

A COMPARATIVE STUDY OF STUDENTS' SELF-EFFICACY FOR THE USE OF EDUCATIONAL TECHNOLOGY ACCORDING TO THEIR DEMOGRAPHICS IN THE MBA FAST TRACK PROGRAM AT THE GRADUATE SCHOOL OF BUSINESS, ASSUMPTION UNIVERSITY OF THAILAND

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Abstract: This study aimed to identify and compare students' self-efficacy for the use of educational technology according to their demographics of 215 students from semester 1/2015, 2/2015 and 3/2015 in the MBA Fast Track Program at the Graduate School of Business, Assumption University of Thailand. The study was conducted in academic year 2015. The study used quantitative and comparative research methodologies. This study had three objectives. The first objective was to identify the students' demographics, the second objective was to identify students' self-efficacy for the use of educational technology and the third objective was to compare students' self-efficacy for the use of educational technology according to their demographics in the MBA Fast Track Program. The researcher used a questionnaire survey based on Bandura's Self-efficacy theory to address students' self-efficacy for the use of Educational Technology to the MBA Fast Track Program's students at the Graduate School of Business, Assumption University of Thailand. This research concluded that there were no significant differences of students' self-efficacy for the use of educational according to their demographics in the MBA Fast Track Program at the Graduate School of Business, Assumption University of Thailand.

Keywords: Students' Self-Efficacy, Educational Technology, The MBA Fast Track Program, Assumption University of Thailand.

Introduction

Technology became vital part of the education in modern history. Education shaped Technology and rapid changes in Technology shaped Education alternatively for the past decades. Technology advancement and the enhancement of computing power ignited enormous learning capabilities for newer generations, their teaching and learning styles. The technology has been part of the education in almost aspect and seen as an engine to change in higher education context (Jiamton & Sills, 2005). The

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fundamental, as well as the most important step to accomplish any important task in our life is to have the sense of confidence and the belief in our capabilities, which is known as Self-efficacy. Self-efficacy, which is originally derived from Social Cognitive Theory, and introduced by Bandura. Self-efficacy is the presence of confidence in self-competence in order to accomplish the tasks (Bandura, 2001). Every individual has different self-efficacy in education and academic achievement in terms of different demographic factors such as age, race, sex, socioeconomic and political situation. According to Bandura (2001), self-efficacy and motivation could be similar in theory because they both can determine the behavior of individuals. The researcher was interested to identify and compare students' self-efficacy for the use of educational technology according to their demographics in the MBA Fast Track Program at the Graduate School of Business, Assumption University as the contribution to Assumption University and learning societies.

Objectives

The following objectives were considered for the study.

1. To identify students' demographics: 1) age, 2) gender and 3) nationality in the MBA Fast Track Program at the Graduate School of Business, Assumption University of Thailand. To identify students' oral interaction achievement of group B students.
2. To identify students' self-efficacy for the use of educational technology: 1) general, 2) Internet, email, search engine, library website, LMS, CMS and social networks, 3) word processing, 4) PowerPoint and other authoring tools, 5) Spreadsheet and statistical software and 6) mobile and cloud computing technology in the MBA Fast Track Program at the Graduate School of Business, Assumption University of Thailand.
3. To compare students' self-efficacy for the use of educational technology according to their demographics for each educational technology category in the MBA Fast Track Program at the Graduate School of Business, Assumption University of Thailand.

Literature Review

Bandura's Self-efficacy Theory

The fundamental as well as the most important step to accomplish any important task in our life is to have the sense of confidence and the belief in our capabilities. This is known as self-efficacy, which was initially introduced by Bandura, 1977. Students who gained high self-efficacy showed higher persistence in accomplishing the given tasks compared to those with low self-efficacy (Bandura & Schunk, 1981). The similar finding was also achieved by Schunk, 1981, students with high self-efficacy put longer constant effort and received outstanding results of challenging arithmetic problems opposed to those with low self-efficacy. Moreover, the study explained that the students' abilities did not affect their level of achievement whereas their lack of self-efficacy caused the poor achievement (Collins, 1982). This finding is further supported by the study of Bouffard-Bouchard, 1990, which found that students with high self-efficacy performed better in solving the problems, improved the quality of

problem-solving strategies than those with equivalent cognitive abilities and low self-efficacy. Self-efficacy and motivation are said to be similar in theory because they both can determine the behavior of individuals (Bandura, 2001).

