Information Technology Phenomenon in Thailand

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Abstract. Since Information Technology spreads in various groups of people and tasks in Thailand, the researcher tries to review this important situation. The objective was Explore the application of Information Technology in Thailand in five dimensions: Policy, Theory, Applications types, Contents, and users. The content analysis approach was used to discussion of IT phenomenon. The sampling was 83 research documents that were recent published in August 2011. The result found that The National Education Act (81.93%) was mostly influenced factor of IT Policy /Plan in Thailand, the theory of Learning (87.95%) was the mostly influenced factor of IT Concept or Theory, IT application mostly was Courseware (49.40 %), IT contents were language mostly (53.66%), and mostly IT users were students (89.16%). Finally, the idea of IT phenomenon in Thailand will be as the case study for the other countries to review their IT applications further.

Keywords: Information Technology Applications, IT usage, IT situation.

1 Introduction

Thailand, the only Southeast Asian nation never to have been colonized by European powers, is a constitutional monarchy whose current head of state is HM Bhumibol Adulyadej. Thailand is the 50th largest country in the world; most nearly equal in size to Spain or roughly equivalent in size to France or Texas. The vast majority (roughly 80%) of Thailand's nearly 65 million citizens are ethnically Thai. The remainder consists primarily of peoples of Chinese, Indian, Malay, Mon, Khmer, Burmese, and Lao decent. Of the 7 million citizens who live in the capital city, Bangkok. More than 92% of the population speaks Thai language, the official language. As a result of its cosmopolitan capital city and established tourism infrastructure, English is spoken and understood throughout much of Thailand. [20]. Information Technology (IT) in Thailand found in 1987 when the Asian Institute of Technology (AIT) in Thailand entered into an agreement with the Department of Computer Science at the University of Melbourne in Australia to operate Internet email service on a regular basis, as send and collect mail. Until 2007, 8.4 million internet users out of Thailand's overall population, and by early 2008, mobile penetration was around 82 percent of population. Although Thailand is still in the early stages of its technological developments, the government of Thailand's information and communication technology plans for the years 2000 to 2010 is "*to promote the increase in internet usage for both its citizens and business sectors*." The information infrastructure is

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becoming more universal and less expensive. Security, privacy protection, and trust are being enhanced so that consumers will have more trust and confidence, and will try different products and services in the future. These developments are creating great opportunities E-Commerce solution providers, and E-Commerce-related service. [19]. For the year 2011-2020, Thai government plans for the years as "*Smart Thailand 2020*" that technology will allow Thailand to meet 3 goals : Stronger Economy, Social Equality, Environmental Friendly. Then, the development process based on three levels. For the basic level : including ICT Human Resources and ICT Competent Work force, ICT Infrastructure, and ICT Industry. For the middle level : including Smart Government. The advanced level : including Stronger Economy (Smart Agriculture and Smart Services), Social Equality (Smart Health, Smart Learning), and Environmental Friendly (Smart Environment as ICT for Green & Green ICT). [9]. Since Information Technology spreads in various groups of people and tasks in Thailand, the researcher tries to review this important situation. Then, the idea of IT phenomenon in Thailand will be the case study for the other country to compare or take the advantage points for supporting of Information Processing and computer in their country.

2 Objective

Explore the application of Information Technology in Thailand in 5 dimensions, Policy /Plan, Concept/Theory, Applications types, Contents , and users.

3 Methodology

There are two phases of research and spent for one year to complete the project.

Phase 1: Content Analysis approach. This phase were took about nine months to explore the application of IT in Thailand by using the content analysis approach. The sampling was 83 research documents that were published recently in August 2011. The tool was the explore forms that divided in five categories: 1) IT Policy /Plan, 2) IT Concept/Theory 3) Type of IT applications 4) IT Contents 5) IT users

Phase 2 : Analysis data and discuss of information system application for three months. Percentage was used for calculated.

4 Result

4.1 IT Policy /Plan

From the eighty three research documents, The National Education Act (81.93%) was mostly influenced by factor of IT Policy /Plan in Thailand. For the other influenced factors were Government Policy (12.05%), and Educational Technology Plan (6.02%). From the National Educational Act, noticed that "The National Education Act of Thailand will prepare people for new social requirements. It will encourage Thais to develop towards more analytical and independent thought. The knowledge-based and learning society will help fine new solutions for the global era". [22]. In year 2011, Miss Yingluck Shinawatra, a prime minister, presented the government

policy for a short period as one year and long term period as four years. For a short term-immediately plan, the government focuses on "Tablet PC for students aged 6-7 years old". [11] Now, the tablet in Thailand was the hot issue for discussion among government, entrepreneur, teachers, and parents in positive and negative way. Most teachers and parents were serious that tablet will be influenced on children' health and behavior -playing game, chat. On the other side, government agreed with the successful educational dimensions of new technology–motivate learning, mobile library, critical thinking, then the experimental tablet project began in readiness primary schools in Thailand and government supports mostly for educational content production. Besides, there are many systems that support government policy to reach as e-government role -one stop service, such as Citizens ID Card system, E-Revenue system, E-Procurement system, and e-Auction system. [12]

4.2 IT Concept/Theory

From the eighty three research documents, the theory of Learning (87.95%) was the mostly influenced factor of IT Concept or Theory in Thailand. Next, theory or concept of IT was skills concept (8.43%), Human resource development concept (2.42%), and Ethics concept (1.20 %). For Learning Theories involve with Blended Learning, Cased-Based Learning, Constructivist Learning, Project-Based Learning, Collaborative Learning, and Game-Based Learning. For Skills Concept related with reading skill, writing skill, searching skill, and critical thinking skill. The example of information system to support learning concept was E-learning system. E-learning focuses on building learning and teaching among online environment. The system included input, process and output factors. Input factors were student, teacher, objective, resource, educational media, knowledge based, communication & activity, and evaluation. Process factors were the learning and teaching situation that build up input factors. Output factor was learning achievement from evaluation. [14] Today, the example systems that support learning concept, skills concept, and ethics concept was as Virtual Learning Community for Thai Muslim Youth –the social networking LMS based on collaborative of Muslim youth and Muslim head of community. Every member will brain storm in social network for creating one project for developing Muslim community. [7]

