

SATISFYING E-LEARNING USERS IN MALAYSIA'S GOVERNMENT LINKED COMPANIES: A PRELIMINARY CONCEPT

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Abstract: *E-learning plays a vital role in the learning and development of executives within Government Linked Companies (GLCs) in Malaysia. The change of its ecosystem, course dimension, trainee dimension and organization dimension affect e-learning effectiveness. Most GLCs in Malaysia adopt e-learning as part of their employees' development process. While factors are abundant on how to make e-learning effective, it is thus, becoming a growing concern and a need to broaden the field of understanding how e-learning can become effective with the moderating and mediating effect of e-leadership and user satisfaction, respectively. Based on the literature reviewed, this research helps identify the underlying causes, limited ecosystem, effectiveness, and need for e-learning implementation into business processes by factoring in the effects of e-leadership and user satisfaction. The findings assist the stakeholders within GLCs to look into those dimensions and the moderator and mediator effect of e-leadership and user satisfaction in increasing e-learning effectiveness within the organizations. Based on the preliminary study, it is recommended that provisions be made for a more enhanced e-learning ecosystem and GLCs need to leverage the effect of e-leadership and user satisfaction to increase e-learning effectiveness. Future research may be undertaken to examine more dimensions included within the e-learning ecosystem. This conceptual study's ideas and thoughts are relied on current research on GLCs, focusing on Malaysia.*

Keywords: *E-learning, E-learning Ecosystem, E-leadership, Effectiveness, Government Linked Companies, User Satisfaction*

Introduction

Since the last two decades, the transformation of training to e-learning has accelerated. Computer based training (CBT), which allowed learners to access study materials saved on CD-ROMs, was the first teaching-learning innovation of the IT (information technology) industry, which bloomed in the mid-1980s (Education World, 2018). Since then, training has progressed from a traditional to a more modern approach. The use of the internet in e-learning has sparked this transformation, allowing learners to interact internationally, at any time and from practically anywhere in the world.

E-learning is said to be one of the important aspects in the changing technology and market (Malitoni & Baluti, 2014). Also, the corporate industry is undergoing a period of extraordinary transformation with unparalleled opportunity (Ferguson, 2008) which has left in the involvement of more complex work forces which emphasise the importance of training. The changing business environment, unstoppable work schedule, expectations of the guest make the scheduling of training to be difficult. Employees of the corporate industry deal directly face to face with the customers who can give immediate response a compliment or complaint.

E-learning is also becoming a critical component of having a skilled workforce. According to (Conkova, 2013), research have shown that the best way to secure a good workforce is to give proper education and training, and that workers nowadays need to learn new skills and information in a timely and efficient manner. Many studies have been undertaken to assist corporations in improving their e-learning efficacy. This covers researches into how the e-learning ecosystem influences the effectiveness of e-learning. Govindasamy, (2001) suggested to corporations that an important step that must be taken prior to implementing e-Learning is selecting a suitable Learning Management System. Polo et al, (2021) concluded that users of e-learning can gain higher self-confidence in their learning progress if the organization adopts a comprehensive e-learning ecosystem.

According to Malitoni & Baluti, (2014), ninety three percent highlighted that the training programs improved their skill, knowledge and behaviour. This, however, is not a new agenda that is happening in the industry. It is indeed, becoming a requirement of continuous improvement in the industry. The huge incorporation of knowledge in any business activity has gone with wide spread increase in the great need for continuous professional training (Busquets et al, 2014).

Although numerous studies have found favourable feedback on how e-learning increases e-learning effectiveness, most of the findings lack e-leadership and user satisfaction as critical characteristics. E-leadership nowadays has become an essential element in ensuring success towards the implementation of e-learning. This is why Chamakiotis, (2021) added that leaders adopting e-leadership in their leadership in the organization need to come to grips with a variety of new challenges to create a high-performing and sustainable e-learning ecosystem. He initially agreed that the world has now been driven by an unexpected transition into virtual working worldwide due to the Coronavirus disease 2019 (Covid-19) pandemic.

