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Technology Supported Cities and Effective Online Interaction for Learning

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Abstract

Technology supported cities providing for a better interaction learning environment in learner-content, learner-instructor and learner-learner interaction are seen a notable factor for successful learning. Therefore, the objective of the study is to examine the types of interaction and its relationship with students' level of satisfaction whereas a descriptive statistics analysis is adopted. A questionnaire was distributed to a hundred and fifty working adults who have enrolled at the University Technology MARA Distance Learning Program. A positive interactive learning environment result will have enormous impact on the quality of teaching and learning through effective interaction

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Keywords: Technology; interaction; learning; environment

1. Introduction

Technology supported cities are to support technological innovation in modern societies and becomes the intrinsic part for city dwellers. The most effective measure of regional inventive capacity, in terms of its effect on technology and productivity growth is the share of the workforce engage in creative activities (Lobo et al, 2014). In fact, it is a key ingredient to promote creative activities and learning is to provide internet accessibility that act as a catalyst for greater social interaction and information retrieval

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(Noorriati Din et al, 2013). An article by Boyd Cohen of Fast Company define smart city as cities which use information and communication technologies to be more effective and "intelligent". He identified ten cities in the world as smart cities. These cities include; Vienna, Toronto, Paris, New York, London, Tokyo, Berlin, Copenhagen, Hong Kong and Berlin (Cohen, 2012). The term city is define based on the population size and its population density (Dijkstra and Poelman, 2012). In this paper the term technology supported cities or technology supported environment or smart cities will be used interchangeably.

In Malaysia, it is reported that the capital city of Malaysia, Kuala Lumpur, has an average broadband speed test above the national average, with an average speed of 5.99 Mbps. The top three locality with the highest broadband speed include Bandar Baru Bangi (22.4 Mbps), Damansara (7.36 Mbps) and Setapak (6.96 Mbps). The broadband speed is low compared with countries such as Hong Kong (60.17 Mbps) and Singapore (38.83 Mbps). However, accessibility rate to broadband in Malaysia is high which is reported to be at 66% of the total Malaysian users (MOSTI, 2012). At present, the Malaysian government has allocated more funds to improve the information and communication technology (ICT) infrastructure in the 2013 Budget (Avanti, 2013), in order to improve technological support for citizens. This is one of the country's initiatives, to develop and strengthen the cities in Malaysia, to be more connected in a technology supported environment.

Computer technology has enabled a new way to deliver educational learning activities from traditional learning environment to technological learning environment. One such form of learning is online distance learning which use internet technology as the mode of delivery. Currently, distance learning has been a popular mode of learning for working adults. Working adults are able to attend to their studies without leaving their job. In lieu of the limitation places to study in the higher institutions, the distance learning is a panacea to the problem. Distance learning has provided a platform for the learners to discuss online. It enables learners to connect and communicate, to exchange news and information with a global audience. On that note, the role of internet in the learning environment was widely utilized in many studies regarding to its usage (Sun et. al, 2003; Liccardi, et.al, 2007). The studies also showed that it can support communication and interaction between learners and their peers, and between learners and their instructor virtually.

1.1. Background of the study

Interaction is an activity based on a mutual influence between two or more people or a reciprocal action through which people can retrieve, use, share and store valuable knowledge (McShane and Von Glinow, 2010). Technology supported facilities will activate learners interaction between individuals in the system. In addition, the technology supported facilities will facilitate the threefold types of interaction as stated by Moore (1993). Moore's interaction is a critical component of learning experiences for a distance learner. In fact, interaction is significantly in both conventional and distance learning environments (Liu, 2008). Consideration of how interaction needs translate into decisions about instructional design and development is critical as well. In any communication and interaction to take place, the ability to induce learning instruction is considered to be a critical competency. On that note, addressing the communication and interaction skill of both the learners and instructors are essential for a distance learning program to remain successful in its implementation and application.

1.2. Moore's types of interaction

Moore developed three categories of interaction way back in the year 1989. The three categories with some additional are still being used by researchers to evaluate online interactions till now. Moore's interaction concept is useful to analyze different types of interaction that might impact the level of