Four Main Effective Ways of Self-efficacy

Self-efficacy can be acquired from four main effective ways such as attaining through mastery experiences; vicarious experiences provided by social models, social persuasion and reducing people's stress reactions and alter their negative emotional proclivities and misinterpretations of their physical states (Bandura, 1994). Among these, the first as well as the most important model applies learning from one's own life experience of ups and downs and building the confidence after overcoming the difficulties with sustained efforts. The second model indicates that the learners construct their self-efficacy comparing with the others 'achievements who share the similarities. The model of social persuasion means that individuals earn self-efficacy by getting direct and indirect encouragement from their influential people to be able to believe in their capabilities. The last model implies that individuals acknowledge their status of self-efficacy by self-analyzing the physical manifestations happened during performing the challenging tasks.

The Effects of Higher Self-efficacy and Lower Self-efficacy

A significant number of educational research have also been performed on the association among self-efficacy beliefs, motivation and learning. Students who gained high self-efficacy showed higher persistence in accomplishing the given tasks compared to those with low self-efficacy (Bandura & Schunk, 1981). The similar finding was also achieved by Schunk, 1981, students with high self-efficacy put longer constant effort and received outstanding results of challenging arithmetic problems opposed to those with low self-efficacy. Another study investigated on students' mathematic ability also obtained the positive correlation between high self-efficacy and ability and accuracy in solving the difficult mathematic problems (Collins, 1982). Moreover, the study explained that the students' abilities did not affect their level of achievement whereas their lack of self-efficacy caused the poor achievement (Collins, 1982).

Self-efficacy for Using Education

Self-efficacy of students also receives interest in improving their academic achievements. Schunk and his colleagues assessed the students with severe academic problems to find out the cause, solution and to monitor their achievements. The direct measures such as giving knowledge about strategies and training failed to improve the students' achievements. In contrast, an applied strategy which targeted to develop the self-efficacy of the students improved their achievements (Schunk & Rice, 1989). Other various researches also pointed out the positive correlation between self-efficacy and academic achievements of undergraduate and postgraduate college students (Galyon, Blondin, Yaw, Nalls & Williams 2012; Klomegah, 2007; Lane & Lane, 2001; Richardson, Abraham & Bond, 2012). High sense of self-regulatory efficacy enhanced task performance efficacy that motivated further self-regulation to pursuit of further academic attainment (Lynch, 2013).

Intrinsic and Extrinsic Motivation

Self-efficacy and motivation are said to be similar in theory because they both can determine the behavior of individuals (Bandura, 2001). Students with higher self-efficacy and motivations have higher interests in improving their academic achievements. The feelings of competence are required to be followed by a sense of autonomy in order to improve the intrinsic motivation (Ryan & Deci, 2000). Positive performance feedback has a direct correlation with intrinsic motivation (Deci, 1971; Harackiewicz, 1979) opposed to the effect of negative performance feedback (Vallerand & Reid, 1984). External material reward (Deci, 1971) as well as immaterial factors which limit the autonomy of individuals including deadlines (Amabile, DeJong & Lepper, 1976), orders (Koestner, Ryan, Bernieri & Holt, 1984), and competitive situation (Reeve & Deci, 1996) reduced the intrinsic motivation. On the contrary, people likely to reflect higher intrinsic motivation resulted from perceived autonomy when they are provided with choices and self-determination (Zuckerman et al, 1978). Classrooms are suggested to support behavioral regulations for the students to feel connected with teachers, sense of effectiveness and act independently so that they will become more self-determined (Ryan & Deci, 2000). Motivation was a key internal force which encouraged students to achieve their targeted goals (Li & Lynch, 2016). For example, some students have their own targeted educational status, lifestyle and living style for their lives.