According to Abdullah (2017), GLCs in Malaysia accounts for approximately 36 per cent of the Malaysian Stock Exchange market capitalization and 54 per cent of the Kuala Lumpur Composite. Razalli (2017) also confirmed these by stating GLCs in Malaysia are mainly the major providers of utilities, postal services, airlines, airports, public transport, water and sewerage, banking and financial services, automotive, plantation, and construction industries.

The market share has, however, decrease to 25%. According to Malaysia's Prime Minister, Yaakob (2022), GLCs make up for about RM445bil in the capital market, commanding 25% of Bursa Malaysia's market share. These, however, does not diminish the role of GLCs in Malaysia's economy. Yaakob (2022) emphasized that GLCs has remained as the main and strategic service provider for electricity, telecommunication, postal, airlines, airports, public transportation, water, sewerage, banking and financial services. In the same statement, he added that Budget 2022 has also estimated RM30bil investments from GLC in the renewable energy sector as well as the modernisation of the supply chain and 5G infrastructure. These signify the importance of GLCs in Malaysia's economy and the importance of enhancing the GLCs' e-learning experience, as all of this enhancement will eventually impact the GLCs' performance. As a reputable organization which represents government's capability in technology advancement, it is important that GLCs should increase their effort towards increasing their e-learning effectiveness. E-learning is a proven approach to upskill the competences of the executives of Government Linked Companies in order for them to be successful in the daily jobs. According to Babu et al, (2018), e-learning is important because it can improve the quality of the learning experience.

Most GLCs have adopted e-learning as part of their learning and development process. However, more research is needed to identify the specific areas where the effectiveness of the adoption can be improved. A specific dimension is necessary to examine its relationship to enhancing the efficacy of e-learning, according to Al-Jedaiah, (2020). This research is critical because it will pave the way for a new area of knowledge about e-learning effectiveness.

Literature Review

E-learning Ecosystem

According to the prior definitions of training, e-learning, and ecosystem, an e-learning ecosystem is a collection of e-learning components that work together to make an e-learning activity successful. The teaching-learning community, contents, teaching pedagogy, and learning resource management make up the e-learning eco system Shukla & Nagar, (2020). To improve user performance, Ahmad et al, (2018) proposed that several parameters be focused on, such as organisational readiness in terms of infrastructure, course flexibility, relevance of modules and their contents in an orderly manner, security, and user friendliness. The dimensions of the course, the trainee, and the organisation were recognised as considerations to consider when implementing e-learning successfully (Yew & Jambulingam, 2015).

Sridharan et al. (2010) recognised three important components of the e-learning ecosystem: principles and methods, processes and systems, and substance and contents, which included certain barriers such as a lack of technical expertise and a learning management system that was insufficient. Cheriyan (2018), on the other hand, identified five essential e-learning system success factors: technological support, learning resources, support and training, and student and instructor characteristics.

According to Saba (2012), organization could improve the quality of e-learning systems by providing greater system accessibility, increased system dependability and flexibility, and convenience of training. According to studies based on the quality of e-learning systems, it appears that constant evaluation of the dynamic usability of the Learning Management System, i.e., effectiveness, learn ability, flexibility, and the users' attitude, is done in order to prevent specific technological emotional weaknesses Dias & Diniz, (2014). Finally, this study is

necessary to improve the discovery of the e-learning ecosystem and its impact on e-learning effectiveness.

Course Dimension

Under the course dimension, there will be two contexts discussed: ease of use and training content. The degree to which a person believes that utilising a certain system will be devoid of physical and mental effort is characterised as perceived ease of use (Davis, 1989). Perceived ease of use was found to be a major predictor of e-learning continuation intention by (Roca & Gagné, 2008). The key element determining learners' training performance, according to Lim et al, (2007), is how easy it is to use or access a site. Employees can acquire the information they need easily and fast thanks to the system's easy navigation and clear online help menu, as well as instructions. This will boost their pleasure with the e-learning system, which will increase their intention to continue and the net advantages to them.

