LEARNING STYLES AND ATTITUDE TOWARDS E-LEARNING AMONG UNIVERSITY UNDERGRADUATE STUDENTS IN INTERNATIONAL PROGRAM IN BANGKOK THAILAND

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Abstract: The purpose of this study is to investigate the relationship between learning style in terms of instructional preference, social interaction, information processing and personality in e-learning in terms of visual, auditory and tactile; and attitude towards e-learning among undergraduate students in international program in Bangkok Thailand. A total of 300 respondents participated in a demographic questionnaire survey using the Learning Style Scale, Learning Style Inventory-Likert and E-learning Acceptance Scale for data collection. Regression Analysis was utilized to analyze the collected data. The result of the study finds that there is a relationship between learning styles and attitude towards e-learning among undergraduate university students in international programs in Bangkok Thailand in terms of instructional preference, information processing as well as visual and tactile personality style.

Keywords: E-learning, instructional preference, social interaction, information processing, visual, auditory, tactile.

Introduction

E-learning is the use of telecommunication technology to acquire and deliver learning in training and education. It is currently emerging as a new paradigm in modern education. Thus, the use of e-learning in education has presented advantages for educators and learners. It liberates them from the limitations of space and time constrains and provides digital communication where learners are at liberty to use and access educational materials and resources anytime and anywhere they are (Sun, Tsai, Finger, Chen and Dowming, 2008). With the emergence of technology and the global speed of communication, e-learning has been widely used to pursue a higher demand in education advancement. The use of E-learning in the classrooms provides the students with flexible communication system and a faster way to communicate with other educators, students, as well as access to useful information from around the world. In their study, Dhiman, Saha and Mondal (2014) stated that the three main system of e-learning are to improve access to training and education, to enhance the quality of teaching and learning. They also added that by the acquired knowledge, e-learning provides a strategic opportunity so that institutions will be able to advance to a new field of education. Also e-learning base networking promotes knowledge sharing which improves learning efficiency, further learning innovations, as well as develops the core competitiveness in groups (Dhiman et al., 2014). However, previous studies not only acclaimed the benefits of e-learning but also noted the deficiencies that exist and added that students drop out and non-completion of e-learning programs still needs to be addressed.

Research Objectives

The objectives of this research are as follows:

1. Determine the relationship between learning styles in terms of instructional preference, social interaction and information processing and attitude towards e-learning among undergraduate student in international programs in Bangkok Thailand.
2. Determine the relationship between personality in learning styles in terms of visual, auditory and tactile; and attitude towards e-learning among undergraduate student in international programs in Bangkok Thailand.

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Conceptual Framework

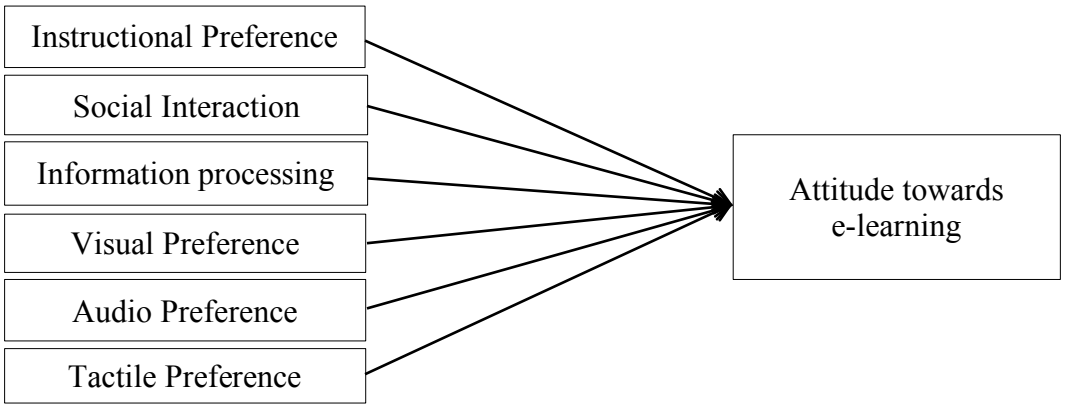

Figure 1. Conceptual Framework

Method

This study is a quantitative research which used inferential and descriptive data analysis to obtain the research data. The data was acquired from 300 undergraduate students from two selected universities in international programs in Bangkok Thailand of which 96 are males and 204 are females. The survey was in a form of demographic questionnaire using a convenient sampling which includes (1) demographic profile (2) Learning Style Scale (3) Learning style inventory Likert Scale (4) E-learning Acceptance Scale to measure the hypothesized relationship between learning style and attitude towards e-learning among undergraduate students in international programs in Bangkok Thailand.

Findings

Respondents Demographic Profile

The current study was conducted to 300 students of whom 96 (32%) are male and 204 (68%) are female. Their age ranges from 18-26 years old which shows a mean age of 16.1 years (medial =20 years). Their education level ranges from 1st year-4th year which out of 300 hundred students 5% (n=15) are 1st years, 4.7% (n=14) are 2nd years, 55% (n=165) are 3rd years and 35.5% (n=106) are 4th years. In terms of faculty 41% (n=123) are from the faculty of business, 33.3% (n=100) are from the faculty of marketing and 25.7% (n=77) are from other faculty. Moreover, in terms of time spend online for academic purposes, 54.7% (n=164) spend 0-7 hours online, 27% (n=81) spend 8-14 hours online, 10.7% (n=32) spend 15-21 hours online, 5.7% (n=17) spend 22-29 hours online and 2% (n=6) spend 20 hours and above online.