Self-efficacy of Demographics for the Use of Educational Technology

Compare to the male students, female students expressed the lower self-efficacy in computing and marketing subjects but higher self-efficacy in statistics. The consistent finding was published in a recent meta-analysis of 187 studies on gender difference regarding to academic self-efficacy (Huang, 2013). In addition, generally males have better computer self-efficacy than females (Torkzadeh & Koufteros, 1994). The study also showed and supported the facts of lower level of self-efficacy in computer had lesser use than those who had high self-efficacy (Noiwan, Piyawat & Norcio, 2005). Another similar research conducted to 197 college students at Stephen F. Austin State University (mid-size Texas public university), Texas, United States of America for computer technology literacy showed high self-efficacy in computer file management, word processing, presentation but lower self-efficacy in Spreadsheet (Dufrene, Clipson & Wilson, 2010). Yang (2012) stated that male students showed greater interest in using mobile devices for learning purpose but female students indicated mobile devices for entertainment purpose only. Students have also developed self-efficacy in using computers if they had the chance to learn computer subject in their high school and university (Askar & Umay, 2001). Even though, Thai schools had students' achievements in core subject areas in ICT education but all were below the international average (OBEC, 2007; Klainin & Soydhurum, 2004; Klainin, 2007).

Educational Technology

Education and Technology have a symbiotic relationship, they enhance each other. Technology became being a part of education as teaching and learning tools. Educational technology means the effective use of technology as a tool in teaching and learning environments (Wikipedia, 2016). Educational technology not only

includes using technology: hardware such as computer, projector, printer, camera, TV and software such as computer software or mobile applications but also it includes the designing of the process of teaching and learning. It helps in creating and organizing learning environments with the use of technological tools to plan, design and evaluate curriculums (Dahiya, 2005). Educational Technology intrinsically motivated and encouraged students to involve actively in learning activities such as presenting their understanding and ideas from studies (Kearsley & Shneiderman, 1999).

ICT, Information and Communication Technology

21st Century teaching and learning for skills is essential to meet the demands of internationally developed competitive education system all over the world. Use of ICT, Information and Communication Technology is a vital part of teachers and students to accomplish the development of 21st Century Skills including collaborative approach, which will ensure social interactions to achieve learning outcomes (Partnership for 21st Century Skills, 2011). Information Technology in education is defined as perfect tool for educational needs and problem solving (Ball & Levey, 2008; Roblyer, 2006). ICT curriculums such as using computer and managing files, word processing, PowerPoint, Spreadsheet, database, programming courses were introduced in secondary school level nowadays.

Educational Technology in the MBA Fast Track Program

MBA classes in Assumption University are traditional typed classrooms but well equipped with modernized and advanced teaching equipment such as computers, slide film projectors, screen projectors, high-speed cable and wireless Internet connections. MBA students use their personal laptops for reading lecturer notes, writing assignments and searching articles as learning activities in their current learning context. Students and lecturers use software and application such as word processor, Spreadsheet, web browser, image and graphic editing software such as Photoshop, mobile software such as Skype and Line. Generally, MBA students used Internet, search engine and library website as learning purpose and email as the main communication channel among peer students and lecturers.

Historical Background of Assumption University of Thailand

Assumption University is one of the international universities in Thailand in terms of offering degree programs, success in academic and recognized for its academic excellence in countries such as U.S, UK, Australia, France, Germany, Poland, Netherlands, China, India, South Korea, Japan, among others. Assumption University's history can be traced back to its origin in 1969 when Brother of St. Gabriel, a worldwide catholic religious established ACC, Assumption Commercial College as an autonomous higher education institution under the name of Assumption School of Business in Bangkok. After getting approval of the Ministry of the Education in 1972, they official name the college as Assumption Business Administration College (or) ABAC. The college was accredited in 1975 and granted a new status as "Assumption University" by the Ministry of University Affairs in 1990. Assumption University is well known for its purpose of serving the nation by

providing scientific and humanistic knowledge, particularly in the business education and management science through research and interdisciplinary approaches (Graduate Studies Prospectus, 2012).