Apart from ease of use in an e-learning environment, the contents of training are crucial in the success of any training program. The content has to be up-to-date, relevant, and accurate. Alliger et al, (1997) argue that when trainees recognized that the contents were practical, they applied knowledge and skills from the training to their real work. According to Negash, Ryan & Igbaria (2003), information quality is defined as a function of the value of the output produced by a system as perceived by the user. Measures associated with information quality include content variety, complete information, detailed information, accurate information, timely information, reliable information, and appropriate format (Ahn, Ryu & Han, 2004). The information quality dimension evaluates the e-learning content whether it has the current, comprehensive, accurate information. In this study, the contents of training refers to the information quality dimension as presented in the DeLone and McLean (1992) information systems (IS) success model.

Trainee Dimension

There will be two context that will be discussed under trainee dimension which are computer self-efficacy and motivation to learn. Historically, Compeau & Higgins, (1995) emphasized that computer self-efficacy is an individual's belief in his or her ability to perform specific computer tasks. It is believed that individuals having high level of computer self-efficacy are more likely to engage in computer tasks and demonstrate persistence in completing computer tasks despite difficulties (Johnson, Lester & Ferguson, 2001). Likewise, Lim et al (2007) found that the higher the trainee's computer self- efficacy regarding online training, the higher their learning performance. Evidently, computer self-efficacy is important in the e-learning environment. Employees who have low self-efficacy often find themselves having problems using the e-learning system, as they get minimal guidance from trainers compared to a face-to-face training environment. Therefore, employees with higher computer self-efficacy are believed to have higher satisfaction on the e-learning system.

Apart from computer self-efficacy, learner's motivation is deemed important in e-learning. Motivation is defined as "the specific desire of the trainee to learn the content of the training course" that is characterized by both the trainees' enthusiasm for learning and the trainees' persistence in attempting to learn the materials when the content becomes more difficult (Noe, 1986). In a study by Mathieu, Tannenbaum & Salas (1992), trainees showed more positive emotional responses when they had higher motivation. Similarly, Mathieu & Martineau (1997) demonstrated that trainees who are motivated tend do well and are more satisfied with the training.

Organization Dimension

Two context that will be discussed under organization dimension which are management and organization support. According to Igbaria, Guimaraes & Davis (1995), external factors such as organizational characteristics have significant effects on individuals' intentions to use technology system based on the presence or absence of the necessary skills, opportunities, and resources to use the system. Management support is perceived as one of the important dimensions in an organization training climate which includes top management encouragement, allocation of resources, and instructional development assistance. (Kozlowski & Hults, 1987) conducted a study that examined the relevance and influence of a training-specific climate dimension. They found strong relationships between seven dimensions of "technical updating climate" (i.e., supervisory support, innovation policies, and job assignments) and individual performance, organizational commitment, and growth satisfaction. Evidently, when the managers show constant emphasis on the importance of continuous learning and tie certain reward to the initiative taken by their employees who actively participate in e-learning, employees will feel satisfied and thus, leads to higher training effectiveness.

In addition, previous research has demonstrated that an organization's training climate is instrumental in preparing individuals for formal development activities and achieving desired learning objectives (Tracey et al., 2001). Lim et al. (2007) found that in an e-learning environment, maintaining a consistent learning environment is not significant with transfer performance, but rather with learning performance. When the organization environment emphasizes innovation, and the organization rewards trainees' self-development efforts, trainees learning performance will be higher. When the organization align their performance management procedures and incentive programs with their employees' initiatives in using the e-learning system effectively and applying the skills acquired in work, employees will have higher satisfaction in using the e-learning system. Therefore, the relationship between organizational support and user satisfaction is equally important in the e-learning environment.

E-learning Effectiveness

E-learning became one of the regular practices in government as available tool to communicate and as a training tool. The usage of e-learning in GLCs should be accompanied with action strategy to maximize the benefits of this tool and to provide guidance for their executives on how to benefit from this new technology to save their time and to maximize their abilities to gain knowledge in short and long run. As e-learning became a major tool to deliver, the culture of the organization should encourage its executives to rely on this tool to exchange communication and knowledge. The effectiveness of e-learning requires further researching among GLCs in Malaysia to measure the extent it accomplishes the objectives and figure out some solution to maximize the benefits of its use in these organizations.

