Transforming E-education: a Strategy to Prepare Thailand for the Coming Ubiquitous Society

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Abstract - The world has been moving toward ubiquitous society with the aid of information technology as the main driving force. Education, as the tool for a change, has to be transformed to best fit the new society. Thailand has set up an aim of becoming a leader in the field of education technology to cope with long term ever changing society and world. It is evidently stated in several National Economics and Social Development Plans, but in practice different story has been presented. Thai policy makers in the related field of education tended not to learn only from foreign experiences but also make policies like them. Without considering the cultural differences, some important policies dictate directions from Thai education technology in very controlled ways which leave insufficient space for any experiment. However, there are abundant supported statistics for the idea of “differences in cultures greatly effecting users’ prospective and behaviours towards technologies” and also since “the process of trial and error” has been essential in science and technologies development, it is better to allow free-of-control style in the beginning stage. It is quite dangerous in the long run to just assume that “the same method yields the same results” without regards to differences in cultures and no crucial information from trial and error.

This study aims to present evidences, compare cases, and argument to support the direction of free development and free delivering of e-Learning as the best way to cope with ever changing and ubiquitous society.

Keywords – Ubiquitous Society, Information Technology, E-education

I. INTRODUCTION

The world has been moving towards ubiquitous society.” declared by Nam Chul Cho, the president of Korea National Open University [1]. The word “Ubiquitous Society” seems to be out of reach in normal daily life of most world’s citizens, but it is evident that we are moving towards such society in incredible high speed. Within the past couple years, most communication devices have changed from voice based delivery to multi-senses communication, and so the way we communicate. Social Network has gained popularity and legitimacy over voice communication [2]. Multimedia has become the core of communication, and communication devices have been transformed into many different forms surrounding all living environments. Besides, such mobile phones that become greatly smarter, the communication devices can be embedded within household’s electrical utilities as well as be equipped along with people in the form of “wearable devices [3].” Such devices from the interconnection among computational devices and various other objects from all places with an emphasis on communication between people and objects or among the objects in the way of “omnipresence [4].” This development brings about the core concept of “ubiquitous society.”

Although such development can be called in many ways, such as “ubiquitous computing,” “ubiquitous networking,” “ubiquitous IT” with no clear demarcation, “ubiquitous society” has most comprehensive
meaning [5]. The word “ubiquitous” is derived from the Latin word of “ubiæ”, which means “being and existing everywhere at the same time [6].” In the context of communication technology and education, the word “Ubiquitous Society” is employed to describe “an environment where one can use various information communication services while getting access regardless of time and space through network [7].”

Beside being omnipresent, “ubiquitous society” has to have two more characteristics as “intelligence” and “consistency” [8]. “Intelligence” occurs when computers perceive the environment and take necessary actions while making its own judgement while “Consistency” describes the state of being able to access a network or internet anywhere and anytime [9]. In other words, “ubiquitous society” occurs in the full internet connecting environment, surrounded by automatic-decision-making communication devices. With these characteristics, it is clear that “ubiquitous society” can potentially brings about many changes in educational environments, especially in e-learning environment [10].

II. EDUCATION IN UBQUITOUS SOCIETY

The term “E-learning” is used to describe “the way people use an electronic device with learning technology [11] to develop new knowledge and skills individually or collaboratively [12].” With advancement of computation technology, mobile learning or M-Learning has emerged. Mobile learning is described as “the way of using mobile devices with learning technology constituting various forms of wireless environments that foster two-way, real-time communications among and between users, equipped with learning context and many learning functions to promote mobile learning [13].” Since the year of 2000, new mobile devices with sensor technology have been providing new directions for technology assisted learning, and this has led to “context-aware ubiquitous learning” [14]. Context-aware ubiquitous learning enables users to interact and learn with sensors embedded objects in their surroundings. Context-aware ubiquitous technology is continuing to develop and spread, and its applications have begun to influence learning in various fields and disciplines. Context-aware ubiquitous technology is widely known as “ubiquitous learning”.

Shneiderman and Kearsley [15] mentioned 5 elements in enhancing learning in their engagement theories as theory, skills, feedback, motivation, and environment. In the era of e-learning, electronic contents and simulation have proven to be superior in quality to traditional learning method [16]. Lacking in the quality of two-ways-communication is crucial deficiency for building the best learning environment. It is one of the reasons that e-learning can not reach society’s high expectation in the past two decades until social media came along in the year of 2000. The strength of social media lies on communication, and the lack of communication has been filled with the aid of social media. Social media have great characteristics to enhance communication, and communication is the core of feedback and motivation process. Brown and Voltz have pointed that “Electronic learning comes alive in full potential only when one can turn all learning elements to electronics [17].” Therefore, e-learning’s potentials have been fulfilled with the help from mobile sensors technology, social media, and connected devices in ubiquitous society.

However, there remains one issue to be concerned in taking full force of new e-learning to the ubiquitous society. McLuhan from The school of Toronto has said that “the medium is the message [18].” In other words, the way we communicate influences the message itself. Therefore, in the case of entering ubiquitous society and its way of learning, the medium has totally changed in characteristic from static location to mobile and from voice-based communication to text. It definitely influences communication contents, more or less. In the same manner, teaching/learning is a kind of communications. Consequently, the contents
of learning would be changed over time with new kinds of ubiquitous learning. Along with all the changes, the society will be changed slowly but definitely. Therefore, preparing for ever changing society with education is more complex than ever. Learning has to be changed as a consequence of medium and technology change. In this situation, adaptive skill is very important for gearing the way of learning along the ever changing society. One important thing that can raise adaptive skill is deep understanding of the situation. One way to establish understanding, especially in science and technology, is performing experiments and learning from success and failure [19].