Reliability of the scales employed

The factor of instructional preference is represented by 9 items, social interaction 4 items, information processing 8 items, visual personality 8 items, auditory personality 8 items and lastly, tactile personality 8 items. The computed Cronbach's Alpha of six scales is satisfactorily ranging from .61-.80 (instructional preference .80, social interaction .71, information processing .87, visual .61, auditory .67 and tactile .71).

Regression Analysis

The result of the current study shows that .568 of Information Processing correlates with attitude towards e-learning. Information processing accounted for 32% of attitude towards e-learning. Moreover, 32.3% of the additional entry of information processing accounted for the variance of attitude towards e-learning. The entry of information processing $f(1, 298)=141.91$, $p=.00$ resulted in a significant amount of variance accounted for in attitude towards e-learning. Also .601 of Visual correlates with attitude towards e-learning and visual accounted for 35.7 % of attitude towards e-learning. Furthermore, 3.9% of the additional entry of visual accounted for the variance of attitude

towards e-learning. The entry of visual f (2,297) =84.07, p=.00 resulted in the significant amount of variance accounted for in attitude towards e-learning. Result of the study further shows that .623 of Instructional Preference correlates with attitude towards e-learning as well as it for 38.2 % of attitude towards e-learning. Also 2.6 % of the additional entry of Instructional Preference accounted for the variance of attitude towards e-learning. The entry of Instructional Preference f (3,296) =62.50, p=.00 resulted in the significant amount of variance accounted for in attitude towards e-learning. Likewise, .632 of Tactile correlates with attitude towards e-learning. It also accounted for 39.2 % of attitude towards e-learning. In addition, 1.2 % of the additional entry of Tactile account for the variance of attitude towards e-learning. The entry of Tactile f (4, 295) =49.18, p=.00 resulted in a significant amount of variance accounted for in attitude towards e-learning. Finally the predictor model that contains Information Processing, Visual, Instructional preference and Tactile is a significant prediction model.

Regression Analysis for hypothesis testing

The result of the study indicated that there is a positive relationship between learning style in terms of Information Processing (beta=.568), t=11.9, p=.00 and students attitude towards e-learning. The model predicts that the more the students' shows information processing in their learning style their attitude towards e-learning is positive. Also the result shows that there is a positive relationship between Visual (beta=.222), t=4.3, p=.00 and students attitude towards e-learning. The model predicts that the more students show visual in terms of personality in learning style, their attitude towards e-learning is positive. Findings of the study also shows that there is a positive relationship between Instructional Preference (beta=.223), t=3.6, p=.00 and students attitude towards e-learning. The model predicts that the more students show Instructional Preference in their learning style their attitude towards e-learning is positive. Finally, the result of the current study finds that there is a positive relationship between Tactile (beta=.121), t=2.4, p=.01 and students attitude towards e-learning. The model predicts that the more the students show Tactile in terms of personality in e-learning, their attitude towards e-learning is positive.

Discussion of Findings

The findings of the current study indicated that the factor of 'social interaction' was rated above the midpoint on its scale while factors of 'instructional preference' and information processing were rated below the midpoint on its scale. Thus overall, the students were more likely to prefer social interaction in using the e-learning system while they prefer 'instructional preference' and 'information processing' to a lesser degree in their use of the e-learning system. These findings reveal the learning style preference of undergraduate in university students in international programs in Bangkok Thailand to prefer 'social interaction' rather than 'instructional preference' and 'information processing' in their use of e-learning. The finding of the current study that students' prefer 'social interaction' in their use of e-learning system is consistent with the study of (Langley, 20017; Williams & Duray 2006) which they stated that the reason why students doesn't engaged in an e-learning program is because of the lack of social interaction and thus students who learn in groups and have more online interaction tends to have a positive learning experience in their use of the e-learning system. They added that factors such as isolation and the lack of group support in an online environment have a significant effect on the students' attitude towards participating in e-learning activities. Several studies also suggested that to enhance learning in an e-learning system, an online environment where students can share knowledge and support should be provided and frequent communication between students and instructors is encourage to decrease isolation which affects students' performance and learning efficiency (e.g., Kreijns et. Al., 2003; Paechter et. Al., 2009; Sabah, 2013). Furthermore Al Qudah & Cristea (2013); Baird &Fisher (2005) suggested that e-learning providers adapt a social e-learning called Topolor to enhance social interaction in an e-learning environment which facilitates chats, discussion boards, commenting and tagging tools to integrate interaction in the online learning community. However, the present study shows an interesting findings where students rated 'instructional preference' and information processing' rate below the midpoint. These findings contradicted the study of Brown et. Al., (2007) which suggested that 'instructional preference' and 'information processing' are significant factors in students learning style preference which they adapted for hypermedia. The difference in the current finding may be attributed to the cultural differences in academic customs and educational

practices of the students. The result of the present study also revealed that students rated visual, auditory and tactile personality in learning style above the midpoint. These findings are consistent with the study of Samson and Karagiannidis (2002) which they stated that personalized learning in a technological and educational stand point is essential in order to deliver knowledge and experience in the e-learning system. Their study further emphasized that when learning experiences are tailored to the different perspective, skill level, culture and other educational context students' are more likely to gain efficient learning in an online environment.

