THE COMPETITIVE ADVANTAGE OF E-LEARNING THROUGH RESOURCES AND CAPABILITIES ACQUISITION

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ABSTRACT
Strategic resources and capabilities are indeed crucial for e-learning. Previous studies ascertain that e-learning resources and capabilities such as management expertise, technology and organizational resources may contribute to e-learning provider’s competitive advantage. Though literatures have demonstrated such important of strategic resources and capabilities for achieving e-learning performance, still there are few researches exist, in particular issue how these resources and capabilities are acquired by e-learning provider and bundled together for explaining performance which contributes to competitive advantage. To fill this knowledge gap, this study explores the strategic resources and capabilities acquired by e-learning provider in Malaysia. This study attempts to propose a novel theoretical framework of how e-learning provider could achieve competitive advantage through resources and capability acquisition. This research adds to the advance of concepts and dimensions for resources and capabilities from Malaysia’s e-learning provider perspective and grant new theory-driven practical verification to defend the e-learning performance.

Keyword: E-Learning, competitive advantage, higher learning institution

INTRODUCTION
Malaysian public universities that categorized as a Research University (RU) will undergo the Malaysian Research Assessment II (MyRA II) on their achievements and outputs from 2010 to 2012. The MyRA II focused on the university’s excellence in research outputs and human capital produced. Moreover it is expected that the research outputs and human capital made a significant impact to the nation and society. Thus an e - learning program of RU will also undergo the assessment on their achievement within the period. E-learning resources and capabilities may contribute
This study explores the strategic resources and capabilities acquired by e-learning provider in Malaysia. This study attempts to propose a novel theoretical framework of how e-learning provider could achieve competitive advantage through resources and capability acquisition. This research adds to the advance of concepts and dimensions for resources and capabilities from Malaysia’s e-learning provider perspective and grant new theory-driven practical verification to defend the e-learning competitive advantage. Though literatures have demonstrated such important of strategic resources and capabilities for achieving e-learning competitive advantage, still there are few researches exists, in particular issue how these resources and capabilities are acquired by e-learning provider and bundled together for explaining performance which contributes to competitive advantage such as management expertise, technology and organizational resources.

This case study explores the strategic resources and capabilities acquired for the School of Distance Education (SDE), Universiti Sains Malaysia toward their e-learning’s competitive advantage. Although the SDE had celebrated their 40 years of establishment on their distance education involvement, but they need to access and evaluate their strategic resources and capabilities prior to embark on e-learning landscape. Thus this study tries to conceptualize the management expertise, technology and organizational resources and capabilities of the SDE toward e-learning’s competitive advantage.

LITERATURE REVIEW

E-Learning

Due to the advancement of ICT in Malaysia, various universities in the country have been promoting their e-learning program. E-learning programs have been seen as a new way of promoting lifelong learning in the country. E-learning has been seen as any type of learning that depend on or is enhanced by online communication using the latest information and communication technologies (Nagy, 2005). Further, technology in teaching and learning has been marketed or presented to its intended market with a lot of promises, benefits and opportunities (Njenga and Fourie, 2010). There are various definitions provided by the scholar on defining e-learning, some said e-learning takes place anytime someone uses electronic means for gathering information that is acquired without another live person present (Collins et al., 2003).

Beamish et al. (2002, p. 105 in Horman and Macpherson, 2005) define e-learning as “a wider set of applications and processes allied to training and learning that includes computer-based learning, online learning, virtual classrooms and digital collaboration. These services can be delivered by a variety of electronic media,
including the intranet, internet, interactive TV and satellite.” Meanwhile, Welsh et al. (2003, p. 246) stated that “e-learning as the use of computer network technology, primarily over an intranet or through the internet, to deliver information and instruction to individuals.” In the context of this paper, the e-learning allows the SDE as provider to extend their knowledge to learn by using ICT as such the learning provider is separated from the learner by cyberspace (Hamid, 2002). This paper defines the e-learning for SDE to be seen as a way of lifelong learning in delivering knowledge and information through the use of information and communication technology (ICT).

