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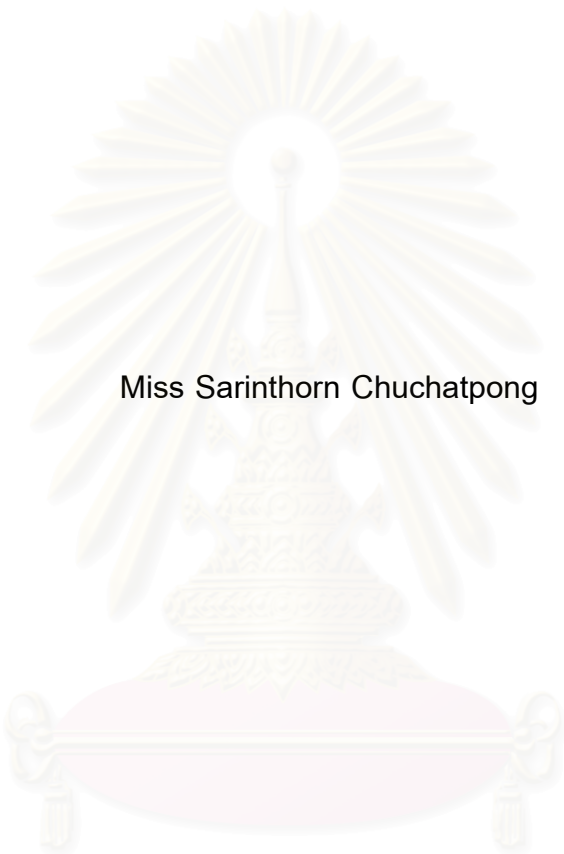
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MEDIA EQUATION AND E-LEARNING IN THE THAI CULTURAL CONTEXT



Miss Sarinthorn Chuchatpong

A thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Arts Program in Journalism

Department of Journalism
Faculty of Communication Arts

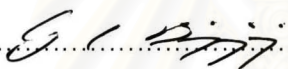
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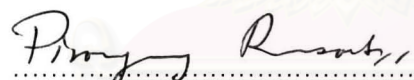
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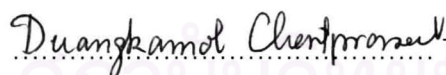
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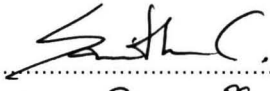
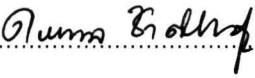
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การใช้อินเทอร์เน็ตอย่างแพร่หลายในยุคปัจจุบันเป็นผลมาจากการเจริญเติบโตของเทคโนโลยีสารสนเทศ ซึ่งอาจกล่าวได้ว่ามีผลกระทบโดยตรงต่อระบบการศึกษาทั่วโลก เพราะได้มีการนำการเรียนการสอนผ่านสื่อออนไลน์มาใช้กันอย่างแพร่หลายในสถานที่ที่มีเครือข่ายอินเทอร์เน็ตเชื่อมโยงไปถึง ระบบการศึกษาในประเทศไทยก็เช่นกัน ได้รับการเรียนการสอนในระบบนี้จากประเทศตะวันตกมาใช้ในมหาวิทยาลัยเพื่อกระจายความรู้ไปสู่ภูมิภาคมากขึ้น อีกทั้งยังเป็นการลดค่าใช้จ่ายประหยัดเวลา และเพิ่มความสะดวกสบายให้แก่ผู้เรียน

เนื่องจากประเทศไทยมีขนบธรรมเนียมประเพณีที่แตกต่างจากประเทศตะวันตกเป็นอย่างมาก การนำระบบการเรียนการสอนที่รับมาจากต่างประเทศมาใช้นั้น จำเป็นจะต้องผ่านการพิจารณาข้อดีและข้อเสีย รวมทั้งผลกระทบว่าเหมาะสมกับวัฒนธรรมและความเชื่อของคนไทยที่มีมาดั้งเดิมหรือไม่ เพื่อให้การเรียนในระบบนี้มีประสิทธิภาพสูงสุดต่อผู้เรียนทางไกลในประเทศไทย

ในการศึกษาครั้งนี้ ผู้ทำวิจัยได้เลือกตัวแปรสองตัว คือ ความเคารพและความน่าเชื่อถือ ที่ผู้เรียนทางไกลมีต่อเทคโนโลยีในฐานะครูตามระดับ มาวัดเปรียบเทียบกับความรู้สึกของนักเรียนที่เรียนกับครูจริงๆในห้องเรียน โดยเก็บข้อมูลจากการตอบแบบสอบถามของนักเรียนจำนวน 451 คน และการสัมภาษณ์เชิงลึกกับนักเรียนจำนวน 20 คน จากห้ามหาวิทยาลัยที่สอนผ่านสื่อออนไลน์

จากผลการวิจัย สรุปได้ว่า ผู้เรียนทางไกลมีความรู้สึกแตกต่างเมื่อเรียนกับครูผ่านสื่อ เพราะกระบวนการคิดในเรื่องความเคารพและความน่าเชื่อถือของคนนั้น ไม่ได้เป็นไปโดยอัตโนมัติ แต่ต้องอาศัยการพิจารณาอย่างละเอียดรอบคอบ ในการศึกษานี้ เทคโนโลยีสารสนเทศและวัฒนธรรมไทยเป็นปัจจัยที่ทำให้คนไทยเกิดความรู้สึกถูกแทรกแซง เพราะความสัมพันธ์ของครูกับนักเรียนที่เปลี่ยนไป ดังนั้น การเรียนผ่านสื่อออนไลน์ในประเทศไทย จำเป็นต้องมีการปรับปรุงให้เข้ากับวัฒนธรรมไทย เพื่อให้การเรียนการสอนมีประสิทธิภาพมากขึ้น โดยการจัดให้มีการผสมผสานกันระหว่างการเรียนผ่านสื่อออนไลน์และการเรียนกับครูจริงๆในห้องเรียน

ภาควิชา.....วารสารสนเทศ.....ลายมือชื่อนิสิต.....
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Since the Internet usage has dramatically increased due to the continuous development in Information Technology (IT), it impacts on the educational system around the world as the utilization of e-learning has then become more popular. E-learning has also been used in the Thai educational system because of its convenience. However, due to the fact that Thai culture is much different from western culture, the use of e-learning must be taken into account whether or not it fits in the Thai cultural context, and that it provides effective learning method to online students compared with in-class study.

In this research, respect and reliability were selected to be intervening variables that might alter the feeling of Thai students towards their teachers (three different types of e-teacher). The survey and in-depth interview were conducted with 451 and 20 students, respectively, from five universities in Thailand, where offer the e-learning program.

The result showed that Thai students' feelings towards different types of e-teacher and the real teacher were significant because respect and reliability were not an automatic process in human's brain, but it was required judgment from people to evaluate whether or not they would pay respect to and rely on other people. In this study, IT interference was the factor that deteriorated the relationship between teachers and students, and the seniority system in Thai culture. Therefore, the solution to enhance learning effectiveness is to combine both e-learning and sit-in class into one course.

Department.....Communication Arts..... Student's signature.....

Field of study.....Journalism..... Advisor's signature.....

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CHAPTER 1

INTRODUCTION AND BACKGROUND

The educational system around the world has been impacted by the rapidly increasing usage of the Internet access. According to the recent research of Imamoglu (2007), it was found that lifetime learning has become unavoidable for everybody as a consequence of the dramatic change of technology regarding knowledge creation. E-learning is an available option in the current educational revolution that is taking students from the old style of learning like sitting in class to the modern digital age. TechTarget (2000) defined that e-learning is an anywhere and anytime instruction delivered over the Internet to online learners. There are two primary models of e-learning, which are synchronous (teacher-facilitated) and asynchronous (self-directed, self-paced). As can be seen, this learning alternative substantially provides convenience for its students.

Having a closer look at the teaching and learning system in today's world, e-learning or sometimes, distance learning, distance education, online learning, online training, etc., has become more and more popular owing to its ease, self-pace, and cost-effectiveness. As e-learning is considerably much less expensive to support and unconstrained by geographic considerations, it offers opportunities in situations where traditional education has difficulties operating. Students with scheduling and/or distance problems can benefit from this learning approach because it is more flexible in terms of time and can be delivered virtually anywhere. In accordance with e-learning's characteristics, it is described as a formalized educational system specifically designed to be carried out remotely by using electronic communication (TechTarget, 2004). Since e-learning is directly relevant with online communication, the utilization of communication technology must therefore be significantly taken into consideration.

Since this study will be done in Thailand, it is also necessary to know some background of communication technology focusing on e-learning in Thailand as well as the

traditional Thai culture so that this knowledge will fulfill the research and help achieving the research objectives successfully.

E-learning has recently been developed in Thailand according to the master plan for the Ministry of Information and Communication Technology (ICT) use in education for the years 2004 – 2006. There are four major strategies, which has been implemented as listed below:

1. The use of ICT to improve teaching and learning
2. The use of ICT to enhance the educational management and service effectiveness
3. The personnel training and developing
4. ICT equipment provision and distribution for all educational levels

As the development of the Thai education has been foreseen by the government, the vision to generate, disseminate, and use of digital information among its citizens to the betterment of the country was paid attention to. It is believed that the distance education will help insufficient learning efficiency in the nation (Suktrisul, 2004).

“The totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought” is a primary definition of culture written in the American Heritage Dictionary (1992). Every culture has its own identity, and so does Thai culture. It certainly has uniqueness and difference comparing to other cultures, particularly the traditional manners of Thai people (e.g. to pay respect, to obey older people, to be afraid of criticizing directly to others, and so forth). Thus, it is important to analyze the correlation between communication technology, and teachers and students' interaction to see whether or not Information Technology (IT) has changed the relationship between teachers and students, and has determined seniority in the Thai culture. The result from this study can be used accordingly to evaluate whether or not e-learning is an effective method of learning in the Thai environment and lifestyle. To know how people perceive the equation

between human-beings and computer, and the level of students' satisfaction in studying with e-teacher and with real teachers through the medium associated with the Thai cultural context, the researcher needs to understand how the Thai culture is as the first priority.

It is noticeable that communication technology has permeated our professional and personal lives as a common mode of communication for people no matter where they are (Simon, 2006). Since new technology has a vast impact on people particularly in the educational system all over the world, it is such an interesting topic for psychologists to study how real people treat new media technology while learning through computers, and even how real people treat other people using computers as a medium for education. Earlier, there was always an assumption that people communicate differently towards computers from direct individual interaction. However, the assumption was proved to be false by the study of Reeves and Nass, the two theorists from the Communication Department at Stanford University, who originated and developed the idea of the Media Equation.

The **Media Equation** is the product of a collaboration that began in 1986 when Reeve and Nass arrived in the Department of Communication at Stanford University and started working together on the integration of media topics. It is defined as “the proposition that we respond unconsciously and automatically to electronic media as if they were humans” (Lamoureux, 2004). No matter what kind of medium human interfaces, they will not be cautious that they are facing with objects but real people and places. In other words, people interact with the media in the same way as do with other people. As communication technology has been vitally involved in numerous everyday activities including the teaching and learning, it is important to understand the relation between the media and the real life because some people might be get confused easily for several of reasons such as lack of experience, low education, computer illiteracy, age, and thought.

The objectives and advantages of studying the Media Equation need to be addressed clearly in order to point out the correct direction through this study. There are

three major advantages, which are considered to be a vitally important criterion for creating effective communication technology for e-learning to meet communication goals. Initially, studying the communication technology equation will be of assistance in acknowledging whether or not the e-learning system is an appropriate communication tool for Thai people. Secondly, knowledge acquired can be used to assist in improving the design of the e-learning program in order to properly fit the current Thai educational system. For example, the e-learning developer might need to be able to answer questions, such as which functions and features training software should have and when they should be used to effectively support learning activities. Additionally, the understanding of the communication technology equation can help evaluating new media, especially from the perspective of psychological point of view, which makes us realize how e-learning students think and feel about using this educational system in Thailand as a communication tool to study without transporting to schools or universities.

However, there is a concern still that the feature of communication technology might affect media as the matter of fact that the main purpose of the Internet is to connect people together but it is embarrassing to state that using the Internet in everyday life demands people to be isolated from their friends and group activities. This dysfunctional feature eventually influences social behavior and drives people towards isolation; as a result, it will be a benefit if the understanding of whether or not e-learning students satisfy to study through the online access and are able to learn without any difficulties can be discovered. Lastly, the realization of effectiveness of virtual learning style in the Thai cultural context, which provides a fast and convenient way of education in everyday life compared with the old traditional style study such as sitting in class.

Yet, there are only a few researches that address the distinction between online learning and in-class lecture, which might result in different interactions depending on the perception of Thai students. Some psychological facets, such as accountability, reliability, respect, trust, fear, and so on, might be a factor that varies communication success in learning. Hence, it is challenging to theorize disagreement between the media equation of

Reeve and Nass, who examined more than 30 studies and got the consistent responses that have led to the media equation – media equal real life (Reeve and Nass, 1996) and the previous studies regarding the virtual community of Rheingold (1993), who blamed for the loss of real in online communication:

“People who use computers to communicate, form friendships that sometimes form the basis of communities, but you have to be careful to not mistake the tool for the task and think that just writing words on a screen is the same thing as real community”.

As the research of Rheingold stated above, it sounds controversy to the finding of Reeve and Nass that explains people will interact unconsciously with the computer in the same way as do with other people. It is therefore meaningful to extend the research on media and its social roles (specialists and source orientation) in e-learning. Teachers, instructors, or lecturers in this study are referred to the e-learning content, which is in the form of software packages or online curriculums. The finding is supposed to result in a dissimilar learning outcome compared with in-class. Thus, to reach the research goals and objectives fruitfully, the following questions need to be clarified:

Research Questions

RQ1: Do Thai students pay respect to e-teacher as if he/she is a real human?

RQ2: Do Thai students believe in reliability of e-teacher as if he/she is a real human?

RQ3: Do Thai students believe that e-learning is an effective method of learning?

RQ4: Do Thai students prefer studying with a teacher through the real-time long distance classroom (synchronous media) to doing self-study with e-teacher (asynchronous media)?

CHAPTER 2

LITERATURE REVIEW

Although there were a lot of researchers interested in studying new technologies of communication in the education system, only a few researches have been analyzed and experimented on the different factors that make online learners feel differently while interacting with the teacher during the learning session, particularly in the Thai education. The limitation of the previous study arises due to the fact that most of the researches were focused on the pros and cons of the e-learning system, and sometimes compared with an actual class at school or university only. Nevertheless, these studies were not discussed among other elements that were formed in students' perception during classes, which might cause such different learning results. So, what could be the intervening variables in this matter? The answer is however flexible and can be too broad but in this case, the relationship between students and teachers (i.e. reliability and respect), are then selected to determine the academic situations occurred during the development of the online interaction in the Thai cultural context.