Regression Analysis

Result of the regression analysis indicated that for the undergraduate university students in international programs in Bangkok Thailand, information processing, visual, and tactile learning style preference has a significant relationship on their attitude towards e-learning. These findings means that the more they show information processing, visual, and tactile in their learning style preference, their attitude towards e-learning is positive. This study is supported by previous study which revealed that students learning preference varies and they benefit from the learning experience if they are able to choose what is relevant and useful for them (Carmona 20017). Particularly, studies found that students will engaged in an e-learning system if the internet will present a system that better understands the student learning preference. These findings are also consistent with Prosser and Smith (1998), Biggs (2003), Ramsden (2003) and Sandler & Smith (2004) that instructional preference influenced students' use of e-learning. Moreover, the relationship between personality in learning style in terms of visual, auditory is coherent with the study of Mustafa and Mohamed Sharif (2011) that students shows better learning performance in the use of the e-learning system where instructions and activities are design to their individual needs in terms of visual, auditory and tactile. Personalization of e-learning system can be done by using media attributes through text, visual, auditory and tactile values. However, the findings of the current study found that there is no relationship between learning styles in terms of social interaction and students attitude towards e-learning. This finding contradicts the study of Brown et al. (2005) where they stated that social interaction is one of the important factors which influenced students' attitude toward e-learning. It contradicts their finding where they stated that students' isolation is one of the reasons why students' doesn't engage in an e-learning system. Current study also reveals that there is no relationship between auditory personality in terms of learning style and student attitude towards e-learning which contradicts the argument that auditory is one of the factors that results to e-learning success (Samson and Karagiannidis, 2002; Mustafa and Mohamed Sharif, 2011). Possible reasons for these differences in the finding may due to academic and cultural background of university undergraduate students in international programs in Bangkok Thailand.

Recommendations and avenues for future research

It is without a doubt that e-learning is the future trend in education. More and more institutions will adapt the system to provide accessible education to individuals all over the world. However, with the rise of technology in education, is it also evident that new challenges will arise, particularly emotional and learning issues which may affect the academic success of the students. Thus, the current study finds number of suggestions and avenues for future research. First, findings of the current investigation suggest that the study be replicated and be tested to a wider group of respondents in Thailand and other regions in Asia which includes a demographic consisting of students from other faculties, Thai and international universities and from other universities in Asia in order to test the psychometric properties of the scale used in the current study. It is also recommended that more research be conducted on an Asian perspective given into account the psychosocial aspects and learning style of Asian students, academic culture and their attitude towards e-learning. Second, it is suggested that future research investigates the causal implications of the variables since the current study only investigated the relationship of the key variables. Third, researchers interested in the same study may replicate it with other sample groups such as those individual who are home schooled, younger students or wider demographics. Lastly, the research questions were given in English and some students may have only provided and tick the answer without reading or understanding the questions which may not truly reflect their responses. Nevertheless, it was ensured that by informing the respondents on its confidentiality and by explaining the questions that they didn't understand mitigated possible problems that may affect the result of this study.

Conclusion and Implications

The growth of e-learning as an academic tool to enhance learning prompted this research to investigate the relationship between learning styles in terms of instructional preference, social interaction, information processing and personality in learning styles in terms of visual, auditory and tactile and attitude towards e-learning. The current study concludes that there is a relationship between learning styles in terms of information processing and instructional preference and students' attitude towards e-learning. It means that that more the students' shows information processing and instructional preference in their use of the e-learning system, their attitude towards is positive. The current study also concluded that there is a positive relationship between personality in learning style in terms of visual and tactile and students attitude towards e-learning. This means that the more the students experience visual and tactile values in their use of the e-learning system, their attitude towards it is positive. Overall, it cannot be over emphasized that the current study was able to accomplish its objectives and its contribution to the understanding of what influence students attitude towards e-learning. The implication of the current findings suggested that for undergraduate students in international programs in Bangkok Thailand, instructional preference, information processing, visual and tactile learning style preference influenced their attitude towards using the e-learning system. In regards to these implications it is suggested that e-learning providers, school administrators and teachers provides personalize e-learning system to provide students with various learning modules to fit their learning style which encourage student engagement in the system. It is also suggested to identify different learning styles so that mental support can be provided and help students develop individual learning skills and be responsible for their own learning process. The current study also implicated that in order to cope with the technical advancement in educational trends e-learning provider, teachers and school counselors should put more importance in considering a student centered an e-learning system that caters to the individual difference in students' learning styles to foster efficient learning and engagement.

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