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Teacher's Motivation on the Use of Virtual Learning Environment (VLE): The Effect of Social Factors, Self-Efficacy and Technological Support

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Abstract
Virtual learning environment or VLE has been introduced in educational institutions such as schools, colleges and universities to encourage a systematic online teaching and learning platform. The application of VLE is suggested as one of the mediators to vary the delivery process therefore teaching and learning process will be easier and more interesting. This paper aims to examine the effect of social factors, self-efficacy and technological support on the utilization of VLE in the educational process. A quantitative approach was employed and the data was collected through questionnaire administered to selected respondents. A total of 356 accounting teachers from secondary schools in Peninsular Malaysia were chosen as the samples. Reflective measurement model in Partial Least Square-Structural Equation Modelling was utilized to measure the effect of exogenous latent variable on the endogenous latent variable. Results indicated that social factor namely (colleague, administrators and school culture) significantly effect the use of VLE among teachers. The finding can be interpreted as teachers with higher value of social factors have higher intention to use VLE in his/her teaching and learning. Further, self-efficacy and technological support (facilities quality, internet access and technical support) positively influence teachers' to apply VLE during teaching. This paper proposes that teachers need to be given ongoing support and appropriate training to develop their skills in using digital technology. Further, the quality of technological facilities in schools need to be developed to promote effective educational processes and motivate teachers to use digital technology.
Keywords: VLE, Social Factor, Self Efficacy, Digital Technology, Teacher

Introduction

Information and communication technology (ICT) has become one of the main focuses in education sector due to the variety of resources and approaches that can be employed using this platform in the teaching and learning activities especially during this pandemic situation

(Campbell et al., 2015). In line with this, Malaysia's government strive to move towards a technology-based education system to strengthen the quality of delivery process through the use of Virtual Learning Environment or better known as VLE (Ministry of Education, 2012). VLE is considered as a platform in the education transformation system to ensure that Malaysia's education moves in line with developed countries. The application of VLE is suggested as one of the mediators to vary the delivery process therefore teaching and learning process will be easier and more interesting (Hrtonova et al., 2015). Changes and actions need to be taken to meet Malaysia's aspirations towards 21st century education (Ahmad et al., 2019; Simin & Ibrahim, 2015).

With the introduction of this new technology, teachers are considered as important figures toward the use of digital technology. Past studies indicated that there are various benefits gained by educators when applying VLE in the teaching and learning process (Pilkington et al., 2000; Russel, 2005; Becta, 2005; Hoskins, 2011). Among others, Rusell (2005) explained the use of VLE allow teachers to share their personal views and experiences with colleagues as well as improve teachers' work performance (Pilkington et al., 2000). Further, students are able to enhance self-learning and develop critical thinking when they are encouraged to use technology in their study (Becta, 2005). As discussed by Hrtonova et al., (2015) digital technology allows students and teachers to communicate online and help in developing students' understanding and analytical skills. Additionally, VLE facilitates access to information resources, learning time is unlimited, users can use VLE anywhere and many educational opportunities are provided (Cavanaugh et al., 2004).

Findings from a study by the British Educational Communications and Technology Agency (Becta, 2009) reported that classes with an online learning element achieved more learning outcomes compared to traditional learning. The report then outlines two positive effects obtained from e-learning which are students will be more focused to learn and the integration into the educational process are more flexible where student can access the resources at any time and anywhere (Becta, 2009). Moreover Jewitt et al (2010), highlighted three benefits derived from the use of VLE in schools namely, information and communication organization become better throughout the school, parental involvement become higher through learning support at home and students' opportunities for independent and self-directed learning increases. Hrtonova et al (2015), claimed that the use of VLE increases teachers' self-confidence as well as encourages collaborative practices in teaching. The use of VLE can also encourage passive students to contribute ideas and opinions creatively and effectively (Berns et al., 2013).