Moreover, although there were empirical researches done in examining many facets of relationships between students and teachers, there unfortunately has not been a research conducted to support the idea that culture, especially the Thai culture, which has its own identity strongly, has a great impact on an effectiveness of the learning process as well as the perception of students towards their instructors in respect. Due to the fact that online learning has become more popular in Thailand today, this finding will thus be useful for psychologists, communication theorists, educationists, and technological professionals in better understanding the feelings of Thai students towards new technologies of communication and potential factors that may vary communication effectiveness in education.

This study consequently proposes the significance of the Media Equation theory as well as other two major factors, which are considered to potentially create deviations of

human interaction in online communication in the Thai educational system owing to culture differences. The theme of the research leads to the interest of how learners interact with media focusing on their thoughts towards different types of teachers in the respect and reliability perspectives in Thai culture. The comparison of the preference between studying with a teacher via the real-time video conference (synchronous media) and with the e-teacher (asynchronous media) will also be described. It is beneficial if the perception of online students can be used to improve the design of communication technological software and evaluate whether or not e-learning is real just like in-class study that will fit the future technologically educational system in Thailand.

The highly relevant topics related to psychology, technology, communication, and education, have been selected to support and utilize in this research, which will be explained in this chapter later as the factors that might impact on the communication technology equation as well as the distinction of social roles in human interaction through e-learning in the Thai cultural context, are seriously needed to observe and investigate. In addition to previous studies review, key terms associated with this research will be identified in the following section.

Key Terms

1. *Asynchronous media* is defined as a secondary media, which transcribe communication to recording media because communication must pass through a secondary medium that is called an indirect medium (Chan, 2005).
2. *Computer Literates* are people who understand a computer and its related systems. It includes a working vocabulary of computer and information system components, the fundamental principles of computer processing, and a perspective for how non-technical people interact with technical people (PC Magazine, 2006).

3. *Computer Mediate Learning* (CML) is a method of learning communication of merit and worthy of support, which uses computers linked to a central server, by either a Local Area Network (LAN) or modems, to deliver education asynchronously (Prendergast, 2000).
4. *Culture* is described in the American Heritage Dictionary (1992) as patterns, traits, and products that are the expression of a particular period, class, community, or population with respect to a particular category such as a field and subject, or mode of expression.
5. *Electronic Mail* (E-mail) is one of the most useful elements of the Internet that has been used for a long time since 1960s. It has turned out to be a natural use of networked communication technology that was developed along with the evolution of the Internet (Crocker, 1996).
6. *E-teacher* is defined as an online teacher, who educates people through media, and considered to have the nine “E”s characteristics that are experience, engagement, efficiency and effectiveness, expansion, exploration, evaluation, enabler, extension, and end-user as described by NECTEC Open Source e-Learning System (1994).
7. *Information Technology* (IT) refers to anything related to computing technology, namely networking, hardware, software, the Internet, or people who work with these technologies (TechTerms, 2006).
8. *Media Equation* comes from a research project that is called “Social Responses to Communication Technologies”. In short, it was found that individuals’ interactions with computers, television, and new media are fundamentally social and natural, just like interactions in real life. Everyone expects media to obey a wide range of social and natural rules. All these rules come from world of interpersonal interaction, and from studies about how people interact with the real world, but all of them apply equally well to media (Reeves and Nass, 1996).

9. *Social class* refers to the hierarchical distinctions between individuals or groups in societies or cultures, which varies widely from one society to another. Even within the same society, different people or groups may have very different opinions about what makes one high or low in the hierarchy. The most basic class distinction is identified by age, gender, and other physical elements, but as societies expand and become more complicated, economic power, such as career, education, income, and wealth, will often replace physical power as the defender of the class status quo (Wikipedia, 2007).
10. *Synchronous media* is identified as a communication that participants must be available at the same time providing a sense of co-presence even if they are physically far from each other (Donath, 2004).
11. *User Interfaces* (UI) design is utilized in many technological innovations to elevate their technical complexity to usable products. Technology alone may not overcome user acceptance, but how the user experiences the end product, is actually the key to acceptance. This is where UI Design enters the design process. When applied to computer software, UI design is also known as HCI (Usernomics, 1995).

E-Learning

As the importance of the Internet is increasing greatly over many decades, its use has an impact significantly on the educational system around the world as well. With the dramatic change of traditional practices, technologies, communication, and skills in relation with knowledge creation and dissemination, lifetime learning has become inevitable for everyone (Imamoglu, 2007). An online learning is an alternative way in the current educational revolution that is taking students from a print to a digitized culture. E-learning is defined as a mechanism of becoming literate involving online communication, which is characterized by technological transformation, speed, and mediated human interactions (Arunpibool, 2006). This is a promising choice that delivers knowledge to educate huge numbers of people over gigantic locations without the boundaries of time and place.

The technological advances have created awareness and demand among the Internet users regarding the online classroom environment; whereas usage has pushed providers to produce further development. According to Sherron and Boettcher (1997), it can be described that these advances have generated four generations of e-learning (Table 1).

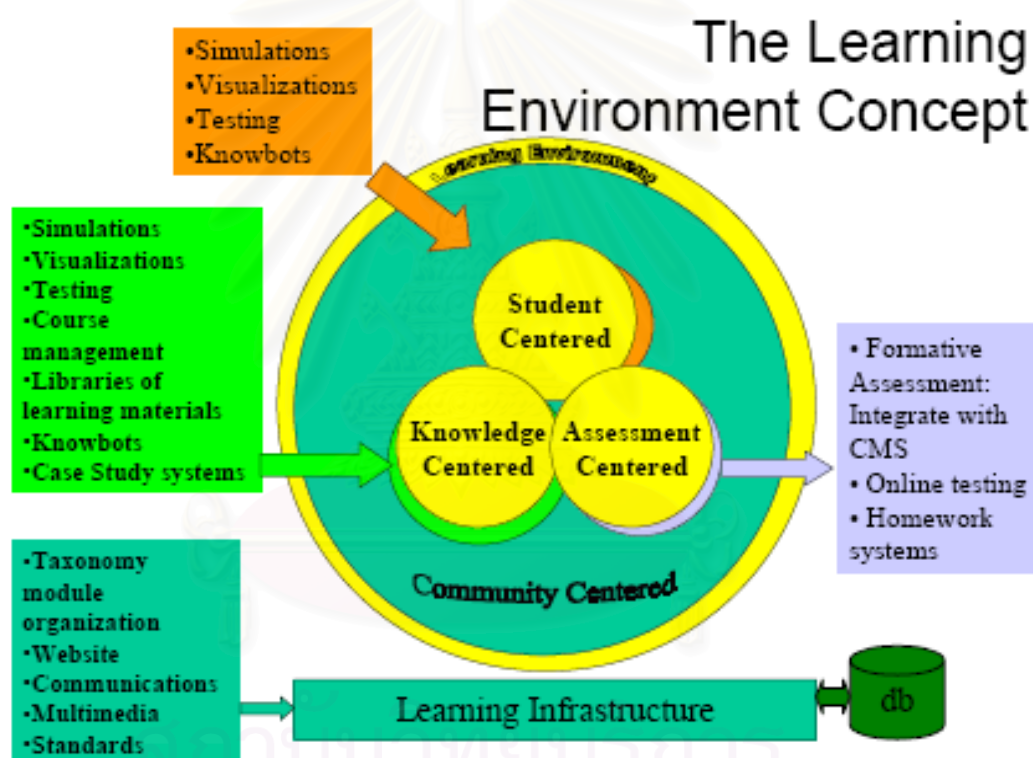
Table 1: Generations of Distance Education Technologies

	1st Generation	2nd Generation	3rd Generation	4th Generation
Primary Feature	Predominantly one technology	Multiple technologies without computers	Multiple technologies including computers and computer networking	Multiple technologies including the beginning of high-bandwidth computer technologies
Timeframe	1850s to 1960	1960 to 1985	1985 to 1995	1995 to 2005
Media	<ol style="list-style-type: none"> 1. Print (1890+) 2. Radio (1930s) 3. Television (1950s & 1960s) 	<ol style="list-style-type: none"> 1. Audiocassettes 2. Television 3. Videocassettes 4. Fax 5. Print 	<ol style="list-style-type: none"> 1. E-mail, chat sessions, and bulletin boards using computers and networks 2. Computer programs and resources packaged on CDs and the Internet 3. Audio conferencing 4. Seminar and large-room videoconferencing via terrestrial, satellite, cable, and phone technologies 5. Fax 6. Print 	<ol style="list-style-type: none"> 1. E-mail, chat sessions, and bulletin boards using computers and networks plus high-bandwidth transmission for individualized, customized, and live video interactive learning experiences 2. Computer programs and resources packaged on CDs and the Internet 3. Audio conferencing 4. Desktop videoconferencing via terrestrial, satellite, cable, and phone technologies 5. Fax 6. Print
Communication Features	<ul style="list-style-type: none"> - Primarily one-way communication - Interaction between faculty and student by telephone and mail - Occasionally supplemented by onsite facilitators and student mentors 	<ul style="list-style-type: none"> - Primarily one-way communication - Interaction between faculty and student by telephone, fax, and mail - Occasionally supplemented by face-to-face meetings 	<ul style="list-style-type: none"> - Significant broadband communication from faculty to students via print, computer programs, and videoconferencing - Two-way interactive capabilities enabling asynchronous and synchronous communication between faculty and students - Internet good for text, graphics, and video scraps 	<ul style="list-style-type: none"> - Two-way interactive real-time capabilities of audio and video - Asynchronous and synchronous communication between faculty and students and among students - Full 30-frame-per-second digital video transmission with databases of content resources available via the Internet and WWW - Lengthy digital video programming available on demand

(Sherron and Boettcher, 1997)

According to Wade (1997), although the term “virtual university” is becoming widely used around the world to refer to the online institution, there is as yet no standard definition of it. However, it is recognized as an e-learning provider and established to decrease complexity as well as the complicated procedure of content presentations. Additionally, the feature of e-learning supports the learning control system of students. Consequently, the use of IT in education has brought up in relation with the learning environment concept.

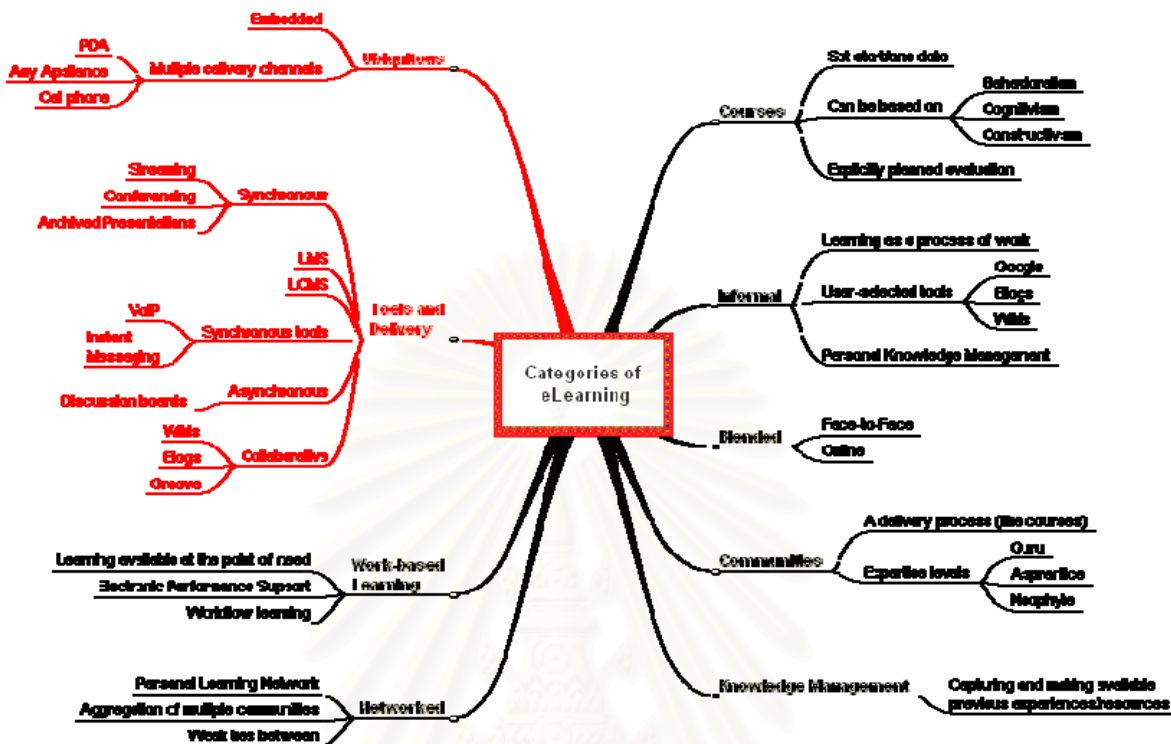
Figure 1: The Concept of Applied Technology for Online Learning Environment



(Innovation Policy Center, 2001)

The categories of e-learning varies depending on the learning objectives as demonstrated in the following figure; nevertheless, two common forms of e-learning at virtual university in Thailand, which include multimedia and online classroom, are referred to in this study.

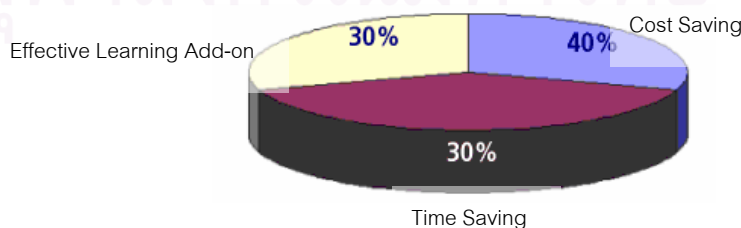
Figure 2: Categories of E-Learning



(Siemens, 2004)

Looking into the online learning system closely, it creates many changes in such a way that no one may think of. A research done in Thailand found that online students were satisfied with online learning system because it reduced learning time consumption for more than 50% and was less expensive compared with the traditional classroom for 30-60%. The 30% of sampling also indicated that this learning methodology could add-on effectiveness of learning process.

Figure 3: Advantages of E-learning in Thailand



(KU Magazine, 2001).