The Graduate School of Business

The Graduate School of Business (GSB) was established in 1985, at the initiative of Rev. Brother Martin Prathip Komolmas who followed the recommendations of a detailed feasibility study carried out by De La Salle University, Manila, Philippine. The Graduate School of Business is well known for providing the most valuable and effective programs for today businesses' needs. The Graduate School of Business is offering not only MBA programs but also Ph.D. level programs such as Ph.D. in Organization Development and Ph.D. in Hospitality and Tourism Management (Graduate Studies Prospectus, 2012). The Graduate School of Business's mission goes to International level by making alliance gateway for the exchange of knowledge and expertise in business development with other universities in worldwide. The Graduate School of Business cooperates with its partner universities through the joint programs with London South Bank University, U.K., University of Exeter, U.K., and University of Wollongong, Australia. The Graduate School of Business produced more than 6,000 graduates in Business and Management roles in Thai society and elsewhere in the world for its 25 years of running (Graduate Studies Prospectus, 2012).

The MBA Fast Track Program

The Graduate School of Business designated some of its MBA programs to make ease of studies or faster for graduation for its students. The MBA Fast Track Program is one-and-a-half-year trimester program and students have to obtain total numbers of 48 credits with minimum GPA of at least 3.0. Students have to pass comprehensive exams and written exams as graduation requirements. Classes opened only in weekends and the program is designated for working people. The classrooms are located in Assumption University's Huamak campus and City campus. It is one of the most popular programs for the students who want to make their carrier success during and after their studies. The program encourages students to socialize with other students to build extended networks in various kinds of business sectors to be fruitful. It makes an exciting learning experience and an equally rewarding social life for the students of MBA program at Assumption University of Thailand (Graduate School of Business, 2016).

Conceptual Framework

A conceptual framework was formulated as follows:

(See Figure 1 on the next page)

Procedures

Instrumentation

The research used questionnaire survey to identify and compare to address the research objectives. The questionnaire consisted of two parts. The first part was