However, despite the benefits provided, literature revealed that many teachers still nurture traditional approach in teaching and learning activities in the classroom. The involvement of teachers and students in VLE application at both secondary and primary levels were not encouraging (Chua & Montalbo, 2014; Noraini et al., 2015). Data showed that only 2% of teachers used VLE in the teaching and learning process (Salma & Fariza, 2014). This issue needs to be examined to determine the reasons why teachers are unmotivated in using VLE in their teaching. This can be attributed to the challenges faced by the teachers and students such as limited internet access, lack of expertise in using digital technology and the quality of the technological facilities that do not reach the required standard (Lai et al., 2015; Ahmad et al., 2020). Besides, teachers assumed that VLE application burdens their work and wastes their time. This exhibits the need to increase exposure and nurture teachers' motivation to use VLE.

The implementation of VLE in schools have changed the educators' teaching pattern in the classroom from conventional strategy to modern teaching method (Hiong & Umbit, 2015). Through VLE, online learning is applied in education where teachers can maximize the use of digital technology in order to impact students, schools, administrators and even facilitate communication between teachers and parents related to their children's learning performance (Georgouli et al., 2008). Additionally, teachers can share education resources between them and carry out teaching collaboration with their colleague (Adenan et al., 2011). The use of digital technology altered teacher's role from being an instructor to a facilitator. Teaching and learning activities have gradually changed from being teacher-centered to student-centered (Cambell et al., 2013). Student learning time schedules also become more flexible and independent (Hoskins, 2011). In this regard, to maximize the use of VLE, related parties such as students, teachers, school administrators and parents need to play their respective roles in order to achieve this goal. Despite the challenges of applying the VLE, studies show that teachers still have a positive view on this platform (Cambell et al., 2013). Many previous studies have also examined the importance of VLE to the education system, however studies that focus on the variables of social factors, self-efficacy and technological support need to be explored in the Malaysian context.

Thus, based on the significance of preparing the education delivery process to be more meaningful to students, this study aims to examine the influence of self-efficacy, social factors and technological support (quality, internet access, technical support) on the success of the implementation of virtual learning in the classroom. Specifically, the hypotheses formed for this study are as follows:

H_1: There is a positive effect of social factors on the use of VLE

H_2: There is a positive effect of self-efficacy on the use of VLE

H_3: There is a positive effect of technological support on the use of VLE

Virtual Learning Environment

VLE is an educational channel that emphasizes learning flexibility and interactive process between teachers and students to take place successfully. VLE is recognized as an internet-based platform that supports various educational activities and digital competency such as quizzes, tutorials, forum discussions and e-books (Abdelhag & Osman, 2014; Boeve et al., 2016). The main benefit of this application is the ability to overcome time and location barriers as it allows teaching and learning activities to be done at individual convenient time and even teachers and students no longer have to be physically present in the same place (Cavus, 2011).

Since its introduction, various types of VLE have been developed to meet the needs of institutions and schools such as Blackboard, Moodle, Canva, Edmodo and Frog applications. Each type of VLE has its own functions and advantages. The differences in the main features between e-learning and traditional learning environment derive from the level of technological use, education resources, teacher's control of classroom and the delivery process (Williams et al., 2000). This is due to the ability of VLE to offer students the opportunity to learn independently according to their own time, space, and experience (Thah, 2014; Berns et al., 2013). With this, learning becomes more interactive and engaging compared to traditional teaching patterns in the classroom (Kankanhalli et al., 2005). VLE has the advantage of enabling teachers to communicate online with students, conduct online courses, teaching materials can be easily accessible and even students' analytical skills can be developed (Hrtonova et al., 2015). Among the advantages of VLE over traditional approaches

as discussed by Boeve et al., (2016), it's able to maximize student reflection and encourage progressive and critical thinking. Secondly, it entitles teachers and students to interact, collaborate and obtain a range of content that varies according to their respective learning abilities (Zanariah et al., 2018). With digital technology as well, teachers can produce and share learning materials and resources anywhere and anytime (Boeve et al., 2016). Therefore, students do not have to rely entirely on textbooks and learning does not limited to the classroom (Zhao et al., 2017). Futhermore, Ghavifekr and Wan Athirah (2015) claimed that teaching and learning processes that utilized digital technology are more effectual than traditional methods in the classroom. In line with this, Lai et al (2015) outlined four approaches for a successful online teaching namely educators must have clear learning objective, make use of interactive modules, organize teaching and learning methods and prepared with adequate ICT facilities.