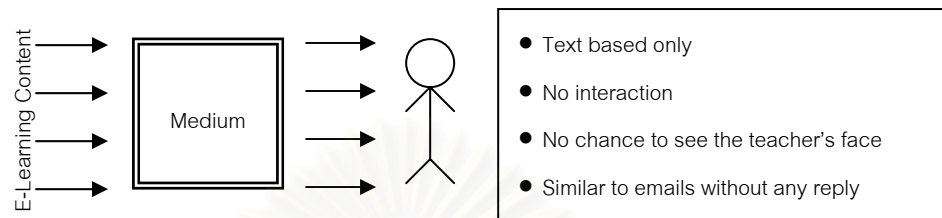
The Thai educational system run by the government see the significance of online learning, and then bring e-learning methodology to adapt for the nation academy. Since 2004 after the master plan had issued from MICT, the continuous growth of the e-learning market in Thailand has drawn a lot of discussion about the effectiveness of virtual learning environments. The initial emphasis of e-learning research in the context of IT skills was a primary concern to be relevant. The finding showed that the success of the e-learning program may require users to be equipped with a certain degree of computer self-efficacy and affect for information systems (Hayashi et al., 2004). As can be seen, computer literacy is one of the most critical factors to make the e-learning system succeed; despite, another issue does needs to be scrutinized because online students in Thailand might perceive e-learning in another way owing to their cultural differences.

Commonly, Thai students pay respect and rely on their teachers as in Thai culture, the teacher is known as a representative of moral goodness (Denevey, 2005). For example, students will usually respect their instructors by showing good manners toward them, and believe in what lecturers teach and say according to source credibility. These two elements are naturally noticeable in the traditional classroom in the Thai educational system. However, since new communication technology has become more powerful, it leads to the increasing importance of e-learning, which makes the style of learning change. Will this new means of study affect the way Thai students feel toward their teachers? Will the Media Equation theory be able to explain that students interact with computers in the same way as real lecturers do? Finally, will e-learning be considered an appropriate learning method for Thai people? These questions have subsequently led to the assumptions stated at the end of this chapter.

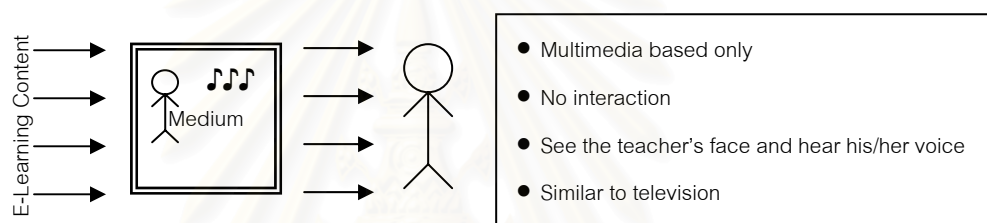
In this research, the degree of the e-learning program will be divided into four levels – e-book, audio/video, the real-time long distance classroom, and the actual classroom – to show differences of students' thought towards each kind of e-learning as depicted in the diagram below.

Figure 4: Different Types of E-learning

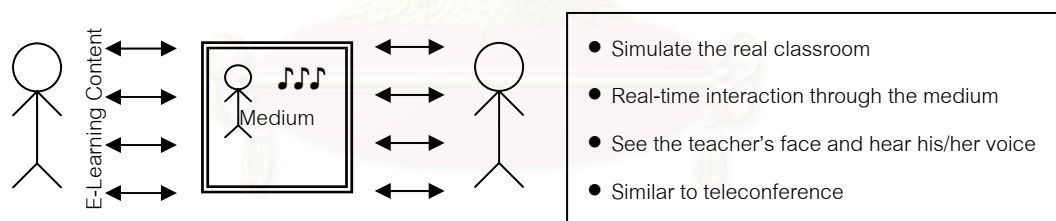
Asynchronous Media



Asynchronous Media



Synchronous Media



Relationship between Teachers and Students in the Thai Cultural Context

In the real world, presentations via media in any form have a huge impact on the message receiver. For instance, even though the plot and characters in the movie are fabricated, the underlying attitudes and messages are not because they communicate cultural values, which shape the way people think and the way people interact (Media Awareness Network, 2007). This principle is heavily relevant to the learning system in Thailand, particularly the e-learning system because different form of media can vary

effectiveness of learning result in many ways. Learning with teacher through real-time video conference classroom in another location can affect efficiency of learning process, and this does apply with studying via e-learning software or e-book also.

In Thailand, a teacher is considered to be not only an academic transmitter, but also someone, who students and other people can rely on because he/she must have been trained to be capable to educate, build spiritual growth, and help others with kindness, mercy, and generosity. There is a well-recognized analogy in Thai stated that *teachers are the lighter*, and must consist of these major characteristics to be recognized as a good teacher (Intrakumhaeng, 2006).

1. Mercy
2. True Friend
3. Honest
4. Patience
5. Sacrifice
6. Role Model

The roles and responsibilities of teachers in the Thai culture are highly expected and needs acceptance from others. These characteristics account for being a reliable teacher but in real life, gaining creditability from people as a great teacher is absolutely difficult. Nonetheless, it is even harder to create creditability and have others acknowledging the goodness of any particular teacher, especially in online communication. As a result, the *reliability* – media and social role as a source orientation, is selected to be one of the intervening variables, which may cause the effectiveness of e-learning changes.

In psychological point of view, information on the Internet is less reliable because anyone can be a message provider, which reduces the quality as well as credibility of source (Alexander and Tate, 1999; Flanagin and Metzger, 2000; Johnson and Kaye, 1998). Particularly, the form of interactions through online communication without facial expression

and body language makes communicators hesitate to rely on one another (Wantanapreeda, 2004). Consequently, online students might think differently towards their instructors in the Thai culture context.

When talking about effective learning, comfort, concentration, knowledge gained, and performance of students are often related to one another. It is because students can concentrate better on lessons when they feel comfortable to learn something. According to Amartayakul's research (1999), he explained these relationships that students can acquire knowledge better when they are in a good mood and comfortable because their brain wave is low. That means they can also gain knowledge more, and it consequently results in a good performance in the examination. As a result, these elements have been chosen to test participants in the reliability aspect regarding the effective learning in this study.

The second dependent variable is *respect* – media and social role as a specialist. According to Dillon's philosophy (2007), it has been said that respect has great influence in daily life in relation to the social class. Children are taught to respect their parents, teachers, and elders, school rules, traffic laws, family and cultural traditions, others' feelings and rights, country's flag and leaders, others' differing opinions, and so forth. The respecifier is always a person, who has a conscious rational capability of recognizing and acknowledging people or things that deserved to be respected, of responding intentionally to them, of having and expressing values with regard to them, and of being accountable for disrespecting or failing to respect them. Wood (1999) explained additionally that people respect something because they recognized that they had to respect it. For example, in the case of teachers and students, students usually pay respect to their teachers because of their expertise as well as professional recognition. This concept also involves the understanding of deontology throughout lifetime experience that ones must pay attention and respond appropriately (Birch, 1993).

In addition, gratitude and respect are things that have been engaged with Thai people for ages. According to the speech of Luangpor Mahasermchai (1998), he expressed

that one of the best merits was to pay respect to people who deserved this respectfulness, such as parents, missionary, pilgrim, senior, and teacher. Since the majority of Thai people are Buddhists, it is believed that people, who follow this principle, will live a better life and become successful eventually. Most of Thai people consequently have been practicing Thai respectful behaviors (e.g. Wai – greeting, Krab – respecting, Thon Sai Bua – curtseying, Kum Nub – saluting, etc.) due to this traditional belief.

Another sub-category of respect that has been selected is penalization. Fear is the basic emotion, which happens with everybody naturally, and considered to be the first instinct (Saksri, 1987). Social environment at school additionally has an impact on students due to the fact that the teacher, who is too strict, can make students scared. For example, when the teacher asks students a question, they are afraid to being penalized because they cannot provide a correct answer. Furthermore, if the teacher is considered to be a serious teacher, students will probably do their homework and submit on time as they do not want to get penalized from the cruel teacher. Penalization may then be a factor that deviates the feeling of online students as they do not have to meet with the teacher face-to-face.

Moreover, obeying elders and being afraid of interruption are considered to be a good manner in Thai culture. Children will taught to believe in what elders say because they have experiences and know trail and error. Also, people who do not want others feel annoyed or uncomfortable, such as asking questions during the conversation, waking other people up while sleeping, and asking for money from others, are recognized as having a good behavior according to Royal Thai Navy Magazine (2004). Acquiescence and interruption are then selected to examine the respect aspect of Thai students. Since the seniority system in Thailand has been affected on Thai people for ages, it is important to scrutinize these five factors, namely respect, gratitude, penalization, acquiescence, and interruption, whether or not it will alternate students' attitude when they study through synchronous and asynchronous media.

Computer Mediated Communication

The Computer Mediated Communication (CMC) theory is defined as a process of human communication via computers, including computer network communication on the Internet and the WWW according to the study of December (2000); whereas Herring (1996:1) proposes that “CMC is communication that takes place between human beings via the instrumentality of computers. In other words, it relies on technology to mediate messages (December, 1997) and requires access to a computer and the Internet. CMC primarily focuses on social effects of different computer-supported communication technologies (Wikipedia, 2006). Nevertheless, in practice, CMC is typically concerned more specifically within human interpersonal communication on the Internet as well as the Web, and it may be surprising to say that how much CMC theory actually connects with day-to-day communication and things around the world (Thurlow, Lengel and Tomic, 2004).

According to Turoff's experience, he postulates that CMC consists of several characteristics, which can be listed below (Turoff, 1997):

- A. Reading, Writing, and Drawing
- B. Asynchronous and Synchronous
- C. Group Memory
- D. Organization, Filtering
- E. Group Structure
- F. Human Roles
- G. Activities
- H. Coordination Modes and Protocol
- I. Collaboration Tools

Having a close look at the characteristics of CMC is very important; nevertheless, the CMC character in an interesting sense that is related to this research is asynchronous and synchronous, which represents the two-dimension between time and space of Computer Mediated Learning (CML).

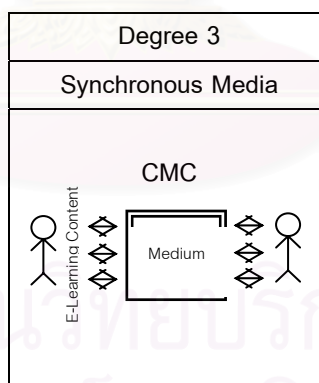
Table 2: The two-dimension of CML

		Time	
		same	difference
place	same	Synchronous / Proximate	Share physical workplace
	difference	Synchronous / Disperse	Asynchronous / Disperse

(Benbynan-Fich and Hiltz, 1999)

Nevertheless, the selected representation of CMC in this study is the teacher conducted the lesson via the real-time video conference classroom. It can be said that this type of media is required two-way communication and considered to be a synchronous medium. The degree of CMC is set to the level 3 in this research as there is still a social presence, which will be discussed later in this chapter, but there is a medium in between the teacher and students as shown in the figure 5 below.

Figure 5: A Degree of Synchronous Media



There were several findings demonstrated that different place and time classroom could not affect the learning process and students' satisfaction (Alavi, et al., 1997; LaRose, Gregg, and Eastin, 1998). However, the opposite results were found contradictorily in students' perception toward e-learning (Drennan, et al, 2005; Shneiderman, et al., 1995; Yu, et al., 2002). Thus, further investigation on this research will contribute thoughtful prospective of e-learning in the Thai cultural context definitely.

In the context of instructional communication, saying the Internet has a great impact on education is understatement still as CMC is a crucial theory to understand how the whole process of learning is changing across educational functions. Due to the fact that technology has revolutionized the way students learn as well as the way teachers teach today, the main educational functions of CMC can then be categorized below:

- A. Communicate: conversing with co-learners, instructors, and experts
- B. Collaborate: engaging in team-learning projects, co-authoring, and designing texts together
- C. Create: using new learning tools, and finding new ways to preserve history and culture
- D. Collect: researching data, resources, and reading materials
- E. Critique: assessing the value of what we discover and its relevance to our purpose

(Thurlow, Lengel and Tomic, 2004: 221)

The Internet have helped students and instructors stay in touch as can be seen that one way communication for online education is now becoming more interactive via the development of Web-based mentoring, tutoring, and training (Katz and Rice, 2002). As a consequence, virtual learning environments are also affected by CMC because it crosses national and cultural borders, and provides opportunities for people who need to study from home.

Moreover, a lot of studies address the differences between online and offline learning but they were only a few further studies on what is actually the element of making these learning methods different as well as students' feeling towards the e-teacher – no real teacher exists during the class – in Thailand. One interesting research at Stanford University was on setting interpersonal goals as a distinguishing factor to theorize if the interaction would be changed while communicating virtually (Shechtman, 2002). Taking this into consideration, it might mean that students, who had good relationship with teachers or trusted learning sources (e-learning developed by well-known colleges or universities), were

willing to use this learning style rather than sitting in class. That is due to their strong interpersonal goals, and that they believe in the curriculum issuers and are proud of studying virtually with the prominent institute. However, another factor may also cause different interactions. For instance, students who have more intention to study and aim to complete their degree within limited time and/or budget will concentrate on their study no matter which method of learning they use. The level of students' satisfaction and the perception (respect and reliability) towards e-teacher in the form of the real-time video conference classroom, audio/video, and e-book will be described and compared to express the fit of the e-learning system in Thailand.

Before further studying the key theoretical issues associated with the Media Equation theory in the educational system in Thailand, it is necessary to understand the pros and cons of online communication as a pre-requisition because they explain noticeably why there are differences between online (e-learning) and offline (in-class) communication. As a consequence, knowledge acquired will assist in comprehending the research outcome that might have been changed or unchanged in relation with the intervening variables (respect and reliability).

To conduct social interaction virtually via synchronous media in accordance with Rheingold, online participating in a virtual community in fact provides both advantages and disadvantages (Dudman, 2006). Online communication in education brings many benefits to daily life as follows. First of all, there is more chance to share knowledge (academic journals, articles, books, etc.) online as a pool, which is much larger than any other sources, especially if those subjects are unusual or specialized ones. Moreover, students who are shy, unsocial, or have some other difficulties, such as language proficiency, pronunciation, lack of self-confidence, etc., may actually find it preferable to study the e-learning program.

However, students cannot be neglected the drawbacks of the virtual learning. Firstly, online education does not provide physical cues – facial and body expressions, eye contact, and voice intonation – which can be found heavily in face-to-face communication,

when instructors are teaching in the actual classroom. This can lead to misinterpretation easily; for example, when the content is complicated, students may not be able to understand correctly as they have no one to ask when the confusion arises. Furthermore, even though students can write an electronic mail (e-mail) to their teachers and ask a question, the delay between interactions can create variation in response (White, 2000). As a result, this disadvantage can degrade the learning effectiveness and efficiency. Finally, the anonymousness of teachers can also be an issue in e-learning due to the lack of proximity and the feel of unknown when students cannot see their teachers.