III. THAI EDUCATION IN UBQUITOUS SOCIETY

Thailand has not reached the status of ubiquitous society yet, even in the metropolis of Bangkok. With three characteristics of ubiquitous society, only “Intelligent” has been satisfied in metropolis areas while “Omnipresence” and “Consistency” has not met the standard. According to U.S. Consensus Bureau, Thailand has internet penetration at merely 25%, lower than world average of 35% [20]. However, mobile penetration has reached 125%, far above world average of 93%. Social media penetration is also high at 36%, 10% higher than world average. The low rate of internet penetration indicates no consistency in access to internet and consequently suggests insufficient connectivity among devices in omnipresent way. Nevertheless, a high percentage of social media penetration and a number of mobile devices connections (mobile penetration) suggest readiness in terms of both quantity and quality of devices. Although Thailand has not quite qualified for ubiquitous society yet, the status is not out of reach[21]. Only a raise in the internet coverage and its quality will bring about both “Omnipresence” and “Consistency”.

Since inter-networking technology is one of the fastest development branches of technologies, the realistic expectation will be that Thailand will reach the status of ubiquitous society sooner than later. Therefore, foundation building is urgently needed in order to establish high quality learning along with the coming ubiquitous society.

In education, Thailand is far from offering ubiquitous learning. Thailand is still in the process of crossing from e-Learning to mobile learning. However, with previous shown statistic, Thailand has great technological potential in crossing towards ubiquitous society with higher than world standard of technology readiness in several criteria. In contrast with e-educational readiness, Thailand has inadequate quality contents in electronic form and also not enough people with skill and knowledge to both create and deliver contents [22]. It is partly a consequence of many acts established by the Ministry of Education that prevent full development of electronic learning. Even in present, pursuing an academic degree via electronic delivery is still be in an uncertainty stage. Moreover, many e-learning programs that had previously been approved by Ministry of Education were ordered to halt due to suspicion in their quality without giving enough time to prove the outcomes. In short, not only does Thailand have no record of failure in e-learning, but the country also does not have one of success. South Korea and Singapore may have incredible success in ubiquitous learning, but they, both, had long and enduring record of trials and errors in the past two decades [23, 24].

IV. STRATEGY FOR THAI EDUCATION IN UBQUITOUS SOCIETY

According to previous mentioned statistic [20], it is clear that Thailand will eventually become ubiquitous society. However, the situation of Thai education does not allow Thailand to take full advantage of ubiquitous learning. Thai education has no, or not enough, experience in creating, managing, and delivering any kind of electronic learning contents. Even more, Thailand has no law to
bind and support all development of learning in modern forms. Although Thai government has published many forms of encouragement in developing electronic contents for learning in the past couple years, there is still no law to bind and no solid direction to establish. In order to make full development in ubiquitous society in an aspect of learning, Thailand needs to establish development both in policy and in direction. For policy, Thai government needs to establish policy that pushes education forward with adequate coverage and validity to bind and with strong direction enough to make it enforced. For direction, there are two main directions to choose from. One direction is to make solid development but might take more time. Another is to make the country jump forward fast but with a doubt on sustainability. The first option is paving Thailand’s own way and is developed with the method of trials and errors. It might be an option that leads Thailand to the territory no one has been before. It means no help from other countries, but Thailand can learn both from success and failure. It might not be the fastest way, but it is the most sustained way of development. Another option is to employ experiences from other countries. This option can be as far as duplicating success from other countries and implementing it in Thailand. It is a fast jump start, but, without experiences and knowledge in depth, it is hard to adapt in order to survive future changes.

Statistically, Thailand is highly likely to take the second option, especially when it comes to a decision on educational development. Thailand has usually been looking for some successful precedents in educational development. It is definitely faster to catch on the level of world development standard. It also seems safer in the short run to be a follower but more threatening in the long run. It is dangerous to just take what is a success in one country and assume that it will perform the same way in another country. Like Albert Einstein mentioned “The significant problems we have cannot be solved at the same level of thinking with which we created them [25].” However, if Thailand takes a set of successful procedure from other countries without deep understanding in it, what will Thailand do when a complex problem occurs? It is desperate for Thailand not knowing how to create the successful procedure to begin with. How can it be to take one step further to solve the problem? Asking for help from the country that Thailand take successful procedure from might seems to be a rational solution. However, if taking the factor of cultural differences in to equation, there are abundant evidences of precedent cases that fail even with full help from the people who have success records from other places else. As Rosenberg [26] concurred that culture has strong influences in any social activities, especially in education and technology. The best suggestion should lie on the first option with learning from trial and error. In this way, Thailand has enough insight to adapt along the ever changing world, for Thailand has created in-depth understanding on educational and technological developments via trial and error process. If it is the case, then free development and free implement of e-learning should be allowed in the first stage to make as many trials to be tested as possible. It is treacherous to make them halt without allowing enough time for grooming outcomes. Although it might be a bit annoyingly slow and tremendously chess to select the right path among odds, it is the best way to leap forward in sustainable way.

V. CONCLUSION

Even though Thailand has not reached the status of being ubiquitous society yet, it is wise to make a careful preparation. Education is one kind of social activities that can fully take advantage of such highly connected world. From e-learning in static world to u-learning in automated mobile society, the cloudy future of learning is taking shape swiftly. Deciding development route is crucial to pave the way toward ubiquitous learning and society. Either duplicate or create one will make electronic
education in Thailand move forward. It only depends on how Thailand value sustainability, over temporary illusion or vice versa.

REFERENCES
Arranged in the order of citation in the same fashion as the case of Footnotes.


[16] Pornphisud Mongkolvanit. (2013). Transforming the enhance education in
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an Era of Ever-changing Social Media: Knowledge Delivery or Content?. Siam Technology College Journal, 1,1&2, 10-15.