However, there are also issues raised on student dissatisfaction with VLE applications. Among the issues highlighted were lack of skills among teachers in using technology during the educational process and educators have less experience in using learning management tools such as Blackboard, Moodle and Canva (Flanagan & Shoffner, 2011; Nico, Ruttena & Wouter, 2012; Adegbenro et al., 2017). As discussed by Flanagan and Shoffner (2011), teachers often have difficulty convincing themselves to use technological tools during teaching activities due to low self-efficacy and lack of confidence when handling some technical applications. In this regard, teachers are encouraged to participate in courses, seminars, workshops and development training related to e-learning to help them gain self-confidence and motivation to develop ICT skills in VLE application (Becta, 2005).

Self -Efficacy, Social Factors and ICT Support System

Self-efficacy refers to the level of confidence an individual has to perform a particular action (Bandura, 2012). Wilson et al., (2007) define self-efficacy as domain of self-confidence, and it is focused on the self-perceptions of individuals about their skills and abilities. In other words, self-efficacy is an individuals' belief in performing tasks which is related to fulfil the goals and expectations (Cassar & Friedman, 2009). Self-efficacy acts as a motivating force in a person as well as the diligence required to succeed in carrying out the activity (Kankanhalli et al., 2005). Past studies showed that self-efficacy is an intrinsic factor that influence teachers to apply digital technology in education process (Compeau & Higgins, 1995; Albion, 2001, BarNir et al., 2011). BarNir et al (2011) explained self-efficacy in technological aspects as the ability of individuals to use computers in a variety of information technology contexts. In terms of teachers' self-efficacy, Albion (2001) described that this factor plays an important role in encouraging technology to be applied by teachers in the classroom. However, lack of confidence to utilize VLE in education makes an individual feel frustrated and indirectly affect the expectations and ability to continue using the application. Findings from Fuller et al (2018) revealed that individual who are proactive tend to have greater self-efficacy due to the ability of learning. Therefore, Albion (1999) suggested the efficient way to increase teacher's self-efficacy is through effective training and courses to ensure teacher's motivation is developed. Whereas Jones (2002) explained that when a teacher uses ICT for teaching and learning purposes, self-efficacy or self-confidence of the teacher emerges. Thus, appropriate action needs to be taken by related party for the success of implementing VLE in education system.

Social Influence refers to the extent to which extrinsic factors such as family support, co-worker, employers and the environment influence individuals to use technology (Venkatesh et al., 2003). These variables explain that through behavior, these individuals

might influence others to use technology (Venkatesh & Davis, 2000). As discussed by Aaron (2011) factors such as support from peers, administrators and the school influences teachers to apply technology in teaching. Teachers are seen to be more enthusiastic about using the VLE when they get support from their colleagues, administrators and the school as well (Ahmad et al., 2019). Trunk and Dermol (2019) found that family members have an impact on the use of ICT on individual. Bagheri and Pihie (2010) also agreed that family influence is a significant factor that provides an individual with background experience and motivation to use ICT. Further, Lucky and Minai (2015) indicated that environmental factors play a vital role in determining the use of VLE of an individual. As Franke and Luthje (2004) claimed that environmental factors could promote or facilitate the use of VLE among individuals.