Even though there were many CMC studies conducted in the past decades due to the dramatic increase of online students around the world, continuous development and research is still needed to ascertain the full advantages of CMC in the educational system, and how it can be optimized in a varied number of different learning contexts (Wheeler, 2006). Consequently, this study will further research another aspect of CMC and fulfill the next step of CMC analysis.

Social Presence

The Social Presence is a degree to which a medium conveys the psychological presence of the message sender. In other words, it is what people psychologically perceive other people to be, which physically presents while interacting with them (Lassar and Dandapani, 2003). Furthermore, Short, William, and Christie (1976: 65) define the social presence as the "degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships". They describe social presence as a quality of the medium itself and hypothesize that communication media vary in their degree of social presence, and that these variations are important in determining the way individuals interact. The capacity of the medium to transmit information about facial expression, direction of looking, eye contact, posture, dress, and non-verbal vocal cues – all contribute to the degree of social presence of a communications medium (McIsaac and Gunawardena, 1996). For example, it is always said that eye contact and eye movements

tell a lot about a person. Although maintaining eye contact with the person to whom you are speaking is not perceived as important (or even polite) in some cultures as cultures differ in the importance they attach to eye contact (Ober, 2003:47)

However, these non-verbal cues can only be found remarkably in offline communication (in-class study), where students and teachers see each other in person. If different kinds of medium are brought to arrange an order of high level in social presence, the first rank will undoubtedly be face-to-face, followed by audio plus video, audio-only, and prints (Scott, 2001). Scott did not discuss about the degree of social presence of the real-time long distance classroom though. Since facial expressions, body movements, and eye contact increase interlocutors' motivation to interact (Rourke, Anderson, Garrison and Archer, 2001), offline communication is then considered to be high in social presence and online communication is generally low (Chidambaram and Jones, 1993).

When a social presence is lacking, communicators communicate less. That means people share their experiences and thoughts more when they perceive the social presence (VanHorn, 2005); for example, a student in class may raise his/her hand, and ask a question related to the subject that has been teaching. An in-class environment, which is rich in social presence, is then considered to encourage students participating in practical activities. Yet, with the same subject, lessons that have been conveyed in the virtual environment might later on be impacted negatively as the social presence can be a matter that alters communication process of learning. What could then be an indicator, which helps to identify the degree of social presence in the e-learning system in Thailand?

Social presence has two dimensional characteristics, which are intimacy and immediacy (Rice, 1993). Intimacy is described as a function of communicators' visual cues (Argyle and Can, 1965); whereas immediacy is defined as "those communication behaviors that enhance closeness to and nonverbal interaction with another" (Mehrabian, 1969: 203). Both characteristics are very difficult to find in online communication; hence, it can be said that the e-learning system lacks of both intimacy and immediacy. More noticeably, learning

via e-learning software offers even less social presence than real-time video conference classroom. Then, it is interesting to figure out the determining factors, which will help to support the learning of social presence in the Thai educational system. In this research, two aspects (respect and reliability) of students towards e-teacher will be taken into account, and the preference between the real-time video conference classroom and e-learning software will also be discussed.

Media Equation

The Media Equation is defined that people treat and behave towards computers in much the same way as towards other people (Goldstein, Alsio, and Werdenhoff, 2002). For example, at the party, people usually introduce themselves and talk to new friends politely. This situation happens in the real world but what if people communicate with the computer they have just seen for the first time. Do they act politely to the computer too? This query has been concluded after the collaboration of Reeves and Nass, who generated the Media Equation theory in 1986 that people treat and respond to media in just the same way as they treat and respond to other people in everyday social interaction (Dourish, 1996), and the most obvious reason, which was proved this theory to be true, is the politeness of real human towards a computer (Rattanasimakool, 1997).

Interestingly, there were a great deal of evidences demonstrate that equating media in real life applies to everyone. That means individuals' interactions with computers are fundamentally social and natural like interactions in real life. In a research project called *Social Responses to Communication Technologies*, the researchers have found that everybody expects media to obey a wide range of social and natural rules, which come from the world of interpersonal interaction as well as from studies about how people interact with the real world (Reeves and Nass, 1996).

According to Chaffee and Berger (1997), they postulate that the Media Equation is scientific in nature, which includes the criteria below:

- A. It predicts that people will treat the media (according to interpersonal theory) as they would treat a real person.
- B. It explains ways the audience is active.
- C. It is relatively simple to understand.
- D. It is internally consistent on the scientific side (one truth, determinism, value neutral).
- E. It helps organize knowledge about the action of the audience.

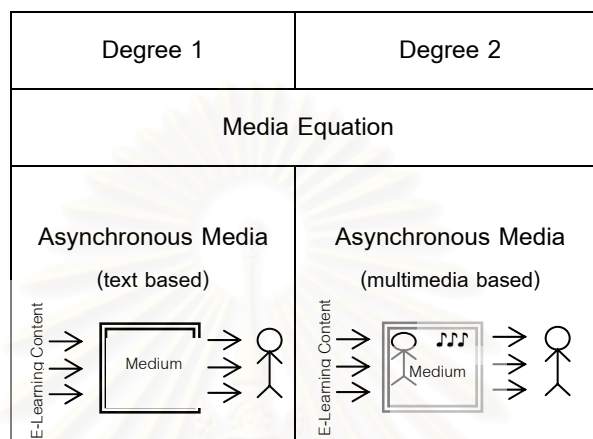
In addition, the Media Equation applies to more than just a computer but other media like television and film. People react automatically as if the movie is real. That is why so many of audiences found themselves chanting “It is only a movie, it is only a movie” when they first saw *Silence of the Lambs* (Juliano, 1996).

Another example is the situation when someone is watching a television. It is found noticeably that on the one hand, watchers will sit closer to the television, smile, and keep eye contact while watching somebody they like and admire on television. On the other hand, they will tend to walk away, make ugly facial expression, or ignore people they do not like when they are on television. This can be interpreted that the relationship including belief, trust, accountability, reliability, and the like, between senders and receivers is also a great impact on successful communication.

In this research, the intervening variables (respect and reliability) have been set to experiment if e-learning in Thailand will result in different communication outcomes regarding the academy because of the diversity in each country. The two degrees of asynchronous media have been selected to represent different levels of the proximity as well as the intimacy between teachers and students. The figure 6 illustrates that an asynchronous medium is only one-way interaction. E-book is selected in this study to represent the degree 1. Thai students will need to access to the Internet and download the e-learning content from the WWW. The second asynchronous media that have been selected to test in this research as represented the degree 2 is audio/video, which offers its

students more feeling of closeness to their teachers because students can see teachers' face and voice.

Figure 6: Two Degrees of Asynchronous Media



In the past findings, there were a number of researchers interested in further studying media and manners, which include politeness, interpersonal distance, flattery, and judging others and ourselves. For example, the experiment done in Australia showed that participants of high experience in the Internet usage displayed the pattern of results that supported the Media Equation theory by reacting to flattery from a computer in a manner congruent with people's reactions to flattery from other human-beings but the low experience ones returned the opposite result (Johnson, Gardner and Wiles, 2004).

Furthermore, this theory explains the prediction of the reason why people respond unconsciously and automatically to communication technologies as if they were human-beings (Communication Capstone, 2001). This communication style has been recognized as a new form of interpersonal communication today. In addition, Chiasson (2004: 27) claims that "people's responses to media are natural, social, and the same as responses to real-world experiences". This also includes social responses to all forms of media, such as computer, television, film, and other forms of multimedia. Nonetheless, there are some modes of interaction specific to the computer, and its social responses are considered to be a separate social actor in the interaction known as Computers As Social Actors (CASA).

Computers As Social Actors

The CASA paradigm demonstrates that people may unconsciously perceive interactive media as being intentional social agents and reading personality, beliefs, and attitudes into them, and more specifically, may act on these beliefs (Mishra, 2006). There are a lot of empirical evidences that support this idea regarding media and manners, including politeness and flattery (Nass, Moon and Carney, 1999; Fogg and Nass, 1997), and media and social roles, including gender and teammates (Alvarez-Torres, Mishra and Zhao, 2001; Nass, Moon and Green, 1997; Nass, Fogg and Moon. 1996). Each of these findings replicated the social psychology experiments and showed that people consistently respond towards the computer in the same manner as they do to others.

Social responses are natural, automatic, and subconscious. Anything that engaged in society socially is considered to be a real human for ages and it deserves social interactions in return (Barkow, Cosmides, and Tooby, 1992). This is because people have programmed themselves to react to stimuli automatically and naturally as day-to-day activities require very little focus of reaction (Bargh et al., 1992). Although people stop, concentrate, and analyze things, it can only make the social responses avoidable for just a little while because it is impossible to spotlight on every action and reaction continuously.

Several findings showed that people who were knowledgeable about the computer would treat the computer as a tool; whereas those who were deficient in understanding the computer work process would respond socially while interacting with the computer (Bench-Capon and McEnery, 1989; Campanella-Bracken, 2000). Yet, the studies of CASA demonstrated that users, who are computer literates, would treat computers as social actors. This contradiction has led to another argument addressed by Searle (1981) that social responses were actually aimed to react to the human rather than towards the computer. For example, when people do the online communication, they are usually thinking of the computer's programmer, Web developer, software designer, or the people behind the computer.

However, referring to the educational system in Thailand, CASA might give different viewpoints as a result of cultural differences. As stated earlier that the Thai culture has its own identity and uniqueness so it may make e-learning in Thailand ineffective and unsuccessful. Nonetheless, Goldstein, Alsio and Werdenhoff (2002) found that people were impolite towards small computers (PDA and smartphone), which is opposite to the postulations of the Media Equation theory owing to several reasons, such as fallacy of generalizing a context, the dichotomization of small attribute differences, and cultural differences.

Human Computer Interaction

As the popularity of computer usage has grown, the role of human computer interaction (HCI) has increased due to its importance as a key factor in designing the application (Canny, 2006). HCI is described as a “a subfield within computer science concerned with the design, evaluation, and implementation of interactive computing systems for human use and with the study of major phenomena surrounding them” according to the Dynamic Graphics Project at University of Toronto (1995); whereas Computing Dictionary (2006) defines HCI as a “study of how humans interact with computers, and how to design computer systems that are easy, quick and productive for humans to use”. From its definition, it can be said that HCI has a similar concept as the Media Equation, and support that people use the same rules while encountering with the computer similar to interacting face-to-face with human-beings, which its idea “arose as a field from intertwined roots in computer graphics, operating systems, human factors, ergonomics, industrial engineering, cognitive psychology, and the systems part of computer science” (ACM SIGCHI, 2004: 5).

HCI is always related to the design of communication technology. For instance, Baron (2006) addressed in his research that the development of User Interfaces (UI) needs validation and verification of a set of required properties, which are mostly relevant to the HCI area. Another recent finding of McCathy, Wright, Wallace and Dearden (2006: 369) also

state that “improving user experience is becoming something of a rallying call in human-computer interaction”. As can be seen in various researches, HCI seems to focus on technology per se but in fact, its significance is on the usage of IT. Due to the importance of HCI, there is recently a thought to initiate the encyclopedia of HCI so that this book can be a basic reference work for readers who need information on subjects in which they are not experts (Sukalski, 2006).

The objective of HCI is to understand the psychological and behavioral interaction between users and computer systems, machines, devices, and other kinds of electronic artifacts. Furthermore, Persson, Hook and Simsarian (2000) claimed that perhaps the major reconfiguration of HCI was because of the outburst in new functionalities and applications of IT in the world today, which are roughly listed below:

- A. Communication (Chat, News Groups, World Wide Web)
- B. Entertainment / Emotional Experience of All Kinds (Games, Multimedia, Web-Media, Music)
- C. News
- D. Services and Work Delegation (E-Commerce, Agent Technology)
- E. Art / Personal Expression (Digital and Interactive Art)
- F. Education (Multimedia)
- G. Collective Memory (Distributing Knowledge and Experiences in a Socio-Cultural Context)
- H. Identity Creation (Personal Web Pages, Anonymous Chat Environments, Digital Story Telling Environments)

Since education is an element that has been affected by the revolution of the Internet, the study of HCI regarding the Media Equation theory is important to be taken into account. To find out the interaction between students and e-teacher, and the preference of students to choose between learning with e-teacher through synchronous media and through asynchronous media is therefore necessary to reveal the factors that potentially impact on effectiveness of e-learning in Thai culture.

So why are these evidences important and relevant to this research? First and foremost, it convinces that there are also other aspects, which cannot be ignored while discussing about the Media Equation theory. As can be seen, other contexts namely, culture, personal experiences, intention, goals, technology literacy, other difficulties, and the like, can be a factor that changes human interaction in the virtual learning. This way of learning is much more complex than sitting in class and discussing with the lecturer face-to-face because non-verbal communication like facial expression (e.g. shock, smile, frown, blank, smirk, anger, fear, etc.) that implies a revelation about characteristics of an individual as well as a message about something internal to the expresser (Hager, 2003), and body language (e.g. nodding, drowsy, eye contact, posture, etc.) that is considered to communicate as effectively as words and maybe even more effectively, will at least help students to understand what the instructor is thinking about or trying to explain in the classroom. It is always said that offline communication is considered to be the simplest way of communication and the easiest approach to understand between message's sender and receiver, and that it increases communicator's satisfaction as well as quality of information (LeMay, 2006); hence, in-class learning should be more effective with regards to the above statement.

Secondly, the level of emotional engagement with the computer has risen to the point that the relationship of humans and computers can be spoken of as the computer can in fact elicit human's behaviors as well as affective responses, which accordingly, express the social responses (Strommen and Alexander, 1999). Therefore, manners and perception of humans towards the computer or teachers behind the computer during virtual communication in the e-learning system is essentially vital to be recognized.

Eventually, there has not been the study on human interaction in the virtual learning in Thailand utilizing the Thai culture as a determinant. Because Thai students normally do have their perception towards the teacher in respect and reliability (dependent variables) differently due to their custom, these two variables will be then measured in this study if they affect the learning effectiveness and the perception of Thai students towards different types

of the teacher in the Thai cultural context. In addition, it would be a beneficiary to study the psychological communication in relation to the educational system as the feeling of students towards their instructors has not much been the spotlight of many researchers in Thailand. They usually examined either only why e-learning is important to Thai educational system, what the advantages of having e-learning in Thailand are, and what helps this method of learning become successful. Thus, it is interesting to explore the utilization of online learning as well as to determine if culture will influence learning achievement in the Thai cultural context. Besides, it is a good idea to extend the research on the Media Equation theory in Thailand since there are not a number of studies regarding the psychologist's point of views.

