamed Dahlan & Zainal, 2013; Junus, 2013; Cheok & Wong, 2015). The general aim of this study is to contribute to the existing knowledge in the integration of the VLE usage in schools. Research studies on the use of the VLE in school environment have become necessary so as to enable the stakeholders to advance its usage significantly. The findings may also be useful when developing Continuous Professional Development (CPD) programmes for teachers so that they are armed with appropriate knowledge, skills and resources. Only then the VLE's transformative power and capacity can be realised.

4. Benefits and Challenges of VLE for teachers

The VLE is an information system that facilitates e-learning which is used to support face-to-face learning (Mamat, Yusoff, Abdullah & Zaidi, 2015). Effective use of the VLE needs teachers to understand how to weave the VLE with pedagogy and content. Being able to do this requires substantial amount of time and effort from the teachers involved. Through the VLE, teachers can incorporate a variety of digital media in the instructional process. This heightens the interest level of students besides allowing them to have more access to learning materials in a flexible manner. Collaboration and construction of knowledge then becomes an enjoyable process. Teachers should design learning materials that can exploit the affordances made possible through VLE. It is a reflection of the technological advancement and changes that are happening in our day-to-day lives.

However, according to Umar and Yusoff (2014), though Malaysian teachers are highly competent in using the internet application for searching and sharing information, using the word processor, spreadsheet and slide presentation, they lack skills in doing the more advanced applications like producing graphics, animations and multimedia design. The biggest challenge to e-learning seems to be the lack of competent academics and to make this scenario worse, nearly two third of academic members in public universities have reported low motivation to incorporate e-learning tools in their teaching and learning (Adnan & Zamari, 2012).

5. Method

The data was collected between April 2015 and June 2015. It was obtained from 60 teachers from three primary schools in the form of an open-ended questionnaire. There were 17 male and 53 female teachers involved where most of them having a degree, except for 12 with a diploma and 10 with a postgraduate degree. As for their age, mainly were in the 31-40 years of age as shown in Table 1.

Table 1: Distribution of Participants' Age in the Survey

Age Range	Percentage
< 30	4%
31-40	59%
41-50	20%
51-60	7%

The mode of data collection is through an open-ended questionnaire that elicits information on the respondents' views of the VLE's implementation. The questions that were asked are as following:

1. What are your views on the role of the VLE in improving teaching and learning?;
2. What kind of support does the school administrator provide?;
3. What do you think are the challenges in teaching using the VLE in schools today? What challenges affect you most?

Thus, the objectives of the study are as the following:
1. To understand teachers' perceptions towards the VLE's effectiveness in teaching and learning;
2. To describe the kind of support teachers receive in schools;
3. To identify the challenges to VLE adoption.

All data were analysed according to exploratory approach and later refined into themes (Burnard, 1999). This analysis took into account the theoretical perspective of Ertmer's (1999) first and second order barriers to ICT integration. Ertmer (1999) has categorised two types of barriers that are preventing ICT integration. According to her the first level includes access, time, support, resources and training. These barriers are easier to arrest as compared to the second order intrinsic barriers like attitudes, beliefs, practices and resistance.

6. Findings

This section reports the findings from the open-ended questionnaire.

6.1 Perceptions towards Effectiveness of the VLE in Improving Teaching and Learning

Ninety percent of the teachers agreed that the VLE is effective in improving teaching and learning. Comments given include that the VLE increases learning as lessons become more interesting, students become more attentive during lessons. The different modalities available through the VLE were able to attract students with different learning styles and preferences. Students also became more responsible as it caters for self-access mode. Their tasks could be carried out at the comfort of their homes and paced accordingly. Teachers assigned tasks on the VLE as to fulfill the requirement by their school leaders. Both the students and teachers ICT skills will ultimately become more skillful as with more usage and exposure.