An effective technological facility is one of the moving factors that motivate teachers to implement innovation in teaching (Lai et al., 2015). It is considered to be an extrinsic factor influencing the use of VLE among teachers. Technological infrastructure involves technical support either from individuals, administrators, internet access or ICT tools when using the VLE during teaching. Igrabia (1990) describes technical support as two dimensional which consist of support for users through tool development systems, user manuals and relevant documents while the other relates to management support where leaders in the organization drive in maximizing enthusiasm and resources. Past research revealed that effective technical support with quality technological facilities give rise to more acceptance and success in technology-based teaching systems (Igbaria, 1990; Sanchez & Hueros, 2010). The lack of technical support and infrastructure facilities can be a major obstacle to the effective use of information technology (Arteaga, Duarte & Garcia, 2013). A study by Zaira et al., (2016) on the factors that influence the use of VLE among teachers in secondary schools found that the level of effectiveness of ICT facilities in schools is still low. Other factors caused the lack of interest among teachers and students in using VLE application are due to low internet capability in the school, limited number of computers to be used for all students and the equipment in the computer lab such as LCD projectors are less satisfactory (Saiful et al., 2014). Due to this reason teachers argued that conventional teaching methods are simpler, effective, and save time.

Theory of Acceptance and Use of Technology (UTAUT)

Theory of Acceptance and Use of Technology (UTAUT) is a model that has been developed to understand the factors that influence the acceptance of the use of computer technology (Venkatesh et al., 2012). The UTAUT model is a model derived from Technology Acceptance Model (TAM) developed by Wallance in 1991. Venkatesh et al (2012) have formulated an integrated technology acceptance model consisting of four cores constructed from eight technology acceptance models. This model proposes four main variables to measure the level of individual technology acceptance viz:

i. Performance Expectations (PE) is defined as “the extent to which users believe that using this system can help users to achieve skills in their work performance. This theory is supported by past researchers of technology acceptance models (Agarwal & Prasad, 1998; Compeau & Higgins, 1995; Taylor & Todd, 1995). This construct is the most influential of the four constructs that Ventakesh has built.
ii. Business Expectation (BE) is defined as the level of convenience associated with the use of this technology system (Venkatesh et al., 2003).

iii. The influence of social factors classified by the UTAUT Model is referred to the extent to which consumers believe that a more important person influences individuals to use technology (Venkatesh et al., 2003).
iv. Facility State (FS) which refers to the extent to which technology facilitates an organization and how users believe that the organization and the technical infrastructure that exists can support the use of technology (Venkatesh et al., 2003).

Based on the UTAUT model, the main variables of this study consists of social factors (family, colleagues, school environment) teachers' self-efficacy and technological support (quality, internet access and technical support) which looks at how these factors influence VLE usage levels. Teachers' behavior is reflected in the frequency of use of VLE in teaching and delivering process. This model explains that when users are exposed to a new software package, several factors are able to influence their decisions about how and when users will use it (Moganashwari & Parilah, 2013). According to Khechine et al (2014), the UTAUT model is a more comprehensive technology acceptance model that include individual and organizational components and this model also provides a more in-depth explanation related to individual intention to use technology (individual acceptance of technology), compared to previous technology acceptance models studied by previous researchers. Ventakesh, Thong and Xu (2012), concluded that the UTAUT model is the most up-to-date and most comprehensive technology acceptance model in assessing individual acceptance of technology as this model is developed through expansion and consolidation based on previous acceptance models.

Methodology

This study used survey method to collect information regarding teachers' profile and the corresponding factors that influence the use of VLE. Questionnaire instruments were utilized to identify the influence of self-efficacy, social factors and technological support on the use of VLE. Questionnaires were employed because it can illustrate consistent and reliable items, high percentage of success to collect answers from respondents, good level of confidentiality and time can be allocated effectively (Uma & Roger, 2010; Ary et al., 2002).

The questionnaires were administered to accounting teachers in the population to answer the research questions. This allows to apprehend agreement on VLE of teachers belonging in the same context. The sample consisted of 356 accounting teachers from selected schools in Peninsular Malaysia. The selection of teachers as the study sample was made on the rationale that teachers are agents of change towards the use of e-learning because the role of teachers are significant for the success of this application. The instruments used in this study were adapted from the study of Azli (2015); Lai et al (2013) and modified according to the needs of the study. The questionnaire consists of five sections to measure the variables, namely sections A, B, C, D and E. Section A is the profile information of the respondents, Section B contains 11 items measuring VLE, sections C and D contains seven items for each section to test social influence and self-efficacy on the use of VLE. Part E contains 9 items to measure technological support in terms of quality, internet access and technical support. This study uses a 5 choice Likert scale that involves a scale from 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree to measure teachers' agreement regarding the research construct studied. The collected data will be analyzed using descriptive analysis (frequency, percentage, mean and standard deviation) and the reflective measurement model in Partial Least Square-Structural Equation Modelling to measure the association of variables.