Summary

Due to the fact that there were several researches focusing on how human-beings treat computers only after the original thought of the Media Equation theory initiated by Reeves and Nass but there have not been researchers do the further scrutiny on asynchronous media in a more specific area like e-learning in the Thai cultural context and what factors (respect and reliability) could make interactions between students and teachers result in a dissimilar way compared with interactions through synchronous media and in-class communication. As communication technology today has been continuously developed, with new tools to serve remote access and to simulate face-to-face learning as much as possible, it is crucial to clarify the pros and cons of asynchronous media to see if e-learning is applicable for Thai culture, and can be an appropriate way of learning for academy in Thailand. As a result, it is time to explore more on the Media Equation theory having a close glance at the feelings of students toward their teachers via the e-learning system (e-teacher), the preference of students to select this style of learning practically, and the comfort to learn with a teacher in another location or to learn from e-learning software package.

Research Hypotheses

H1: Thai students do not pay respect to e-teacher as if he/she is a real human.

H2: Thai students do not rely on e-teacher as if he/she is a real human.

H3: Thai students do not believe that e-learning is an effective method of learning.

H4: Thai students prefer studying with e-teacher through the real-time long distance classroom (synchronous media) to doing self-study with e-teacher (asynchronous media).



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CHAPTER 3

METHODOLOGY

In this research, the two facets of media and social roles regarding the Media Equation theory will be investigated. These factors include respect (specialist) and reliability (source orientation). In order to further explore this study and to fill the gap in understanding more of these intervening variables (respect and reliability) that might have an impact on altering e-learning result as well as its effectiveness, the pilot study is therefore created to examine the four hypotheses by means of looking into the following four different levels of the relationship between teachers and students (Figure 5).

- A. Asynchronous Media as an “*E-book*”
 - a) Text based only
 - b) No interaction
 - c) No chance to see the teacher’s face
 - d) Similar to emails without any reply

- B. Asynchronous Media as an “*Audio/Video*”
 - a) Multimedia based only
 - b) No interaction
 - c) See the teacher’s face and hear his/her voice
 - d) Similar to television

- C. Synchronous Media as a “*Teacher Taught via the Long Distance Classroom*”
 - a) Simulate the real classroom
 - b) Real-time interaction through the medium
 - c) See the teacher’s face and hear his/her voice
 - d) Similar to teleconference

D. “*Teacher Taught in the Actual Classroom*”

- a) Real classroom
- b) Real-time interaction within the class
- c) See the teacher’s face and hear his/her voice
- d) Face-to-face conversation

Participants

This case study recruited participants on a voluntary basis from five prominent universities established in Thailand, which are Chulalongkorn University, Chiang Mai University, King Mongkut’s University of Technology Thonburi, Kasem Bundit University, and Ramkhamhaeng University. These universities have provided a variety of e-learning depending on their expertise and availability, which will be described briefly below.

Chulalongkorn University (Chula Online) opens for unlimited registrars and offers five categories of the e-learning course supported by the Continuing Education Center Chulalongkorn University. These five courses include language, business, computer, mathematics, and science. This e-learning system was developed by Thais for opportunity expansion to the other region in Thailand. At Chula Online, various forms of technology, namely VCD, online audio/video, e-book, multimedia presentations, etc., have been used to teach online students. Moreover, Cultural Management Program of Graduate School, Chulalongkorn University, has offered similar teaching and learning style with CU Online that students do not have to go to the actual classroom at all time, but access to the Internet and study online through the WWW.

The IT team of *Chiang Mai University* (CMU Online) built the KC-MOODLE system, which is an integrated system that was developed from free software in the form of open source called MOODLE (Modular Object – Oriented Dynamic Learning Environment) system (Wanchaisatit, Tantipatpinyo, and Wongmitr, 2005). It provides the e-learning program in more than 20 faculties, and also utilizes this style of learning with all freshmen at the

university to study the English foundation. In addition, the e-learning course is required by the Faculty of Education to have its first-year students study Educational Technology subject. There are also free online courses granted to interested people, who do not enroll with Chiang Mai University, but they are required to do online registration prior to the study. The e-learning materials at CMU Online consist of e-books, audio/video, web board, and online assessment.

King Mongkut's University of Technology Thonburi (E-KMUTT) provides three forms of the e-learning system, which comprise of live broadcast, courseware, and live long learning. The initiative of E-KMUTT was to become e-university so that this learning system could serve its students as a center of academic resources and exchange opinions to improve and apply appropriate technology in order to receive the most effectiveness of the study and achieve the education standard in the IT world today.

Kasem Bundit University offers the e-learning course to its students in many faculties, such as Faculty of Arts, Faculty of Law, and Faculty of Engineering, for both Master and Bachelor programs. Also, it is compulsory for all freshmen to enroll the e-learning course for the English foundation subject, just like Chiang Mai University. The learning assistance at KBU includes e-book and audio/video.

Ramkhamhaeng University has established the RU E-learning Center since 2001 to enhance educational feature using IT to develop the standard of courses at the university and to provide more opportunities in education to the region via the Internet. There are several ways of learning at RU, which include e-book, cyber classroom, course on demand, e-testing, and m-learning.

Some e-learning courses at these universities are to partially fulfill the degree in several faculties across these universities and some are selective subjects, which were registered by their own decision. In other words, some students have to study the e-learning

course due to the compulsory program; however, some short courses are chosen by students' desire.

Four hundred and fifty one people, who enrolled in such courses, participated in this research to represent as online students, who have experienced in e-learning in the Thai cultural context. There were 125, 101, 50, 77, and 98 students from Chulalongkorn University, Chiang Mai University, King Mongkut's University of Technology Thonburi, Kasem Bundit University, and Ramkhamhaeng University, respectively, participated in the survey, and 7, 4, 2, 2, and 5 from Chulalongkorn University, Chiang Mai University, King Mongkut's University of Technology Thonburi, Kasem Bundit University, and Ramkhamhaeng University, respectively, participated in the in-depth interview.

There is no constraint on age, gender of participants, and the level of enrolled class, but these participants must be computer literate as this condition will decrease bias of the participants in perceiving computers as complex and inconvenient tools, and therefore, they may be bored and have bad attitude on e-learning. For example, some non-computer literates get annoyed easily when they cannot use computers and their features functionally – computers do not perform tasks appropriately as the user wishes so this problem might change the result of the pilot study because participants have initially negative thinking of using computers or being online.

Furthermore, the participants in this research were essentially born and brought up in Thailand. Thai culture is very unique, and it takes time to absorb the sense of being Thai; as a result, it is necessary to control this requirement since the researcher wants to focus on the geographical location of the case study to limit other intervening variables as there might be a factor that causes different outcomes as people are from different cultures as well as environments.

Procedure

The design of this study utilizes two types of research method, which were the survey (Appendix A) and in-depth interview (Appendix B) to find out the answer of the four research questions and to hypothesize the assumptions. With the goal of determining whether or not the intervening variables (respect and reliability) can be the elements that create attitude change towards the e-learning system in Thailand, and later on, alter the learning effectiveness, the research took place in two phases. The first phase was to distribute questionnaires to the sample group. There were three sections in this survey, including personal information, learning behaviors, and students' feelings towards the e-learning content in the form of e-book, audio/video, and the real teacher conducted in the long distance classroom as well as the actual classroom in the Thai culture context. The questions were mainly discussed on the following areas:

- A. Respect of online students regarding the Thai culture
 - 1. Gratitude
 - 2. Respect
 - 3. Penalization
 - 4. Acquiescence
 - 5. Interruption
- B. Reliability of online students regarding the effectiveness of learning
 - 6. Reliability
 - 7. Comfort
 - 8. Concentration
 - 9. Knowledge gained
 - 10. Performance

Additionally, the survey questions were scoped to focus on the four levels of learning method, which consists of the degree 1 – students learn from e-book, the degree 2 – students learn from audio/video, the degree 3 – students study with the teacher through the real-time video conference classroom, and the degree 4 – students study with the

teacher in the actual classroom in Thailand (Figure 5). The other concerned aspect is culture, which describes different degree of students' attitude that is either conservative or modern towards both the e-teacher and the teacher taught the e-learning program at their universities. The answers received from the questionnaires as well as the in-depth interview would help to understand the perception of students towards real teachers and e-teachers in various facets as earlier stated.

Prior to the survey, the two pre-test sessions were conducted to make sure that all participants would understand the questionnaire and its questions thoroughly and were able to answer without any hesitation as well as confusion. There were 25 answerers in the first round and 30 volunteers in the second round.

In the second phase, the individual interview was conducted to gather background information, and to deepen and broaden the understanding of Thai students' perception related to the e-learning program. Prior to the interview session, an informed consent form (Appendix C) has been sent and approved by the interviewees to explain the overview of the research and ask for an agreement. The 20 participants will be selected from those, who enrolled in the online learning course at the five chosen universities as listed below.

- A. Chulalongkorn University
<http://www.chulaonline.com>
- B. Chiangmai University
<http://cmuonline.cm.edu/>
- C. King Mongkut's University of Technology Thonburi
<http://eu.lib.kmutt.ac.th>
- D. Kasem Bundit University
<http://space.kbu.ac.th/el/index.asp>
- E. Ramkhamhaeng University
<http://www.ram.edu/elearning/index.php>

Although these participants had already done the questionnaire in the first phase, they were asked to introduce themselves and give some background related to their e-learning experience for about five minutes at the beginning of the interview session. They will then have to answer to the 20 questions. By means of doing this, it was expected that students would give deeper insight into their attitudes towards the four different degrees of the teacher in the Thai cultural context, and the reason why they chose to study virtually even though there was an available alternative.

The phase one of this study was implemented on February 1st, 2007 and expected to complete by February 18th, 2007. The phase two was started on February 19th, 2007 and ended on March 17th, 2007. The time constraint was set to be subject to change only if the returned surveys were delayed and there was a schedule conflict of the interviewees; nonetheless, this pilot study was completed within 45 days as planned.

Limitations

It is important to note before discussing the findings from the pilot study in the next chapter that this research may still contain some flaws inherent within the sample group. For example, there is no constraint on age and gender of students in the sample, which may result in a poor representation of attitudes across different ages as well as gender groups.

Moreover, these 451 participants are only from the five selected universities, which might not represent the whole population of online students in Thailand as people in the same environment can possibly be influenced by their peers, and result in too similar thoughts onto the e-learning program.

Furthermore, although the sample group is chosen from who was born and raised in Thailand, there is no demographic information collected as the proportions present of the certain racial or ethnic group, which might be unable to represent the population as a whole.

This could also be a vital factor in forming attitudes and opinions regarding the online learning, and should be considered for future research opportunities.

In addition to these limitations, this case study nevertheless should provide values in other areas of analysis. For instance, the result of participants at the same universities but different faculties should represent some meanings if the result of one faculty deviates from the other, and vice versa. This might be another factor, which could intervene in this study.

However, the computer literacy level of participants can increase accuracy of the research because they are the real Internet users and use these communication technologies for their daily activities, not the newcomers or first-time users. The finding will then be more meaningful in this perspective.



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CHAPTER 4

ANALYSIS OF RESULTS

Since the questions asked in the survey are mainly about two facets of the e-learning program (*respect* of online students regarding the Thai culture and *reliability* of online students regarding the learning effectiveness) that Thai students have on different types of teachers as shown in the table below, 10 keywords related to these categories, including statistical results will then need to be discussed.

Table 3: Types of Teacher

Category Number	Types of Teacher	Theory
1	E-book	Media Equation
2	Audio/Video	Media Equation
3	Teacher in video conference classroom	CMC
4	Teacher in actual classroom	Traditional Style

The four hypotheses were tested by means of statistical method using repeated-measures analysis of variance (ANOVA). The reason of choosing ANOVA was because the researcher wanted to avoid excessive statistical errors. It is because of its essential features of repeated-measures ANOVA, which are there is only one independent variable and each subject serves at every level of that variable (Evans, 1996:420). Some variables would be compared across four degrees of the e-learning style; whereas some would be just a pair comparison.

In addition to the survey, information gathered from the interview will be addressed afterwards to highlight the major points of view of all selected 20 interviewees in various aspects.

Questionnaire Results - Respect Regarding the Thai Culture

To answer the first research question whether or not Thai students pay respect to the e-teacher as if he/she is a real human, five sub-categories (gratitude, respect, penalization, acquiescence, and interruption) will be described to test the hypothesis. If four categories of teacher, which include e-book, audio/video, the teacher taught via the real-time video conference classroom, and the teacher taught in the actual classroom, elicit different feelings of Thai students, then the hypothesis will be supported by these statistical evidences.

Before demonstrating each topic related to the respectfulness in details, it is important to emphasize that there are differences between the following pairs listed below, but there is no difference between e-book and audio/video in the respect aspect.

- A. E-book and teacher in the video conference classroom
- B. E-book and teacher in the actual classroom
- C. Audio/video and teacher in the video conference classroom
- D. Audio/video and teacher in the actual classroom
- E. Teacher in the video conference classroom and teacher in the actual classroom

Gratitude

The students' feeling of gratitude towards their different types of the teacher has been categorized into two groups, which are the teacher taught via the video conference classroom and the teacher taught in the actual classroom with five ranking scales of belief from most to least.

The result from the table below shows that the computed F ratio of 317.337 is significant. That means there is a difference in students' belief on gratitude towards their teachers, who teach in the long distance classroom and in the actual classroom.

Table 4: Gratitude – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Gratitude	142.884	1.000	142.884	317.337	.000
Error(Gratitude)	202.616	450.000	.450		

In the table 5, it can be seen that the mean of the teacher taught via the real-time video conference classroom is obviously less than the mean of the teacher taught in the actual classroom. In other words, Thai students feel thankful for their teachers, who teach them in the actual classroom more than for teachers, who teach them through the real-time video conference.

Table 5: Gratitude – Descriptive Statistics

Types of Teacher	Mean	Std. Deviation	Pairwise Comparisons*
Teacher in the remote classroom	3.56	.951	A
Teacher in the actual classroom	4.36	.739	B

*Different letter means they are significant differences from one another.

Respect

In the respectful aspect, Thai students were asked to rank (5 scales – most, high, medium, low, and least) their belief in the respect for each type of the teacher. It was their choices to select the level of respect toward each type of teacher, which includes e-book, audio/video, teacher in the video conference classroom, and teacher in the actual classroom.

The significant result of the computed F ratio (Greenhouse-Geisser) in the table 6 shows that Thai students have their attitudes towards four different kinds of the teacher differently.

Table 6: Respect – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Respect	523.913	1.936	270.610	444.130	.000
Error(Respect)	530.837	871.220	.609		

Table 7 illustrates that Thai students pay respect most to the teacher in the actual classroom, the teacher in the video conference classroom, audio/video, and e-book, respectively. It is crucial to note that there is no significance of respectful feeling of Thai students study from e-book and from audio/video, but other pairs illustrate the significance in the pairwise comparisons.