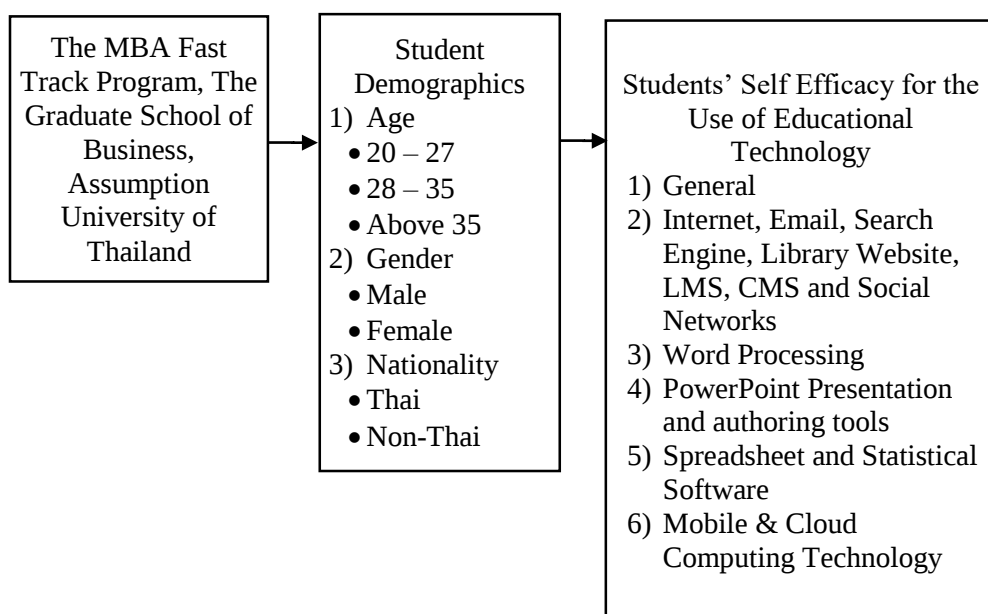


Figure 1: Conceptual Framework of This Study

students' demographics: age, gender and nationality. The second part of questionnaire consisted of 50 statements in 6 different categories and each statement uses rating scales equating to 5 levels of responses: very low confidence, low confidence, moderate confidence, high confidence and very high confidence as five (5)-point Likert scales and its scale interpretation.

Population Sample

The target population sample was 215 students from semester 1/2105, 2/2015 and 3/2015 of the MBA Fast Track Program in academic year 2015 at the Graduate School of Business, Assumption University of Thailand.

Findings

Based on the research objectives and analyzed data from instrument, this study had the following findings:

Students' Demographics

The research findings for students' demographics: age showed 148 (68.8%) students were age between 20 – 27, 63 students (29.3%) were age between 28 – 35 and 4 (1.9%) students were age above 35, whereas 78 (36.3%) were male students and 137 (63.7%) were female students, whereas 185 (86.0%) were Thai students and 30 (14.0%) were Non-Thai students in the MBA Fast Track Program at the Graduate School of Business, Assumption University of Thailand.

Table 1: The Details of Respondents by Age (n = 215)

Age	Number	Percentage
20 - 27	148	68.8
28 - 35	63	29.3
Above 35	4	1.9
Total	215	100

Table 2: The Details of Respondents by Gender (n = 215)

Gender	Number	Percentage
Male	78	36.3
Female	137	63.7
Total	215	100.0

Table 3: The Details of Respondents by Nationality (n = 215)

Nationality	Number	Percentage
Thai	185	86.0
Non-Thai	30	14.0
Total	215	100.0

Students' Self-efficacy for the Use of Educational Technology

Students had high confidence or high self-efficacy for the use of educational technology in the MBA Fast Track Program at the Graduate School of Business, Assumption University of Thailand.

Table 4: Mean and Standard Deviation of Students' Self-efficacy for the Use of Educational Technology in the MBA Fast Track Program (n = 215)

Self-efficacy Types	M	S.D.	Interpretation
• Educational Technology: Overall	3.87	.48	High Confidence
• Educational Technology: General	3.87	.48	High Confidence
• Educational Technology: Internet, email, search engine, library website, LMS, CMS and social networks	3.86	.53	High Confidence
• Educational Technology: word processing	3.90	.64	High Confidence
• Educational Technology: PowerPoint and other authoring tools	3.88	.66	High Confidence
• Educational Technology: Spreadsheet and statistical software	3.76	.70	High Confidence
• Educational Technology: mobile and cloud computing technology	3.92	.63	High Confidence

Comparison of Students' Self-efficacy for the Use of Educational Technology According to Their Demographic

The findings of data analysis of students' self-efficacy for the use of educational technology according to their demographics in the MBA Fast Track Program showed the probability significant value was .365 in age, the Sig. (2-tailed) value was .190 in

gender, the Sig. (2-tailed) value was .913 in nationality and all were bigger than .05 level of significance. The data analysis of students' self-efficacy for the use of educational technology according to their demographics for six different educational technologies were also bigger than .05 level of significance. Therefore, there were no significant differences of students' self-efficacy for the use of educational technology according to their demographics in the MBA Fast Track Program at the Graduate School of Business, Assumption University of Thailand.