Validity and Reliability Test

To determine the reliability value, the researcher used the consistency method by considering loading factor for each question item where the acceptable reliability of the questionnaire item is between 0.71-0.99 which at this level is the best level (71%-99%) (Hair et al., 2016). Nevertheless, the value of the reliability coefficient that does not meet the criteria should be deleted from the outer model, then the analysis continues with the second factor loading. Referring to Table 1, the third and eighth items from the VLE construct were discarded for obtaining a feasibility coefficient of less than 0.71. While there are no items from the construct of self-efficacy, social factor and ICT experience which is discarded.

Table 1: Factor Loading of the Outer Model

Items	First factor loading	Second factor loading
Virtual Learning Environment:		
I know what is Virtual Learning Environment (VLE).	0.823	0.835
I use VLE during teaching and learning on a daily basis.	0.725	0.802
VLE simplifies my teaching affairs in the classroom.	**0.651**	deleted
I use VLE in teaching and learning at least 3 times a week.	0.765	0.781
VLE application help to ease my teaching process even more.	0.798	0.799
I am adept at providing interactive learning elements using the VLE.	0.845	0.842
I am adept at using VLE to provide open and flexible learning environment for teaching purposes.	0.811	0.824
I know VLE applications can diversify my teaching techniques.	**0.679**	deleted
I am adept at sharing teaching materials through VLE applications.	0.798	0.775
I am adept at using technology and VLE applications in creating collaborative (group) learning.	0.821	O.838
VLE based learning can generate creative and innovative students.	0.897	0.874
Social factor:	0.721	0.753
Individuals who are close to me, encouraged me to use VLE in teaching and learning.	0.789	0.799
Most of my teacher friends, encouraged me to use VLE in the teaching process.	0.864	0.853
School administrators support the use of the VLE.	0.832	0.821
School culture encourages the use of VLE.	0.754	0.773
The implementation of the learning process using VLE by my friend, successfully resulted in an interesting learning environment.	0.897	0.869
Students are more interested in learning process that uses VLE.	0.811	0.801
To achieve school target, administrators are assertive in their efforts to encourage teachers to use the VLE.	**0.398**	**Deleted**
Self efficacy:	0.784	0.778
	0.871	0.876
	0.798	0.783
	0.712	0.730

The implementation of the learning process using VLE is a good method.	0.878		0.877	
I am comfortable using the VLE in the learning process.	0.856			
I am confident that VLE can produce an exciting learning environment.	0.881		0.852	
I am comfortable guiding fellow teachers to use the VLE.			0.887	
I was able to overcome any small obstacles that arose while using the VLE in the classroom.	0.895		0.890	
Understanding students' learning styles, helped me plan the learning process using the VLE.	0.767		0.772	
I am able to produce meaningful learning process when using the VLE	0.721		0.734	
Technological Support (Quality, Internet access, Technical support):		0.734		
		0.786		0.741
The quality of ICT infrastructures provided in my school are good (example: computer, LCD Projector, printer, etc.).		0.857		0.780
				0.858
My school provides adequate computer lab facilities in terms of hardware and software for the use of VLE applications.	0.877		0.878	
I have my own personal computer to access VLE applications from home or out of school area.	0.792		0.798	
I can easily access or use the VLE applications from home due to good internet line at home.				
The internet access at my school is good and stable.				
The whole area of my school has adequate internet access.				
School management is always providing support and helping to implement VLE application education activities.				
Relevant technicians or officers are always helpful in case of problems in using the VLE application.				
Facilities and equipment for VLE applications in school are constantly being improved and maintained.				