Several papers use both 'learning outcome' and 'satisfaction' as definitions for effectiveness (Harrington & Walker, 2009; Jung et al, 2002 & Maloney et al, 2011). The number of papers in this list would of course change if the remaining abstracts were coded, but the author's find that the most common definitions are expected to stay relatively stable, as they have not significantly changed in recently reviewed abstracts.

In this research, e-learning ecosystem and e-learning effectiveness are being tested to study the relationship. Thus, the perceived outcome is whether e-learning ecosystem have a significant relationship towards e-learning effectiveness. According to Mayerova & Rosicka, (2015), course and trainee dimensions possess a significant effect on the effectiveness of e-learning.

However, these results were gained with the absence of organization dimensions as part of the elements in e-learning ecosystem. Hence, this research is importance to complement the previous study.

E-leadership

(Kissler, 2001) began his examination of e-leadership by posing the question: —what kind of leadership will be required for the pursuit of e-business? Zaccaro & Bader (2003) noted that today ‘s organizational leader grapples with two interrelated forces: (a) the increasingly global dispersion of divisions and subunits, customers, stakeholders, and suppliers of the organization; and (b) —the exponential explosion in communication technology that has led to —greater frequency of daily interactions with colleagues, co-workers, subordinates and managers dispersed geographically. As a reaction to these changes, —organizational scientists have begun to talk about _e-leadership ‘to refer to leaders who conduct many of the processes of leadership largely though electronic channels. Zaccaro & Bader (2003) also postulated that in view of the rapid technology growth in organizations and their increasingly global reach, in the near future —e-leadership will be the routine rather than the exception in our thinking about what constitutes organizational leadership.

In terms of e-leadership, the most commonly cited definition, which has garnered solid footing and acceptance in the mainstream of leadership research, is that provided by (Avolio et al., 2014). They define e-leadership as “a social influence process embedded in both proximal and distal contexts mediated AITs [advanced information technologies] that produce a change in attitudes, feelings, thinking, behaviour, and performance.” Thus, e-leadership is an abstract concept that implies the use of or failure to use ICTs to induce changes in the behaviours and mental states of followers.

User Satisfaction

Previous research has found that individuals who are less satisfied with their experiences are less likely to enrol in future e-learning courses (Carswell & Venkatesh, 2002). Similarly, Wang (2003) found a positive relationship between e-learner’s satisfaction score and the reuse intention of the e-learning systems. Expectation Confirmation theory states that IS continuance intention is positively correlated with satisfaction. A number of research studies on IS satisfaction indicate that IS satisfaction directly effects intention to use and actual use (Karahanna et al. 1999).

Hayashi et al, (2004) found that the higher the satisfaction level with initial use end users have, the higher their continuance intention in using the training environments. Previously, Liaw (2008) conducted a study to understand how to improve e-learning user satisfaction, behavioural intention, and to enhance training effectiveness on 424 university students in Taiwan. The results of the study showed that perceived satisfaction contribute to the learner’s behavioural intention to use e-learning system.

User satisfaction is important in bringing the values from the e-learning. Several previous studies have shown that, e-learning has positive relationship towards user satisfaction. According to DeLone and McLean (2003), a positive user satisfaction will contribute to positive e-learning net benefits.

Methodology

The current study was based on a survey of secondary data sources from a variety of academic journals and publications that were found through word searches on "e-learning ecosystem.", "e-learning effectiveness", "e-leadership" and "user satisfaction". The titles, abstracts, keywords, frameworks, and headings and sub headings were being developed based on the articles reviewed. The majority of relevant articles published from 2012 and above were chosen to get an updated understanding of the variables. All of the sources of instruments for these variables are mainly from the results of its questionnaires. For this research, the relevance of prior studies and the professional qualifications of the authors were used as selection factors. Therefore, all of the journals were taken from indexed publications and other reliable sources. Above all, while this paper seeks to bridge existing theories in its distinctive ways, the paper's criteria were based on (Gilson and Goldberg, 2015) guidelines, which included presenting an integrated framework, suggesting novel linkages among conceptions, developing arguments for associations, and broadening the scope of academia.