Table 7: Respect – Descriptive Statistics

Types of Teacher	Mean	Std. Deviation	Pairwise Comparisons*
E-book	3.18	1.039	A
Audio/Video	3.23	.999	A
Teacher in the remote classroom	3.74	.833	B
Teacher in the actual classroom	4.52	.681	C

*Different letter means they are significant differences from one another.

Penalization

In this question, Thai students were asked if they would be afraid of being penalized from different types of teacher (the teacher in the video conference classroom and the teacher in the actual classroom). Online students had to rank the feeling of fear to be penalized from most to least to each type of the teacher.

Table 8 explains that the computed F ratio of 534.789 (Greenhouse-Geisser) is significant noticeably; thus, there is an obvious difference between two kinds of the teacher.

Table 8: Penalization – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Penalty	512.639	1.000	512.639	534.789	.000
Error(Penalty)	431.361	450.000	.959		

Table 9 shows that the mean of the students' fear toward the teacher taught in the real-time long distance classroom is much less than the mean of the students' fear of the teacher taught in the actual classroom for the number of 1.51.

Table 9: Penalization – Descriptive Statistics

Types of Teacher	Mean	Std. Deviation	Pairwise Comparisons*
Teacher in the remote classroom	2.31	1.070	A
Teacher in the actual classroom	3.82	1.227	B

*Different letter means they are significant differences from one another.

Acquiescence

Thai students, who had registered the e-learning program at the universities in Thailand, were asked to differentiate their feeling of acquiescence towards four types of the teacher in the questionnaire. The result (table 10) illustrates that the computed F ratio is significant.

Table 10: Acquiescence – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Acquiescence	379.456	1.761	215.484	275.060	.000
Error(Acquiescence)	620.794	792.426	.783		

The means of Thai students, who follow and obey what e-book and audio/video tells them to do, are very similar. The difference is just about 0.02 as can be seen from the table 11. Additionally, the pairwise comparisons verify that there is no significant difference

between these two categories. Similar to Thai students' belief of the respect aspect, there is no significance between the first pairs (e-book and audio/video) when comparing with one another as can be seen in the following table.

Whereas the mean of Thai students, who obey the teacher taught via the video conference, is greater than those two formers for approximately 0.45, the mean of the teacher taught in the actual classroom, who can make Thai students do as what they say, shows the most greatest number, which is far beyond the second place for approximately 0.6.

Table 11: Acquiescence – Descriptive Statistics

Types of Teacher	Mean	Std. Deviation	Pairwise Comparisons*
E-book	3.18	1.039	A
Audio/Video	3.20	.990	A
Teacher in the remote classroom	3.63	.850	B
Teacher in the actual classroom	4.31	.761	C

*Different letter means they are significant differences from one another.

Interruption

In the survey, Thai students were asked to determine the five ranking if they would be afraid of interrupting two types of the teachers (the teacher in the real-time video conference classroom and the teacher in the actual classroom) during the learning process. The result of the computed F ratio of 92.193 in table 12 shows that there is significance between Thai students being afraid of interrupting the teacher in the real-time video conference classroom and the teacher in the real classroom.

Table 12: Interruption – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Interruption	73.796	1.000	73.796	92.193	.000
Error(Interruption)	360.204	450.000	.800		

The mean of Thai students, who do not want to interrupt their teacher during the learning session in the actual classroom, is greater than the mean of Thai students, who do not want to interrupt their teachers during the learning session in the real-time long distance classroom for 0.57.

Table 13: Interruption – Descriptive Statistics

Types of Teacher	Mean	Std. Deviation	Pairwise Comparisons*
Teacher in the remote classroom	3.31	1.130	A
Teacher in the actual classroom	3.88	1.068	B

*Different letter means they are significant differences from one another.

The questions that were asked in order to evaluate Thainess of individuals are used to crossed check with each type of the learning style whether or not the strong belief in the Thai culture is correlated with the answers regarding the respect facet. The methodology of doing this is to find the average mean of Thainess's questions first, and then to find the average mean of each type of the teacher concerning the respect aspect.

The result in table 14 indicates that Thai students, who are more conservative, will pay respect most to the real teacher in the actual class (.535) according to Pearson Correlation. The other styles of learning also show the significance of the respect issue in correlations between Thainess and teacher types from the second to the last place – the real teacher taught in the real-time long distance classroom (.377), e-book (.306), and audio/video (.275), respectively.

Table 14: Thainess and Teacher Types – Correlations

	E-Book	Audio/Video	Remote Classroom	Actual Classroom
Thainess	.306(*)	.275(*)	.377(*)	.535(*)

*Correlation is significant at the 0.01 level (2-tailed).

As the research result of all five facets related with the respect aspect demonstrates similar outcome that Thai students pay respect to the real teacher, who teaches them in the

actual classroom most comparing with the other three types of the teacher, regardless the significant difference between lessons taught through e-book and audio/video, it can be concluded that it is reasonable to support the first hypothesis that Thai students do not pay respect to e-teacher as if he/she is a real human since the computed F ratio of all five aspects are clearly significant (Table 15) with no difference between e-book and audio/video while calculating the pairwise comparisons.

Table 15: Summary of Respect Aspects

Types of Teacher Thai Culture	Media Equation		CMC	<i>Actual Classroom</i>
	<i>E-book</i>	<i>Audio/Video</i>	<i>Remote Classroom</i>	
<i>Gratitude</i>	SIG.	SIG.	SIG.	SIG.
<i>Respect</i>	SIG.	SIG.	SIG.	SIG.
<i>Penalization</i>	SIG.	SIG.	SIG.	SIG.
<i>Acquiescence</i>	SIG.	SIG.	SIG.	SIG.
<i>Interruption</i>	SIG.	SIG.	SIG.	SIG.

Questionnaire Results - Reliability Regarding the Learning Effectiveness

The second research question whether or not Thai students rely on e-teacher as if he/she is a real human can be answered by examining five sub-categories (reliability, comfort, concentration, knowledge gained, and performance) to test the hypothesis and to prove if the assumption is true.

The result demonstrates that all five facets of reliability have a great impact on the effectiveness of learning in the e-learning program at universities in Thailand regardless the significance of all aspects between e-book and audio/video, and the difference of Thai students' comfortable level among e-book, audio/video, and the teacher in the real-time long distance classroom.

Reliability

The reliability of different types of the teacher was ranked by Thai students, who enrolled in the e-learning course of the universities in Thailand. The computed F ratio of 154.104 shows it is significant as the level of reliability of Thai students is different amongst several groups of the teacher.

Table 16: Reliability – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Reliability	154.078	1.740	88.573	154.104	.000
Error(Reliability)	449.922	782.803	.575		

The means of students' reliability in e-book and audio/video are equally the smallest numbers of the table 17 compared with other two style of learning; hence, the pairwise comparison also indicates no difference between these two variables. The teacher taught via the real-time video conference came with the second ranking, and the most creditability that is received by Thai students was to learn with the teacher in the actual classroom.

Table 17: Reliability – Descriptive Statistics

Types of Teacher	Mean	Std. Deviation	Pairwise Comparisons*
E-book	3.56	.925	A
Audio/Video	3.56	.903	A
Teacher in the remote classroom	3.83	.827	B
Teacher in the actual classroom	4.27	.777	C

*Different letter means they are significant differences from one another.

Comfort

The result in the table 18 again shows its significance after the computing F ratio of 63.698 because different four learning methods (learning from the e-book, learning from the audio/video, learning with the teacher in the real-time video conference classroom, and

learning with the teacher in the actual classroom) are the factor that makes students feel comfortable to study with differently.

Table 18: Comfort – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Comfort	114.698	1.800	63.721	63.698	.000
Error(Comfort)	810.302	810.009	1.000		

The means of comfortable level of Thai students to study with e-book, audio/video, and teacher in long distance classroom are very similar (Table 19). This also tells the same result in the pairwise comparisons that there is no such difference between these three subjects but the teacher taught in the actual classroom is different.

Interestingly, the mean of Thai students, who learn from e-book, feel slightly more comfortable than learning from audio/video.

Table 19: Comfort – Descriptive Statistics

Learning Styles	Mean	Std. Deviation	Pairwise Comparisons*
Learning from E-book	3.59	.984	A
Learning from Audio/Video	3.53	.882	A
Learning with the teacher in the remote classroom	3.66	.843	A
Learning with the teacher in the actual classroom	4.16	.963	B

*Different letter means they are significant differences from one another.

Concentration

The concentration level of Thai students to study with four different learning styles performs the significance of the computed F ratio of 198.173 (Greenhouse-Geisser) in the following table.

Table 20: Concentration – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Concentration	310.862	1.865	166.643	198.173	.000
Error(Concentration)	705.888	839.445	.841		

In table 21, there is a little difference between the means of Thai students, who can concentrate on lessons learning from e-book and who can concentrate on lessons learning from audio/video. However, it shows no significance between these two items in the pairwise comparisons. In contrast, it is significant when comparing these two groups with students' concentration on lessons studying with teacher taught in real-time video conference and teacher taught in the real classroom.

Table 21: Concentration – Descriptive Statistics

Learning Styles	Mean	Std. Deviation	Pairwise Comparisons*
Learning from E-book	3.27	1.043	A
Learning from Audio/Video	3.29	.949	A
Learning with the teacher in the remote classroom	3.63	.845	B
Learning with the teacher in the actual classroom	4.30	.812	C

*Different letter means they are significant differences from one another.

Knowledge Gained

The survey result illustrates in the table below that the computed F ratio of 152.650 (Greenhouse-Geisser) is significant; however, there is no difference that Thai students perceive they gain knowledge differently from e-book and audio/video.

Table 22: Knowledge Gained – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Knowledge	165.404	1.889	87.580	152.650	.000
Error(Knowledge)	487.596	849.870	.574		

The means of students' perception in gaining knowledge from e-book is equivalent to students' perception in gaining knowledge from audio/video. Table 23 shows no difference between the first two items, but the last two subjects of the table. Thai students believe that they gain knowledge more when they study with the real teacher via the long distance classroom, and even most when they study with the real teacher in the actual classroom. The pairwise comparison demonstrates the significances among all items regardless the first pair (e-book and audio/video).

Table 23: Knowledge Gained – Descriptive Statistics

Learning Styles	Mean	Std. Deviation	Pairwise Comparisons*
Learning from E-book	3.55	.887	A
Learning from Audio/Video	3.55	.846	A
Learning with the teacher in the remote classroom	3.80	.790	B
Learning with the teacher in the actual classroom	4.29	.784	C

*Different letter means they are significant differences from one another.

Performance

The research result in table 24 depicts that Thai students believe that they will perform better in the examination if they study with the real teacher in the actual classroom due to the significance of the compute F ratio of 189.159 (Greenhouse-Geisser).

Table 24: Performance – Tests of Within-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Performance	210.124	2.024	103.822	189.159	.000
Error(Performance)	499.876	910.752	.549		

Yet, there is absolutely no difference in Thai students' exam performance between studying from e-book and audio/video (Table 25); thus, there is also no significant result shows in the pairwise comparisons either. The mean of those who believe studying with the real teacher in the actual classroom will help them to perform better in the exam is

noticeably much higher than the other three learning methods (studying from e-book and audio/video, and with the teacher taught via the long distance classroom).

Table 25: Performance - Descriptive Statistics

Learning Styles	Mean	Std. Deviation	Pairwise Comparisons*
Learning from E-book	3.45	.913	A
Learning from Audio/Video	3.45	.869	A
Learning with the teacher in the remote classroom	3.72	.792	B
Learning with the teacher in the actual classroom	4.29	.733	C

*Different letter means they are significant differences from one another.

The survey results from five aspects regarding the reliability of online students in the learning effectiveness viewpoint showed the similar outcomes, which tell there is different effect if Thai students learn with these four different learning styles, which are studying from e-book, studying from audio/video, studying with the real teacher via real-time video conference classroom, and studying with the real teacher in the actual classroom.

Although there is no difference on studying effectiveness between learning from e-book and audio/video in the pairwise comparisons, the result is still significant when comparing with other teaching methods. It is important to note that e-book, audio/video, and teacher taught in the long distance classroom have no difference in the pairwise comparisons though. As a result, to summarize the reliability of online students regarding the effectiveness of learning, it makes sense to support the hypothesis that Thai students do not rely on e-teacher as if he/she is a real human as the entire computed F ratio results in significant outcomes (Table 26), and the most greatest feedback that has been trusted is to learn with the real teacher in the actual classroom, not e-teacher.

Table 26: Summary of Reliability Aspects

Learning Effectiveness	Types of Teacher	Media Equation		CMC	<i>Actual Classroom</i>
		<i>E-book</i>	<i>Audio/Video</i>	<i>Remote Classroom</i>	
	<i>Reliability</i>	SIG.	SIG.	SIG.	SIG.
	<i>Comfort</i>	SIG.	SIG.	SIG.	SIG.
	<i>Concentration</i>	SIG.	SIG.	SIG.	SIG.
	<i>Knowledge Gained</i>	SIG.	SIG.	SIG.	SIG.
	<i>Performance</i>	SIG.	SIG.	SIG.	SIG.

Interview Results

After conducting 20 interview sessions with the selected Thai students, who registered e-learning program with universities in Thailand, the result has come up with lots of information, which will be pinpointed in bullet in the following section.

Respect

The more time children are living in the Thai family with old people, who have heavily followed their tradition and culture, the more Thainess they will absorb bit by bit throughout lifetime. Later on, they will become conservative and believe in the old custom. This idea does apply to the respect aspect as well.

Many Thai students have strong belief that they must pay respect to the teacher as he/she provides them knowledge, advice, moral support, encouragement, suggestion, and the like. Otherwise, they will have to go to hell or have a sin, which stop them from being successful in whatever they do in the future. One Thai student says that "I do not want to be a bad guy by disrespecting my teacher"; the next one states "I am Thai. I live my life here so I will have to follow the Thai tradition what older people have done for ages"; and the other says "It is a good merit to pay respect to the teacher, who deserves it". From their consideration, the teacher is not only the educational provider, but also the person, who is deserved to receive respectfulness from students. They think that the teacher is the second

person after father and mother for them to pay respect to. This belief is what they have learnt since their childhood, and story about paying respect to older people is the Thai tradition that has been continued doing from time to time.

On the other hand, there are some Thai students understand that the teacher is just a person, who does his/her duty as assigned, and some teachers even are unable to perform their duty successfully and properly. For example, a student addresses that “Some teachers do not know their roles and responsibilities. They are sometimes bias, unprepared before coming to class, and cannot be a role model for their students”. As a result, this behavior decreases the teachers’ credit, and that their students will suppose they are not deserved to be paid respect consequently. However, there are a few students agree with this point of view; therefore, almost all Thai students still pay respect to their teachers owing to cultural effect.