To test the validity and reliability of the construct, analysis was performed to obtain the value of Average Variance Extracted (AVE). AVE values greater than 0.5, means that the construct explains more than half variance of its indicator. Referring to Table 2, the value of AVE for each construct is more than 0.5 with p-value is less than a significance level of 5% ($p<0.05$) and Cronbach's Alpha values between 0.787–0.901 display the questionnaire items are at a good level and acceptable to perform the actual study.

Table 2: Construct Validity and Reliability

Latent Constructs	AVE	P-value	Cronbach's Alpha	p-value	Composite Reliability	p-value
VLE	0.707	0.000	0.924	0.000	0.876	0.000
Social factors	0.812	0.000	0.787	0.000	0.697	0.000
Self efficacy	0.697	0.000	0.901	0.000	0.866	0.000
IC	0.719	0.000	0.854	0.000	0.783	0.000

Data Analysis

Data was collected over a period of two months through the distribution of questionnaires to selected schools in West Malaysia. Respondents were given 7-14 days to answer the questionnaire questions. After the questionnaire is completed, data can be collected for analysis to obtain the findings of the study. Partial Least Square-Structural Equation Model (PLS-SEM) was employed to analyze the data. The reflective measurement model in PLS was utilized to measure the relationship of exogenous latent variable on the endogenous latent variable which allows examining of causal relationships between variables (Vinci et al., 2010; Hair et al., 2016).

Based on Table 3, a total of 356 respondents were involved in this study. Of these, 126 (35.4%) were male teachers while another 230 (64.6%) were female teachers. In terms of school location, a total of 175 respondents (49.1%) work in urban schools while the other 181 respondents (50.9%) work in rural schools. The majority of respondents (83.4%) have a bachelor's degree compared to only 16.6% who have a master's degree and PhD. From the aspect of ICT handling ability in teaching, showing the majority of respondents that is 220 (61.8%) have a moderate level in ICT handling in teaching, followed by 75 teachers (21.1%) have a high level of ICT handling ability and only 61 respondents (17.1%) who have a low level of handling ICT in teaching.

Demographic Profile of Respondents

Table 3: Respondents Demographic Factor

Demograhic Factor	Ferquency (N=356)	Percent (%)
Gender		
Male	126	35.4
Female	230	64.6
School Location		
Urban	175	49.1
Rural Area	181	50.9
Age		
<25	30	8.42
25-30	74	20.8
31-40	95	26.7
41-50	138	38.8
>51	19	5.33
Education		
Bachelor	297	83.4
Master & Phd	59	16.6
ICT skills		
Low	61	17.1
Moderate	220	61.8
High	75	21.1
Total	**n=356**	**100.0**

Findings

Table 4 depicts the direct effect between the independent variable and the dependent variable. As shown in table 4, the direct effect of social factors on VLE is significant (path coeff.=0.317; t=3.724, p<0.05), thus the first hypothesis is accepted. The finding can be interpreted as teachers with higher value of social factors have higher intention to use VLE in his/her teaching and learning. Next, the attitude effect of self efficacy on VLE (path coeff.=0.342; t=6.987, p<0.05) is significantly proven. The second hypothesis was supported and to be concluded that self efficacy has a positive effect on the use of VLE. Further, technological support in term of quality (path coeff.=0.297; t=5.531, p<0.05), internet coverage (path coeff.=0.219; t=4.154, p<0.05), and technical support (path coeff.=0.419; t=3.301, p<0.05) are significant too. Therefore, this means the better ICT infrastructure in terms of quality, internet coverage and maintenance in school encourage teachers to use VLE in teaching and learning.