6.2 Support and Incentives Provided

To be given award during school meetings was one type of support teachers received. The award will be given to the teachers with the most amount of logging-in usage. On the other hand, teachers who has not logged-in will also be highlighted during the meetings. So teachers mentioned that most of them will resort to logging-in to the VLE website for the sake of logging-in but will continue with their other work. Teachers also mentioned that facilities are provided; the VLE, the internet connection and a computer lab. However, Chromebook was only provided to selected schools. Some of the facilities are not sufficient and are not running efficiently. All the teachers mentioned they have received at least half-day training on how to log-in to the website. In the FROG VLE, teachers must upload their own lessons. There are also contributions from other teachers who shared their teaching plans on the website. To them, peers played an important role in helping them with their usage. There is a teacher in each school who is responsible for disseminating information, knowledge and skills pertaining to the VLE. How much is provided will depend to a large extent on how proactive is the person in-charged of the e-learning and the school leaders.

6.3 Challenges of VLE Implementation in Schools

One of the common themes to emerge from the data was that it is a challenge to run e-learning lessons among young primary school students. It is a common sight in Malaysian government aided schools to see a huge number of students in a class. At times the number reaches 45. Having insufficient computers made this almost an impossible task for teachers. So teachers resort to uploading task sheets onto the system and students will have to do them at home. Slow internet connection made it time consuming for teachers. A lot of time is wasted either when logging-in or when wanting to view a video. About 75% of them mentioned that if the internet connection is not a problem, then chances are most of them would be using the system. Lack of ICT seems to be the main problem especially among the senior teachers. Training sessions have to be planned according to teachers' needs, and not the same one across the nation. Continuous professional development programmes that are based on needs assessment of every teacher in the school would result in more relevant sessions for them. Finally there is the curriculum to be considered. In the analyses, teachers highlighted concern regarding the same curriculum and assessment to be used. This shows teachers are in a dilemma as to why their practices have to change when the core aspects which are the curriculum and assessment remained unchanged.

7. Discussion

As indicated by previous sections, the focus of this research is to understand perceptions towards the VLE implementation among teachers in three primary schools from a state in Malaysia. The primary aim of this study is to find out ways to increase usage of the VLE in schools. Findings from this study seem to suggest that there is no issue about the usefulness of the VLE in teaching and learning as well as its potential in enhancing teachers' ICT skills. These correlates well with study by Davies and Sinclair (2013) who have acknowledged the vital role that e-learning plays. Teachers benefit a great deal from the adoption of the VLE by being able to use it in ways which the traditional face-to-face can never achieve. However, problems and challenges in the daily routines of teachers have prevented teachers from fully exploiting the rewards of the VLE adoption. Workload and time consuming (Cheok & Wong, 2014; Khambari, Moses & Wong, 2009), lack of technological knowledge and skills (Umar & Yusoff, 2014), are among the hindering factors.

Teachers would benefit in trainings that cater specifically to their subject matter. Instead of giving and exposing the available resources and information in general regarding the VLE, it would be of more value for them to be able to see how the VLE can be integrated in their subject specific context. Provision of time for teachers to working collaboratively and learning from each other; have been shown to help teachers to adopt a technology. Provide time and place where teachers can meet and carry out professional discussion and sharing sessions. During training, activities carried out must have a direct relationship to teaching their subject matter. Generic training divorced from subject matter will not come down well with the teachers (Barton & Haydn, 2006). This is because as mentioned in the findings, teachers are already bogged down with so many other administrative and clerical tasks. As any form of change will initially add burden to a teacher's job, activities that can be applied immediately in his or her lesson would have more chances of being applied and carried out in the classroom. According to Mamat, Yusoff, Abdullah and Razak (2015), there are teachers who are reluctant to use due to their own lack of self-efficacy in utilising the VLE.

The current lack of professional development training just added to the difficulty in attracting more teachers to embrace the VLE. Mere investment in resources and infrastructure do not automatically create new teaching and learning practices. As mentioned by Niemi, Kynaslahti and Vahtivuori-Hänninen (2012), equipping teachers must be at the forefront of any planning before school cultures and learning experiences can be expected. Any innovation must be accompanied with professional development programmes that upgrade both the pedagogical and technological knowledge and skills over a sustained period of time. Building a community of network can also help them to learn from one another especially on issues pertaining to

instructional planning. As mentioned by Fullan (2007) the most effective source of help for teachers are other teachers.