Table 5: Comparison of Students' Self-efficacy for the Use of Educational Technology According to Their Age in the MBA Fast Track Program (n = 215)

Age	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.469	2	.234	1.012	.365
Within Groups	49.081	212	.232		
Total	49.550	214			

Table 6: Comparison of Students' Self-efficacy for the Use of Educational Technology According to Their Gender in the MBA Fast Track Program (n = 215)

Gender	N	M	S.D.	t	Sig. (2-tailed)
Male	78	3.93	.49	1.316	.190
Female	137	3.84	.47		
Total	215				

Table 7: Comparison of Students' Self-efficacy for the Use of Educational Technology According to Their Nationality in the MBA Fast Track Program (n = 215)

Gender	N	M	S.D.	t	Sig. (2-tailed)
Thai	185	3.87	.47	.109	.913
Non-Thai	30	3.88	.51		
Total	215				

Discussion

Majority of the students were age between 20 to 27 because they had their own personal reasons such as job requirements, demands from their targeted jobs, for their job promotions in current companies or organizations, to work in foreign companies, for further or future studies in abroad, for their personalities and social status in societies and other personal factors according to personal communication, conversations and interviews with respondents during questionnaire distribution. The same personal reasons were also found in age between 28 – 35 and age above 35 in the MBA Fast Track Program. There were more female students than male students in the MBA Fast Track Program because Thai societies have social competitive approaches for social status and achievements as their own intrinsic and extrinsic motivations. Motivation was a key internal force which encouraged students to achieve their targeted goals (Li & Lynch, 2016). High sense of self-regulatory efficacy enhanced task performance efficacy that motivated further self-regulation to pursuit of further academic attainment (Lynch, 2013). Some female students were keen to go abroad for further studies i.e. Ph.D. and to work in abroad after finishing

the current MBA program according to personal conversation and interview during the questionnaire distribution. The research findings for nationality showed that one out of six students in the MBA Fast Track Program were Non-Thai students. Non-Thai nationality students were from China, France, U.S, India, Myanmar (Burma), Bangladesh and Belgium. Non-Thai nationality students from far west were exchange program students. Majority of non-Thai students were Chinese students. There were also several reasons why there were Chinese students studied in Assumption University because Thailand became the hub of ASEAN countries and Thailand had economic ties with global economic power China for export and import products, several investments, joint ventures in SMEs, tourism business and also Assumption University had offshore campuses in China for further studies in Thailand for international and Chinese programs.

Students had high confidence or high self-efficacy for the use of educational technology for overall and each educational technology category. There were no age differences in finding. The researcher personally assumed that the newer generation had earlier access to the blooming of new technologies such as smart phones, mobile apps and high-speed Internet access than older generations even though they had chances to access at the same time but it adhered to Cooper's statement of using technology in early age had higher self-efficacy. There well no gender difference in findings as well because the several studies in the past stated that the gender gap was closing on computer self-efficacy (Sam, Othman, & Nordin, 2005). There were no nationality differences between Thai students and Non-Thai students in this study even though several studies claimed Thai students were below the international average in ICT education (OBEC, 2007; Klainin & Soydhurum, 2004; Klainin, 2007).

The reasons that there were no significant differences of students' self-efficacy for the use of educational technology according to their demographics in the MBA Fast Track Program because newer generation had faster access for information and communication than previous generations. ICT education were introduced much early than before for the past ten years. Common ICT courses were introduced in secondary level education, which were normally introduced in upper secondary level in the past. The researcher personally assumed that the newer generation had earlier access to the blooming of new technologies such as smart phones, mobile apps and high-speed Internet access than older generations even though they had chances to access at the same time but it adhered to Cooper's statement of using technology in early age had higher self-efficacy. The researcher personally assumed that, regardless of gender, ICT education and the use of computer and mobile devices became much easier than before with even lesser cognitive skills. Also, female students had the abilities of performing all components of educational technological tools and ICT education which was comparable to their opposite gender's capacity. The researcher personally further speculated that the reason of the absence of significant differences of students' self-efficacy for the use of educational technology according to their nationality in the MBA Fast Track Program was most of the students studied their primary, secondary and high school educations in international schools and many of them obtained their Bachelor degrees in Assumption University as ABAC Alumni and came for this MBA program as further study to improve their education. They

studied their ICT education at the same levels and the same standards as international schools and universities.

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