Table 4: Hypotheses Testing

Latent Constructs	Beta	P-value	T-statistics		R-Square
Social factors--->VLE	0.317	0.000	3.724	Accepted	0.176
Self-efficacy---> VLE	0.342	0.000	6.987	Accepted	0.197
ICT-quality---> VLE	0.297	0.000	5.531	Accepted	0.066
ICT-internet access--->	0.219	0.000	4.154	Accepted	0.083
VLE	0.419	0.000	3.301	Accepted	0.043
ICT-maintenance---> VLE					

Discussion

Teachers VLE usage

Finding illustrates that although majority of teachers have basic knowledge of the application but the frequency of accessing VLE in the classroom is at moderate level. Teachers have moderate ability in providing interactive learning elements, using technological approaches in creating collaborative learning (groups) and providing a more open and flexible learning environment for teaching and learning purposes. The data is consistent with Noraini et al., (2015) who reported that 66.5% of teachers do not have adequate skills to utilize technological tools such as computers and the internet when implementing teaching and learning. In general, these results are supported by previous study which also showed that the majority of school teachers are less skilled in applying ICT based materials and technological innovations in teaching (Willians et al., 2000; Cuban et al., 2001; Ashinida et al., 2004). However, respondents have a positive stance on digital learning. Teachers believe that through the use of digital technology, they were able to diversify teaching techniques and that the delivery process became more flexible. In addition, teachers agreed that the adoption of VLE may generate creative and innovative students. Teachers acknowledge that the learning platform is competent to construct creative teaching strategy with contemporary learning methods. Ashikin and Kamisah (2010) emphasize that this application eases the sharing of teaching materials as well as capable to advance learning environment for teachers and students.

Social Factors Influence on the Use of VLE

This study has proven that social factors have significant positive impact on VLE applications among teachers in school. Peers and individuals who are close to the teachers, encourage and help them to employ VLE in the teaching and learning process. As discussed by Hasliza et al(2016), teachers who are proficient in ICT integration could be mentors to their colleague. Studies showed that teaching process using VLE by fellow teachers successfully resulted in an engaging learning environment. Findings revealed that the collaboration in teaching process between teachers is necessary to support fellow colleague who lack ICT skills to administer the online platform. This suggests that teachers could attract their colleague to utilize VLE in classroom due to the innovation demonstrated by the fellow teachers, and the success in implementing interesting learning outcomes. Shahfiezul and Fariza (2017), stated that teachers prefer to observe their fellow friends before they are actually ready to utilize VLE in education activities.

Next, finding indicated that students are more interested in following learning activities using digital technology. This proves that VLE platform is able to attract students to

learn because through this application students can communicate transparently, which enables them to discuss with their friends and teachers either during learning activities or outside of classroom. Hence, VLE application can diversify teachers' teaching methods where students can learn collaboratively. This result is in line with Aaron (2011) who found that collaborative learning attracts and increases student engagement when teachers use VLE application as a learning platform. Further, this study shows that the role of school administrators in cultivating the integration of technology in teaching is crucial (Noraini et al., 2015). Zah (2008a) emphasize that teachers will be less motivated to accept new teaching platform if administrators do not provide decent support and ultimately create a sense of disinterest in using the innovation that has been implemented. However, result showed that the support teachers received from school administrators are not widely implemented in terms of monitoring, ICT assistance training and ICT facilities. Thus, positive school culture and the support from school administration exerted a significant influence on teachers to utilize VLE in education process.

The effect of self-efficacy on the use of VLE

Self-efficacy has been identified to have significant positive impact on the use of VLE. This study revealed that teachers have high self-efficacy and they agreed that the utilization of VLE in teaching activities may generate an interesting learning environment. This study captured that through higher self-efficacy in teachers, teachers' confidence and motivation develops, and significantly influences the use of VLE application. Chang et al (2011) have shown that teachers' self-efficacy has a positive relationship with the acceptance of technology that influences teachers whether to use technology or not in teaching. This finding is also supported by previous literature which highlighted that if teachers' self-efficacy is high, then teachers are more motivated to integrate ICT in teaching activities compared to teachers with low level of self-efficacy (Noraini et al., 2010; Arif et al., 2011). A study conducted by Wong et al., (2013), acknowledged that teachers who utilize "Smart Board" technology perceived that the application provide benefits and value to students and themselves.