Resources and Capabilities

In order for SDE to embark on e-learning programs, the school needs to have the resources and capabilities in doing so. The term resources had been defined as the input or factors available to a company through which it performs its operations or carries out its activities. The generic definition includes resources of different kinds, physical, employee skills, patent, productive teams, etc. (Carmelo-Ordaz et al., 2003). On the other hand, Crook et al. (2008) claimed strategic resources meet certain criteria – it is valuable, such that it reduces costs or increase value to customers, rare enough that competitors do not use the same resource to compete away the value, and difficult to imitate or substitute, which keeps competitors from gaining parity. Although there are many resources and capabilities that can be considered (Crook et al., 2006), but this study examines management expertise, technology and organizational resources and capabilities as the motivation for the SDE toward its competitive advantage in e-learning environment.

Based on review on resources and capabilities for e-learning, scholars indicated that technology and computer skills (Tsai, 2009); financial, human and technical (Garrison and Kanuka, 2004); technology, corporate environment and delivery method (Macpherson et al., 2004); technological development and knowledge to be shared (Gasco and Gonzalez, 2004); human resource functions and knowledge management (Efimova and Swaak, 2002); and software development and support process improvement (Marshall and Mitchell, 2002). Further, Jones and O’shea (2004) listed the followings were needed for e-learning’s resources and capabilities namely mobilize staff, organizational, ICT investment, government and stakeholders support, and change management. Thus this study conceptualizes that e-learning resources and capabilities are formed by management expertise, technological and organizational.

Management Expertise

Management expertise resources and capabilities are regarded as firm ability to
acquire and develop skilled people and integrated teams with technical, knowledge and experienced (Penrose, 1959; Rueber, 1997). Management expertise resources and capabilities are important for e-learning environment experts in developing the e-learning contents, training design as to develop and maintain the e-learning. Moreover management expertise resources were also referred as the people who were behind the e-learning scene. They had all the skills and expertise in developing and maintaining the e-learning needs and resources. Barney (1991) stated training, experience, judgment, intelligence relationships and insight of individual people in the firm contributed to management expertise resources. Welsh et al. (2003) claimed training design was needed for e-learning. Thus for SDE to embark on e-learning people are needed for training design.

**Technological**

Technology resources and capabilities are essential for e-learning providers to control their e-learning activities and support the process. Technology resources are regarded as the firms’ ability to provide relevant technology and maintenance resources which enable communication, transmission and processing of information, for example, hardware, software, peripheral and communication system (Alshawi, 2001; Aldin, 2004). The new or technologically advanced equipment is the most critical part of technology resources. Web-based information systems often depend on computer platforms, communication technology and software systems. Such technological resources enable innovation capability which e-learning providers use to enhance their control over e-learning activity through enhanced communication, transmission, processing of information and delivery. Barney (1991) stated that physical technology as part of his physical capital resources. Welsh et al. (2003) indicated information technology was an important issue for e-learning, this includes hardware, software and technical support.

**Organizational**

Organizational resources are regarded as firms’ competence in the development of system, routines, policies, business process and ways of doing things, which may have a positive impact on strategy and objective of a firm (Hofer and Schendel, 1978, Tomer, 1987; Grant 1991). For e-learning, organizational resources and capabilities are needed for e-learning providers to manage their e-learning landscape. These resources can be in the form of management abilities and style, adaptability in terms of ability to manage change and ability to innovate, organization culture and teamwork (Camelo-Ordaz et al., 2003). Barney (1991) stated that a firm’s formal reporting structure, formal and informal planning, controlling and coordinating
systems, informal relations among groups were considered organization resources. Further SDE needs to consider change management (Welsh et al., 2003) onto their organization operational and systems in having e-learning landscape.