Besides the Thai cultural issue, the IT matter also creates a problem to the e-learning program from the interviewees’ point of view. Since technology creates the lack of interaction, proximity, simulation, and relationship between teachers and students, Thai students feel that they are interfered by technology and cannot overcome the feeling that the human being teacher can be replaced by the IT teacher.

Reliability

Likewise, interaction in the classroom is one of the most important factors, which accounts for the first impression of students’ reliability. Thai students would like to have the teacher, who they see his/her expertise and wit to have faith in. They not only want to ask questions when they do not understand things, but also expect to get good answers from the specialist. An interviewee expresses that “I expect to see professional manners from my teacher, such as to be able to perform problem solving, decision making, and critical thinking successfully”. It is obvious that e-learning computer-based program cannot provide such opportunities between students and teachers to discuss, interact, and participate in

class together. Therefore, the e-learning teacher (teaching through the medium and/or teaching via other IT materials) will be deficient in reliability as a result of the feelings of IT interference.

Furthermore, some students applied for the e-learning course because they rely on the fame of the institution. This belief has unconsciously developed since they were young when they heard from their parents or relatives about the university, or their parents or relatives might probably graduate from that institute; thus, they just feel it is a good place to study. The interviewees said that they trusted the university, where they considered carefully prior to making the decision more than any other subjects. One student additionally claims that "I am not concerned much about the e-learning content, but I want to study whichever e-learning course at Chulalongkorn University". As a consequence, the prominent university, which offers the e-learning course, will somehow be considered by Thai students as the first priority in this aspect.

However, some Thai students addressed that whichever institution the e-learning program has been created and whoever created it, knowledge acquired will definitely depend on each student whether or not they are able to receive what the e-learning content provides. It is truly natural that individual can gain knowledge differently even studying from the same source; hence, they are not interested in teachers' reliability but their confidence to learn wisely and apply knowledge gained to their daily life effectively and successfully.

Reasons of Admiring E-learning as an Effective Method of Learning

Even though there is more opportunity for Thai students to learn with the e-learning system as of the development of IT in Thailand, the majority of students still believe that the old learning style sitting in class is better for them. Nonetheless, some students disagree with that belief because they think that e-learning is such an effective approach of learning due to a number of reasons, which will be described below.

First and foremost, **convenience** students receive from not having to transport to the university, being able to repeat the lesson as many times as they would like, and accessing to the resource anywhere and anytime they are available, seems to be the greatest advantage of the e-learning program. Lot of students say that “I can save time a lot on transportation and spend that time stuck in the traffic jam to learn more from home”.

Moreover, learning online provides them a **vast resource of information** and **most up-to-date** resource, and students can use it for **future reference**. Some students state that “When I do not understand lessons clearly, I can go surfing the WWW and find out more explanation, example, or diagram to assist my learning”. Others say that “E-book is such a great source because I can print it out right from the Internet and bring it to wherever I want. It is so convenient.”

In addition, **self-study** is another element that some Thai students prefer and think it is a good thing of the e-learning program as they can concentrate more on lessons and practice whenever they are ready. Some people prefer to study at night time because they believe they can concentrate at night but unfortunately, the universities in Thailand only open a day-time class, for instance. Furthermore, Thai students like e-learning because they can wear whatever at home and study. Occasionally, they get annoyed and feel uncomfortable wearing official uniform or formal cloths because they have to go to class at the university. One interviewee tells that “I love learning from home so much because I can wear whatever, lay down as much as I want, and have a break whenever”.

Additionally, **self-pace** is another issue to be discussed. As the matter of fact that learning with different teachers cause inconsistent outcomes because there is no same standard for everyone. However, if Thai students learn with the same teacher – same set of e-learning software, they will surely be able to expect the progress of their knowledge through the e-learning course. For example, a student studies from English e-learning software vol.1-10, he/she will see his/her development step by step, and if he/she wants to

be good at English quicker, he/she will have to keep pacing his/her study. This is like a kind of motivation to encourage learners automatically.

Eventually, the real-time video conference classroom offers no difference from the actual classroom. Thai students like this e-learning program a lot because they stated that everything seemed to be real. The **simulation** of classroom made them feel comfortable to study as some students are shy and do not like meeting with others face-to-face. Some students are afraid of being asked a question and being penalized by the teacher. An interviewee addresses that “I want to see the teacher while he is teaching, but I do not actually want to interact with him. Does this sound weird?” Thus, this type of e-learning has helped them to have harmonized solution with their teachers without too much relationship and too less interaction.

Nonetheless, the most suitable learning type for Thai students to be selected depends on the field of study. For example, if students study Arts, the teacher’s explanation is then very essential in the lesson. However, if the study is about IT, the text based e-learning content may be sufficient as the logic of programming is quite straight-forward.

Online Students’ Perception towards E-learning in Thailand

From the previous section of this chapter, all ten aspects related with respect (specialist) and reliability (source orientation) are considered to be factors that make Thai students feel and understand the content differently regarding the four degrees of learning environments – e-book, audio/video, long distance classroom, and actual classroom (Figure 5). Since the whole computed *F* ratio in each factor (Table 15 and 26) illustrated significant values, it can be summarized that different learning methods offer the learning process to online students in the Thai cultural context in a different way. Particularly, the mean of learning with teacher taught in the actual classroom always comes at the first ranking; hence, this means that Thai students still believe in the old fashion learning methodology, which will be the best style of learning process in Thailand.

As the research output demonstrates both Thai custom (respect) and effectiveness of learning styles (reliability) have a great impact on the e-learning program in Thailand as a result of the Thai culture; consequently, online students in Thailand judge that e-learning program produced by Thai universities is not good enough and need improvement to revise the old e-learning program and/or initiate the newly better e-learning courses to offer effective e-learning program to meet students' satisfaction. From this result, it leads to the summary that support the third hypothesis, which is Thai students do not believe that e-learning is an effective method of learning.

Preference Compared between Synchronous and Asynchronous Media

It is vitally important to note initially that in this research, e-book and audio/video signify asynchronous media and teacher taught via video conference classroom represents synchronous media. After scrutinizing 7 aspects of e-learning (respect, acquiescence, reliability, comfort, concentration, knowledge gained, and performance) of students in the Thai cultural context towards these three different kinds of teachers, namely, e-book, audio/video, and the teacher taught in the real-time long distance classroom, it is found that 6 out of 7 elements of the computed F ratio return significant results. In other words, there is significant difference between synchronous and asynchronous media in the perception of Thai students. The significances of these factors are also compared by means of pairwise comparisons.

Since the survey results (Table 14 and 26) are considerably consistent that Thai students respect and rely on the teacher taught via the real-time video conference classroom (synchronous media) more than e-book and audio/video (asynchronous media), it can be said that the fourth hypothesis of this research is supported evidently as Thai students prefer studying with the teacher taught through the real-time long distance classroom to doing self-study with e-teacher.

CHAPTER 5

DISCUSSION AND CONCLUSION

The study on “Media Equation and E-learning in the Thai Cultural Context” uses the survey and in-depth interview to measure Thai students’ attitude towards four different types of teachers, namely e-book, audio/video, teacher taught through the real-time video conference classroom, and teacher taught in the actual class, at five selected universities in Thailand. The focus is to see whether or not e-learning is an appropriate academic approach and proper to be utilized in the Thai educational system. Also, the different e-learning styles (synchronous media vs. asynchronous media) might suit online students in the Thai cultural context differently.

Through the course of this research, the number of evidence shows significance of differences amongst different types of teachers, which include both self-study materials (asynchronous media) and the real-time remote classroom (synchronous media) comparing with the actual classroom. The following section will discuss in details why the questionnaire and interview results demonstrate different perceptions of Thai students towards e-learning at the universities in Thailand.

Despite the fact that the survey and in-depth interview were set to test Thai students, who have experienced at least one e-learning course at the university in Thailand, it is unavoidable to mention the cultural issue, which was predicted prior to the beginning of this study to be extremely relevant with the result of the survey as well as the information gathered from the interview.

Media Equation vs. CMC

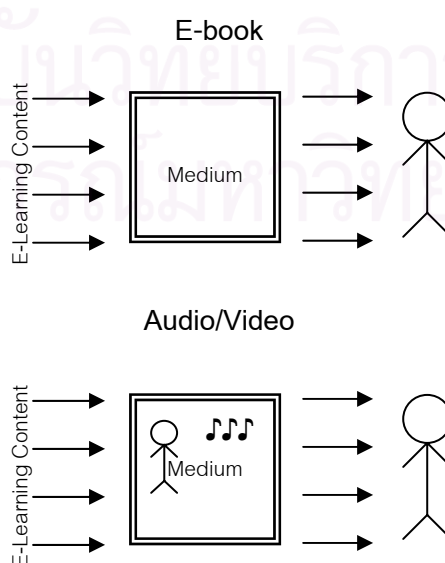
Before further discussion, it is vital to state that this research has been conducted to examine whether or not the Media Equation theory is applicable in Thailand, and that it has influenced Thai students’ perception regarding the e-learning system at the universities. To

scrutinize this statement, the four sub-hypotheses in chapter 2 in this study will be described and concluded later on.

Asynchronous media in this research refers to e-book (text based) and audio/video (multimedia based), which both are considered to be one-way communication (Figure 7). When comparing these variables to the teacher taught in the actual classroom, the result shows significance in various aspects, which will be further explained later in this chapter. In brief, Thai students still think that the real teacher, who they meet face-to-face deserves their respect the most. This perception is clearly related with the cultural issue as it is the Thai custom for younger people to pay respect to older ones. This belief is even stronger when those older people are their teachers, who provide education for them.

In addition to the respect issue, there is also significance in Thai students' reliability as they perceive that the human teacher is more reliable than any other forms of teachers. This is because the degree of closeness and interaction does not occur while studying from e-book as well as audio/video. In other words, technological tools interfere with the perception of Thai students, and they do not feel the sense of the real teacher existing during the e-learning class.

Figure 7: Asynchronous Media Workflow



Even if it seems that there is no difference in students' feeling towards their study from e-book and audio/video, it is found in the in-depth interview that Thai students like these two learning styles because of different reasons as follows.

From the IT facet, Thai students like learning from e-book because of its convenience as it is printable and portable to wherever they go. Once they access the Internet and retrieve information they want, they do not have to turn on the computer and reconnect to the Internet retrieving same information again. However, this does not occur with studying from audio/video because it is required the computer as a tool to play e-learning content files. It is necessary to have mobile laptop if students want to study while traveling to other places.

On the other hand, the powerful feature of audio/video is to feel close to learning in the real classroom since the voice as well as the face of the teacher is recorded. The simulation of this style of learning makes Thai students feel warm and close with their teachers naturally. It adds more distance to the relationship between teachers and students. Besides, studying from the video that has the teacher's presentation recorded, makes it less boring for students since the teacher on the video will use his/her teaching techniques to attract students' attention. In addition, seeing their teachers on the video potentially keeps students focused as they will be able to concentrate on the lesson better and longer.

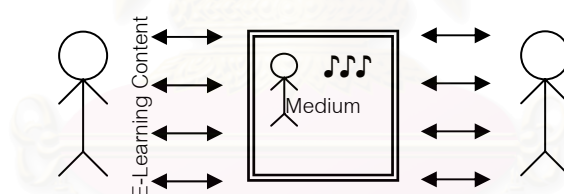
In summary, the Media Equation theory does not support e-learning in the Thai cultural context because the feeling of Thai students towards media and the real teacher in the learning environment is different. They do not treat media that are not involved with human beings the same way as they do to the real teacher in the classroom. If the real teacher does not exist, the perception of Thai students will be understood that the e-learning content is the medium. It is interesting to note that this finding is totally opposite to the Media Equation theory of Reeves and Nass that people will treat and behave towards computers as if they are the real human. Although some scientific criteria of Chaffee and

Berger (1997) are somewhat true, not all of them apply to the Thai e-learning system because of the Thai culture mainly.

Synchronous media in this study refers to the teacher who teaches via the real-time video conference classroom. It is considered to be a two-way communication with media in between (CMC) and provides more degree of closeness to students compared with asynchronous media because students will have a chance to see the real teacher and hear his/her voice through the medium. However, when comparing learning via synchronous media with the old style of learning in class, Thai students still prefer to learn with the teacher in the actual class because they will pay more respect to the teacher they meet face-to-face, and he/she is considered to be more reliable than other sources in enhancing the learning effectiveness.

Figure 8: Synchronous Media Workflow

Real-time Long Distance Classroom



In this research, ten factors in the respect and reliability facets were examined to check if they would impact on the learning effectiveness and the respect of Thai students towards different types of the teacher. Seven out of ten items (two for respect issue and other five for reliability aspect) were studied in relation with asynchronous media, and ten out of ten (five for respect issue and other five for reliability aspect) subjects were related to synchronous media as described below.

Respect

As the matter of fact that Thai students believe they must pay respect to people, not things, they cannot treat things (e-book and audio/video) as if they are the human-being

teacher because media are what the real teacher utilizes as a teaching and learning assistance. Therefore, asynchronous media does not work very well with the educational system in Thailand owing to the Thai culture.

So what if the real teacher teaches through the medium, such as the teacher taught via the real-time video conference classroom? The similar answer illustrates that Thai students still want to have relationship and interaction with their teacher in the real class because they are unable to interact with the media like they do with the real human. Even though Thai students prefer studying with the real teacher via the medium (synchronous media) to doing self-study learning from e-book and audio/video (asynchronous media), they wish to study with the real teacher in the real classroom the most.

Acquiescence

A good manner like acquiescence that younger people should follow and obey older people, including the ones providing them knowledge, in the Thai custom is ignored when people do not teach them in person. When there is lack of closeness, it reduces respect of students towards their teachers. This circumstance can be expected to happen with asynchronous media in the Thai cultural context until the students' attitude towards the e-learning program has been changed.

Reliability

Reliability is another element that alters students' behavior towards each type of teacher. It has constantly been said that online information is inevitably diminished its creditability by people's perception naturally as a result of its feature – open source. Nonetheless, this problem often occurs when there is no reference. However, if online content is created by teachers at famous universities of the country, will it have a trouble losing reliability from Thai students? The feedback is yes referring to the statistical results in the previous chapter due to a number of reasons. For example, when Thai students do not understand the lesson clearly and need to ask experts about the confusion, they want to

have someone answering their questions thoroughly in a timely manner. E-learning will be poor in assisting students because there is no real teacher existing in class. Therefore, this can eventually dwindle in the prospective learning effectiveness in Thai students' perception.