Organisational difficulties include getting to use the computer room, and their busy schedules. As there are no LCD in the classroom, to have a lesson integrated with ICT would require them to take the class of about 40 to 45 students to the computer lab. This would easily cost the teachers and students to lose precious time walking from their classes to the lab (Attaran, Alias & Siraj, 2012). ICT facilities should be made readily available to teachers when the need arises. Another difficulty is with the inadequate bandwidth in schools. The long buffering time needed to view a video for example has put off many teachers in using the VLE.

The mismatch between their beliefs that the VLE can transform teaching and learning and their lack of usage of the VLE requires us to understand the impact and restrained of external influences; curriculum, and assessment in order to make sense of the situation. Relevance to assessment will influence teachers' judgement of any new technology even more so in highly exam-oriented country like Malaysia. Therefore, a change in the assessment, one that aligns with the VLE might result in a more positive change.

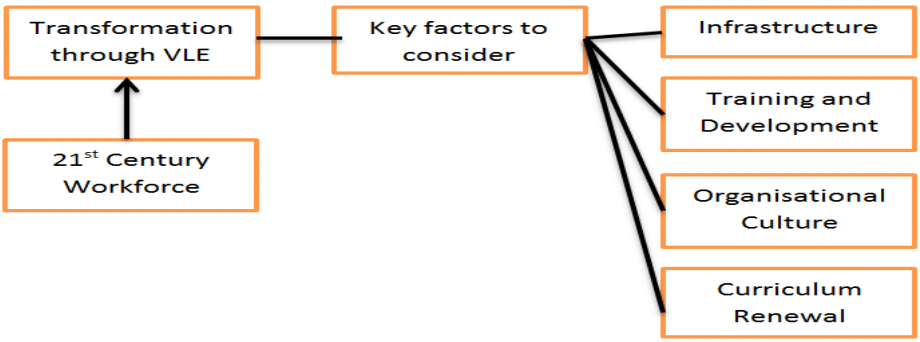


Figure 3: Factors to be Considered in VLE's Implementation

Figure 3 summarises the findings and discussion of this paper. In line with features of case studies, it is not the aim of the current research to generalise its findings to other contexts. The respondents' cases exemplify the current phenomenon studied within its real-life context (Yin, 2003). Findings indicate that despite coming from three different schools, barriers faced remained the same. Aspects like the infrastructure, poor internet connection, lack of basic ICT facilities like the LCD projector, and computers need attention. Their cry for more training to help them cope with the integration of the VLE in their lessons, are real issues that the MOE must attend to. Being able to surf the internet for entertainment and social purposes are clearly different from having to use the technology for pedagogical and learning purposes. They need to be taught the 'how' and 'why' to use technology in meaningful ways (Gorder, 2008). However, internal administrative support in schools, are of equal importance. The collaboration and support will help teachers survive the initial struggle as in any new intervention. Threats and warnings must be replaced with genuine concern to support and listen to teachers' feedback.

8. Conclusion

The findings clearly suggest that teachers have greater awareness of what e-learning constitutes as a result of this nationwide adoption. This exploratory research has paved the way for further research to be conducted to better understand factors that are inhibiting teachers from integrating the VLE in their classrooms. Indeed there are still work to be done after the adoption and initial implementation. On-going needs assessment and the VLE diffusion stage of each and every school need to be carried out so as to replace the one-size-fits-all treatment with a more reliable and effective corrective measures in schools. Besides availability of reliable resources, a supportive organisational culture must be present. Lastly, instead of complaining, perhaps teachers and school leaders could also take a more proactive stance by taking the necessary steps towards realising the aims of a better ICT uptake in our education system. Teachers can make the change within the confine of their classrooms, while school leaders should also do the same

within their schools. There are many exemplary best practices from outside Malaysia that can be adopted. It is also hoped that more empirical studies on the e-learning in the Malaysian schools would take place so as to provide better knowledge, thus practices.

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