Result and Discussion

As this research continuously develop the findings about e-learning ecosystem, e-leadership, moderating variables as well as e-learning effectiveness; all research criteria such as hypotheses, previous research findings, limitations, conclusion and recommendations will be in the radius of these variables.

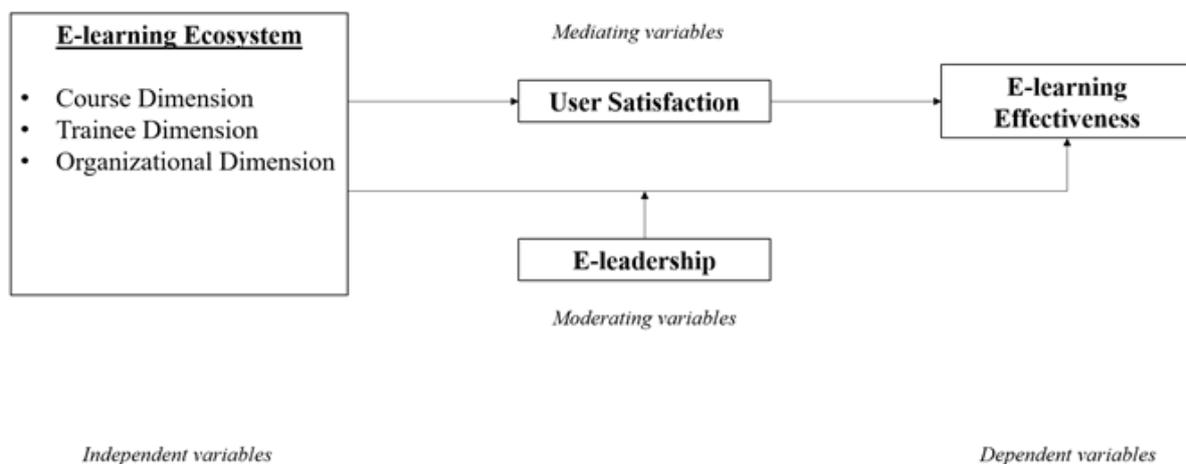


Figure 1: Research Framework

Hence, based on the earlier findings, it is concluded that the research framework as shown as Figure 1 is used for this study. The findings shows that course, trainee and organization dimension is part of the e-learning ecosystem. As mentioned by (Yew & Jambulingam, 2015), course, trainee, and organisation dimensions were identified as factors to be considered to implement e-learning successfully. In addition to that, the presence of e-leadership as a moderating variable is expected to increase the improvement of e-learning effectiveness as (Cordie and Lin, 2018) emphasized that e-leadership are the key decision makers and hold the primary responsibility for either leading the changes or maintaining the status quo specifically in increasing e-learning effectiveness.

The significance of e-leadership in e-learning has been discussed in previous research at which (Oblinger, 2003) mentioned that in order to successfully include e-learning in strategy plans, e-leaders need to: (a) respond quickly to change; (b) be willing to invest new monies in

technologies, staff, and faculty; and (c) align e-learning with the culture of their organization. However, it is equally important to measure e-leadership as a moderating variable between e-learning ecosystem and e-learning effectiveness.

The other aspect of this research is the relationship between user satisfaction and e-learning effectiveness. Previous research has found that individuals who are less satisfied with their experiences are less likely to enrol in future e-learning courses (Lim et al., 2001). Similarly, (Wang et al., 2003) found a positive relationship between e-learning satisfaction score and the reuse intention of the e-learning systems. In his theory of Expectation Confirmation Theory, (Oliver, 1980) states that continuance intention is positively correlated with satisfaction.

Conclusion and Recommendation

The adoption of e-learning in Malaysian GLCs is highly encouraging. Continuous development in the efficiency of e-learning should always be founded on scholarly theories to ensure that the improvement is always on the right track. It is always recommended that the findings of this research will be used to improve the application of e-learning in Malaysian GLCs. Furthermore, this study can be used as a springboard for future e-learning research.

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