**Competitive Advantage**

Barney (1991, p. 102) stated firms had “a sustained competitive advantage when they implement a value creating strategy not simultaneously being implemented by any current or potential competitors and when these other firms are unable to duplicate the benefits of firm’s strategy”. Further, four indicators of the potential of firm resources to generate sustained competitive advantage were valued, rareness, imitability and substitutability (Barney, 1991). Meanwhile, Urde (1999) claimed that brand can be used as strategic resources in order to achieve competitive advantages. The idea can be braided together with a brand identity through a process of value creation and meaning creation (p. 122). Further as customers felt the brand is valuable and unique, then it became difficult for competitors to imitate (Urde, 1999). According to scholarly reviews on e-learning literatures, they highlighted that e-learning competitive advantage can be examined from the perspective of satisfaction (Sun et al., 2006), continuous improvement (Clarke et al., 2005) and interactions as felt by e-learners.

**Summary**

The management expertise, technology and organizational resources and capabilities are conceptualized as resources and capabilities that are needed for e-learning providers to have a competitive advantage in providing the medium of knowledge dissemination. The e-learning competitive advantage will be examined through satisfaction, continuous improvement and interactions as perceived by adult students. Thus, we propose the following study’s hypotheses:

- H1: Resources and capabilities acquisition by an e-learning provider can lead to competitive advantage.
- H2a: Management expertise resources and capabilities can lead to satisfaction.
- H2b: Management expertise resources and capabilities can lead to continuous improvement.
- H2c: Management expertise resources and capabilities can lead to interactions.
- H3a: Technological resources and capabilities can lead to satisfaction.
- H3b: Technological resources and capabilities can lead to continuous improvement.
H3c: Technological resources and capabilities can lead to interactions.

H4a: Organizational resources and capabilities can lead to satisfaction.
H4b: Organizational resources and capabilities can lead to continuous improvement.
H4c: Organizational resources and capabilities can lead to interactions.

Theoretically, the study’s framework can be depicted in Figure 1 below.

![Theoretical Framework](image)

**Figure 1: Theoretical Framework**

**METHODOLOGY**

This study will embark adult students of the SDE in getting their perceptions on the e-learning resources and capabilities provided by the USM in general and specifically by the SDE. A questionnaire will be constructed and distributed to adult students who are registered with the SDE programs. Further, the questionnaire constructs will be adapted and adopted based on the scholarly reviews in the e-learning literatures. Pilot study of the questionnaire will be conducted to ensure the questions are understood by the respondents and no problem with the wording or measurement [28].

**DISCUSSION AND CONCLUSION**

This study is important for an e-learning provider to know their resources and capabilities needed in the e-learning landscape. Specifically, SDE must rigorously examine their resources and capabilities in terms of their management expertise, technological and organizational. They need to ensure their management expertise is ready and equipped with the knowledge and skills of e-learning. Technologically, SDE need to have physical systems, support systems and the backbone for their e-learning environment. Without these systems, the SDE will not have the capability and ability to provide an e-learning environment to their students.

The SDE needs to have a policy for their e-learning landscape. This policy is
needed as it governs the e-learning operations. The SDE needs to have a blueprint in preparing for their e-learning. The blueprint will guide SDE accordingly toward time for them to get the necessary equipments, support system, staff to manage the e-learning; further the SDE needs to be abreast with e-learning environment in order to keep them with the current and up-to-date state of technology in e-learning.

Training is crucial for SDE’s human capital namely their own faculty members and support staff. Support staff need to be trained on the e-learning systems. They will be the entrusted staff for the smooth operations of the e-learning at SDE. Meanwhile, faculty members are also needed to be trained on the use of e-learning systems. They need to be well versed with the physical equipments and their systems of instructions.

An empirical study is needed to examine the theoretical framework for SDE’s e-learning resources and capabilities which lead to their competitive advantage in providing the e-learning environment for adult students. This study expects to contribute novel empirical evidence on e-learning resources and capabilities for SDE.

Finally, learning from the experiences of others in the e-learning resources and capabilities needed help SDE to foresee their own strengths and weaknesses. This helps SDE to plan and strategize their resources and capabilities to be ready and prepared themselves toward challenges in e-learning ahead.

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