4.3 Type of IT Applications

From the eighty three research documents, mostly type of IT application was Courseware (49.40%). Next, IT application were Information System (24.10%), Game (16.86%), and Social Network (9.64%). IT tools were applied in different styles such as Professional Home Pages language (PHP), MySQL program, Adobe Flash CS Software, Adobe Dreamweaver CS Software, Adobe Photoshop software, Adobe Illustrator software, Sony Sound forge software. Information System tools were as LMS, CMS, and Moodle. Most system based on more OS : Windows server, Linux Server, Cent OS Server, Free BSD Server, Ubuntu Server, Mac OSX 10.4. Communication tools were as FACEBOOK, for chat, e-mail, forum, blog, wiki. Storytelling practice websites were applied, for example, Voice Thread, Scrapbook, Lino. Presentation programs were Microsoft PowerPoint, Adobe Presenter 7, and Adobe Captivate 5. The mostly main system was E-learning system, applied new

tools for communication & activity –social media, game. The examples were E-learning : Implement of Game-Based Learning in Higher Education– Multimedia Online Role-Playing Game or MMORPG [4], Video Conferencing System for online teaching and learning by Red5 – Flash streaming server, the open source [13], Reflecting Writing of Goodness via Weblog –self concept goodness and other goodness [1], Web-based information system for evaluation of Boyscout activities - using concept of System Development of Life Cycle (SDLC) and developing with PHP language and MySQL database [16], The development of Management Information System for Publishing Company -both operational and management level and developed with MySQL database for connection, HTML, PHP, AJAX, JAVA application development for linking via internet [6], and Development of Automatic Online Item Analysis system – for analyzed discrimination, difficulty, and reliability of testing questionnaires by using PHP, MySQL, JavaScript, Apache Web Server. [23]

4.4 IT Contents

For the IT contents were described as the concept of Dewey idea, that contents were divided in 10 subjects (000-900) - 000 computer, 100 Philosophy, 200 Religious, 300 Social Science, 400 Language, 500 Pure Science, 600 Apply Science, 700 Art & Entertainment, 800 Literature, 900 History- Mostly IT content, from the forty one research documents of Courseware, was language (53.66%). Next were computer (24.39%), Pure Science (14.63%), Apply Science (12.20%), Religious & Social Science (9.76%). The contents of language areas were Japanese, Thai, and English. Besides, the social science contents were education and community, computer contents were network, data processing. Science contents were physics, environment. Applied science content was business document. Last, religious was the content about ethics, Buddhism, and goodness. The example systems that contained specific contents were E-learning system of Effecting Game-based Learning in Teaching English Reading Skill -Eternal story with English Vocabulary[15], Online Morality and Ethics Encouragement Learning System–e-learning system applied Buddhism fables [24]. The other systems that contained in different contents were The development of e-learning on Electronic Data Processing– computer subject [25], Creating of e-learning on Computer Mathematics[8], e-learning for Business Document Subject -business student [18], Create the RT e-learning Courseware [21], and Development of Advertisement Creation instruction [5].

4.5 IT Users

Mostly researches were focus on the Students and Teachers. Students were chosen as a main sampling (89.16%) and the other groups were Teacher (6.03%), Employee (2.41%), Blind (1.20%), and Deaf (1.20%). The example of information system for disability such as The e-learning system for development of Sign Language Animation of students with Hearing Deficiency – cartoon animation classifies in five sections: things, animal and nature, religious and place, vehicle, other [2]. The system for teacher was Teacher Electronic Porfolio Management System : CUFolio – based on self assessment concept and individual development planning by using ASP.NET and PostgreSQL Database[3]. Today, there was one interesting project, named

Openmind Projects , that introduced the overseas volunteer to develop IT in Thailand : helping with e-learning projects, IT and website projects, and teaching [10]. The project will be responsibility for three tasks: 1) Help a poor teenagers to use a computer and help them to get a better job in the future. 2) Help poor farmers to use computers and Internet and help them to sell their products without middlemen who make the money. 3) Help poor villagers to use computers and Internet and help them to develop community based eco tourism and sell it without tour operators who keep the profits. The project could help the youth to be good at technology and help all the other part of users, poor farmer and villagers, in Thailand.

5 Conclusion

The government of Thailand promoted the increase in internet usage for both its citizens and business sectors. These developments will create great opportunities of E-Commerce solution providers, and E-Commerce-related service. The result of the research found that mostly factors related the IT phenomenon as The National Education Act, the theory of Learning, type of IT application was Courseware, IT content was language, IT user mostly was students. Then, Thailand applied more techniques of IT tools: Professional Home Pages language (PHP), MySQL, Adobe Flash CS, Adobe Dreamweaver CS, Adobe Photoshop, Adobe Illustrator, Sony Sound forge, Moodle. Windows server, Linux Server, Cent OS Server, Free BSD Server, Ubuntu Server, Mac OSX 10.4., Microsoft PowerPoint, Adobe Presenter 7, and Adobe Captivate 5, website of Voice Thread, Scrapbook, Lino, and Facebook. Moreover, most users were generally as student, employee, blind and deaf. However, Thailand still be received the contact project from IT volunteer oversea.

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