Nevertheless, study illustrate that although teachers agreed on the advantages of VLE for education purposes, the use of digital technology among teachers are still at a moderate level. They also have less confidence to produce meaningful learning outcome when using the VLE. The lack of ICT skills reduces teachers' confidence to employ VLE application. Study revealed that teachers have the perspective that applying digital technology during teaching will take their valuable time to finish off the prescribed syllabus, thus increase the teaching burden. Results showed that the success of utilizing VLE comes from the confidence teachers have within them and it is associated with the ability in handling technological tools. Albion (2001) reported that there are association between ICT skills and self-efficacy whereby self efficacy plays a significant positive role on the use of technology by teachers in the classroom. The influence of self-efficacy is one of the important factors in determining the level of use and acceptance of ICT in teaching. Therefore, teachers should improve their ability in handling ICT either through attending courses, training or seminar to develop confident in utilizing VLE.

VLE Facility Condition

ICT and computer facilities are equipped by the school for education purposes. Results illustrated that ICT support in terms of the quality of facilities, good internet network and effective technical support encourages teachers to utilize VLE in the classroom. However, teachers rank the quality of ICT facility in their school to be at a moderate level. Teachers

emphasized that ICT equipment in the computer lab, internet access and the number of computers should be sufficient for teaching and learning activities to be efficient. There were complaints by respondents regarding the limitation of internet access and the lack of necessary resources to use digital technology during the teaching process. The result is consistent with the National Audit Report (2013) which highlighted that internet access provided in schools was still unsatisfactory causing difficulties for teachers to employ VLE during teaching activities. Teo and Wong (2013) indicated that the main drivers of e-learning satisfaction among teachers and students consist of five variables namely convenience state, ease of use, perception of usefulness satisfaction, good teaching staff and technology delivery.

In terms of technical support which are guidelines, references, technician or person that help in case teachers have difficulties while using VLE, study found that this support is at moderate level. Further, user-friendly features (easy to use) possessed by the VLE application also shows to be at moderate level. Most teachers are less willing to use such applications because the navigation of the VLE system in schools does not reflect user-friendliness. The result highlighted that adequate technical support and guidance from certain parties either from administrators, ministries or colleagues are significant to motivate teachers to use digital technology during teaching. ICT infrastructure should always be maintained by technicians so that no technical problems occur during teaching and learning activities. This study is supported by Sanchez and Hueros (2010), who found that technology support has a positive impact on the use and acceptance of technology to educators, thus improving the integration of ICT in the teaching and learning process.

Summary and Suggestion

Social factors, self-efficacy and ICT facility condition were found to have an influence on the use of digital technology in teaching activities. Social factors namely school culture, school administrator and peers, motivate teachers' behaviour to employ digital technology during teaching. There is an association between self-efficacy and confidence level, as teachers become more confident to utilize digital technology, the motivation to employ VLE is higher. In addition, teachers believed that VLE is an interesting learning platform and may generate creative and innovative students. Teachers agreed that through learning activities using VLE, they are able to attract students in class because this application allows students to address their ideas, learn collaboratively, communicate, discuss with peers and teachers, and share resources on-line either in classroom or outside of classroom learning time. Further, VLE application can diversify teachers' teaching methods and provide flexible learning environment for educational purposes.

Technology support has a significant impact on the usage of VLE since it can increase the use and acceptance of technology, thus raising the integration of digital technology among teachers. Teachers also need technical support when employing VLE because such assistance encourages teachers to expand their knowledge and skills to integrate technology. By understanding the challenges faced by teachers in using VLE, related parties such as school administrator and the ministry should provide adequate computer facilities, good internet access and technological devices should always be maintained by technicians to ease learning process. Further, teachers need to be given early exposure to digital technology so that they are highly motivated and fit to use technological innovations. E-learning will be successful if teachers have the appropriate technological knowledge, training and time to practice the applications. Consequently, teachers need to improve their skills in technology by attending

courses held by the school administration or through their own initiative. The availability of extensive skills and knowledge in digital technology is able to develop the readiness and confidence to use VLE in teaching.

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