Concentration

The other deviated factor is concentration, which makes different learning processes result in altering efficiency and effectiveness. From the statistical results, it can be stated that Thai students can better concentrate on the learning content whilst studying with the teacher face-to-face in the actual classroom, as it requires interaction, such as question and answer session. In other words, the teacher in class can help students focus on lessons and keep them on track. The real-time classroom increases students' motivation in learning as well as interest as the human teacher will be able to get rid of distraction within the classroom. Therefore, when comparing asynchronous media with synchronous media, it is found that synchronous media will assist students in better concentration on the e-learning content.

Knowledge Gained

Different learning methodologies can in addition vary the level of knowledge gained depending on the perception of students toward each type of learning styles in how much they feel they can gain from that particular method of learning. No difference was found between studying with different forms of asynchronous media, and synchronous media because Thai students think they can acquire knowledge equally via both learning styles in Thailand. This belief is due to the fact that they see the ability of learning is up to the individual competency. It is not about how good the e-learning content is or the learning method is but the intelligence of each person and the capability to comprehend lessons.

Performance

Some Thai students believe that they can perform better in the exam when they study with the real teacher because he/she will tell them the guideline of the examination during the preparation period. Also, they can ask about what they do not understand directly to the teacher, who creates the examination paper. On the contrary, some students believe in themselves and prefer to do self-study as they have more time to contribute to the study without spending time on commuting to school and waiting for meeting their teachers. These two contrast opinions depend on the individual student whether they will be on which side because different people have their own preference.

Nevertheless, more Thai students are appreciated in learning with the real teacher as they feel confident that they will perform better in the exams somehow. This implies that learning with the real teacher taught in the real-time video conference classroom (synchronous media) is of course better than learning from e-book and audio/video (asynchronous media) as students can interact with the real teacher and ask questions in the classroom.

Comfort

The comfort level to study in different environments of Thai students absolutely affects the efficiency of learning and teaching. The more comfort level students feel, the more effective learning process will be acquired by both teachers and students. Interestingly, Thai students, who learn from e-book, is more likely to feel comfortable than learning from audio/video. The interviewees additionally gave the idea that it was because they did not feel tense listening to the voice of teacher or viewing their teacher through the video.

It is important to emphasize that four sub-categories (reliability, concentration, knowledge gained, and performance) related to reliability regarding the learning

effectiveness showed statistically significant outcomes between synchronous and asynchronous media. However, comfort issue demonstrated no significant difference.

There are other three sub-categories (gratitude, penalization, and interruption) of respect aspects were not evaluated in asynchronous media, but were evaluated in the synchronous media due to the likely impossible measurement. The reason of this difficulty is that e-book and audio/video (asynchronous media) are things and totally unable to have two-way interaction with students. Thus, people cannot express their gratitude and/or do something good to pay back to objects. Only real teachers who teach in different methods were then examined.

Gratitude

Although the Thai culture is taught that students must be grateful for their teachers in whatever way, such as paying respect, giving presents, behaving a good manner towards them, etc., since they provide education and knowledge, Thai students do not feel this way with the real teacher in the real-time video conference classroom. This is because the long distance relationship between teachers and students creates a gap that makes students' attitude towards their teachers different from the real teacher in the actual classroom. When there is the medium in between teachers and students, different perception will be developed in students' mind to prevent the expression of the real Thai behavior.

Penalization

Penalization was compared between the two real teachers with different teaching methods only. People are normally afraid of getting penalized from older and/or supervisor. Thai students in particular also fear to be penalized at school due to the fact that children, who have been brought up in the Thai households, are taught to believe and follow what older people teach and order. Otherwise, younger people will be penalized. For example, if

students did not do their homework as the teacher told them to they would probably have to stand up with both arms spreading out during the class for an hour.

The question to be answered here is that what if the teacher is actually teaching them online through the medium, will they still be afraid of being penalized? The answer is no, since there is no proximity in the long distance classroom. It can be made clear that the teacher taught via the real-time video conference classroom cannot come to whip the student, who does not do assignments because they learn in another location.

Interruption

Thai students do not usually interrupt their teachers during the conversation, teaching period, and other formal occasion. However, some students think that they pay to learn something so they should have the right to ask questions when they do not understand lessons. The outcomes of interrupting these two types of teacher are not much different because some Thai students also feel comfortable to interrupt teachers, who they know face-to-face or have good relationship in the actual classroom.

It is not only the statistical results of these five facets, which show that Thai students will have their own level of respect to different kinds of teacher differently, but also information gathered from the interview session indicates more specific reasons why Thai students feel like paying respect to the real teacher in the actual classroom more than other teachers taught through the media. The interviewees addressed that intimacy was one of the most important factors that made them feel respectful toward their teachers. Secondly, learning with the real teacher in class required interaction between teachers and students, and that students felt warm as they are having someone to assist and talk with them when confusion arises. Thirdly, strong belief of seniority and paying respect to the one deserved, especially paying respect to the teacher in the Thai culture, was considered a good merit in life that Thais must do. As a consequence, students lastly believed that teachers were helpful and deserved respect.

Furthermore, after the cross check with the degree of Thainess (Table 14), it was found that there were correlations between people, who have strongly believed in the Thai culture and those, who consider that the teacher deserves to be respected. 50% of participants strongly concur that they must be thankful for their teachers because they are a person who gives them knowledge, 50% of participants highly accept that teachers are the lighter, and 41% of participants seriously disagree with walking over textbooks as they are things pay respect to.

Yet, the highest respect and reliability ranking that constantly comes first when comparing against all learning styles in this research is to studying with the real teacher in the actual classroom. This shows that there is still a conflict between culture and IT in Thai students' perception as they cannot see and treat the e-teacher (asynchronous media) or the teacher, who teaches through the medium (synchronous media) as if they are the real teacher taught in the actual classroom.

Similar to the Media Equation theory, the HCI concept that supports people use the same rules while coming across with the computer just like interacting with human-beings face to face according to ACM SIGCHI (2004) is then proved to be false in this research. As a result, e-learning creators need more concentration on HCI to design and develop the e-learning content, which provides more interactive and simulate the real classroom as much as possible to meet Thai students' satisfaction, who have strong traditional belief about their teachers as earlier discussed, and make them feel the same way as sitting in class and being lectured.

Even though, the result of this research rejects the belief that people respond to the computer automatically and unconsciously as if it is human, it consents with several findings about CASA – sub-category of the Media Equation theory that people, who are knowledgeable about a computer would treat a computer as a tool according to Bench-Capon and McEney, 1998, and Campanella-Bracken, 2000, but contradicts with the study of Searle (1981).

Thai students, who have had e-learning experiences at the university in Thailand and are considered to be computer literates, do not respect the e-teacher as they do to the real teacher. Also, the reliability of e-learning teachers is much less than how much they rely on the real teacher in the actual classroom. In addition, the majority of Thai students still believe that the real teacher will be able to assist them in teaching and learning effectively and efficiently as they can ask questions when confusion arises so they are confident to sit in class and study rather than do self-study and learn from home.

However, studying with synchronous media is a better choice for Thai students if they have to choose between synchronous and asynchronous media, regardless the students' feeling of comfort. They will rely on technology to mediate messages (December, 1997) only when there is the teacher existed behind the technological medium as Thai students still perceive the human teacher as a specialist, and the reliability of the real teacher as a source orientation is still important to them. Nonetheless, the statement that different place and time learning could not affect the learning process and students' satisfaction created by several researchers (Alavi, et al., 1997; Larose, Gregg, and Eastin, 1998) in the past is rejected in this study.

It can be seen obviously that Social Presence is a critical factor for e-learning in the Thai cultural context because interpersonal relationships are the determinant of the way individuals interact. The finding in this research therefore supports the idea of Short, William, and Christie (1976) that communication media vary in their degrees of social presence, and these variations are important in determining the way people interact. In addition, many Thai students evidently prefer to have interaction, such as question and answer session, during the class due to the two dimensional characteristics of social presence – intimacy and immediacy (Rice, 1993).

Moreover, the more experienced the teacher is, the more effective the learning process will be. This idea is contradictory with the previous study that e-learning can add-

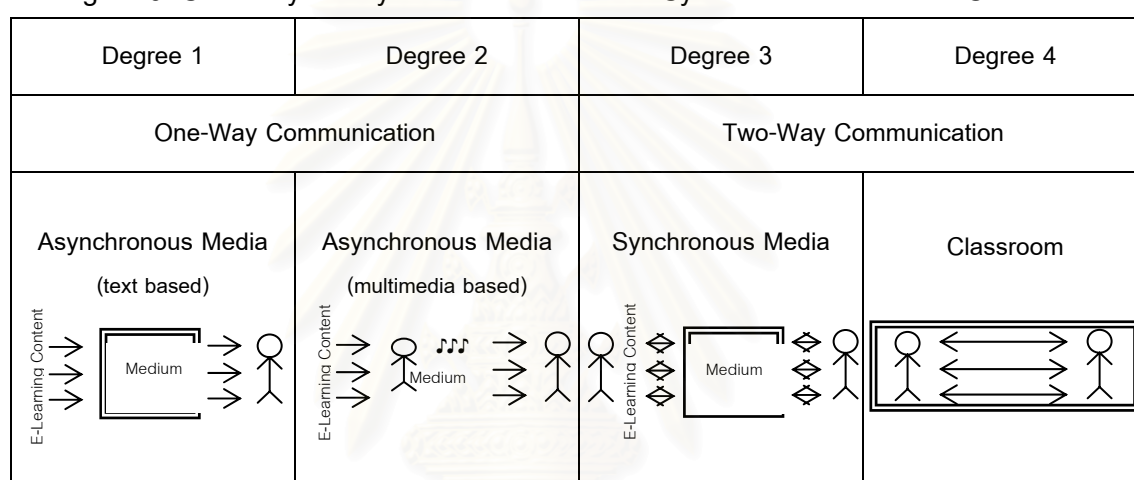
on effectiveness of learning process by 30% (KU Magazine, 2001). Due to the fact that e-learning materials have only one way to be taught to their students because the e-learning issuers do not care about whoever will be taught, but just provide standard level of the learning content. However, experienced teachers are more concerned about their students. They know how to deal with good and bad students differently. They also know how to treat their students gently as well as smoothly when a trouble arises. This is the soft issue that the real teacher can do in the real-time classroom as he/she understands the sense of human-being, but the computer cannot perform this complicated feeling of human. Consequently, synchronous media are considered to be the first alternative for Thai students, not asynchronous media, when in-class study is unavailable.

In brief, since this study focuses on the differences between asynchronous and synchronous media, it is critical to emphasize again that these two types of learning approach are different in both respect and reliability aspects. More importantly, different forms of teaching and learning assistance in asynchronous media also demonstrate significance because multimedia based presentation materials – audio/video has gained more admiration in respect, acquiescence, and concentration, but less favor in comfort than text based presentation materials by Thai students. Interestingly, they see that e-learning multimedia based and text based materials are equivalent in reliability, knowledge gained, and performance.

The figure below shows the summary of the different degrees of asynchronous media, synchronous media, and classroom. When Thai students study from e-book, they hardly think about the teacher, who creates the learning material, which makes the text based asynchronous media the lowest degree compared to all degrees in figure 9. Similar to the degree 1, although the multimedia based asynchronous media have more sense of the existing teacher during the audio/video learning session because Thai students can see the teacher's face and hear his/her voice, they do not perceive the sense of human touch through the media. These two one-way communications are then considered to be the lowest degrees in the teacher's existence. In addition, Thai students do not treat and

behave towards their teacher, who is behind the media in the real-time video conference classroom (Degree 3) as much as the real teacher in the actual class (Degree 4). The IT media still interfere their attitude in both respect and reliability perspectives towards their teacher. As a result, the teacher taught in the actual classroom without any technology involved is the most favorite learning approach that Thai students prefer due to its proximity, interaction, and intimacy regarding the respect and reliability aspect.

Figure 9: Summary of Asynchronous Media vs. Synchronous Media vs. Classroom



After all, the e-learning program at the universities in Thailand is not a good idea for Thai students owing to numerous reasons as previously stated. However, it might not be because the e-learning content is bad since IT still has its interference with the feeling of Thai students. The utilization of IT by Thai users is also insufficient and inappropriate in some way. This can be another factor that decreases students' satisfaction, and should be another subject to be further scrutinized in the future research.

In fact, Thai students, who enrolled e-learning courses, may not be thoroughly understood the meaning of e-learning, the differences of each learning style, and the advantages and disadvantages they will confront through the selected course. If they understand the e-learning system in Thailand clearly, they may be able to cope with a situation they expect prior to the registration better.

Culture vs. Technology

It can be stated that the relationship between culture and technology is inevitably affected on one another. Although it is up to the particular culture whether people have strong belief in their customs, the educational system of Thailand that has technology involved still depends on the social culture according to the demonstration of various evidences. For instance, Thai students will pay respect to the e-teacher less than the real human teacher due to Thai tradition. Similarly, the reliability of Thai students towards their teachers is also perceived by the old culture that the fame of universities in the country, where teachers are working for, is crucial.

Importantly, it might be true to say that almost all Thai students in the sample group have such strong beliefs in the old tradition, especially on the respectful aspect. As a consequence, the social role of the teacher at the university in the Thai cultural context is seen as a specialist. The character of the expert is required in order to gain respect from students to build up accountability. Since Thai students mostly pay respect to the teacher, who is human-being, e-teacher has unfortunately failed to claim for respectfulness in this sense.

Similarly, the social role of the teacher's reliability is seen as a source orientation. This trustworthiness can be called from students' attitudes regarding the learning effectiveness. After examining five aspects of reliability, the result showed that e-teacher has again failed to call for reliability from Thai students as they trust the real teacher more than any other kinds of the e-learning teacher.

This social implication obviously tells that no matter how well the educational system of the nation is, it still depends on the culture somewhat. The traditional relationship between teachers and students in the Thai culture has been impacted by the new technology that decreases respect and reliability of the teacher, including the hierarchy of seniority in the Thai conventional community. Therefore, to establish a good foundation of the educational system, academic creators must think about the culture as well, and blend it

smoothly with education outlines to produce the most suitable curriculum for people in the nation.

Advantages vs. Disadvantages of E-learning in Thailand

It can be seen from the previous sections that the e-learning program has both pros and cons when it has been taught to students in the Thai cultural context. The findings show that e-learning provides comfort and ease for computer literates; whereas the respectful issue creates disadvantage for e-learning in Thailand in reducing reliability of the teacher.

Although some students are comfortable to do self-study utilizing technological aids because they learn and understand the e-learning content better when they study alone, some students feel extremely the opposite. The majority of Thai students want to have interaction during class. This is because when they do not understand the lesson, they can raise their hands and ask questions right away. This is to eliminate their worries and pressure before continuing studying the next lesson. Unfortunately, the e-learning course in a form of asynchronous media cannot provide interaction between teachers and students.

As can be seen, there are both advantages and disadvantages to choose and study the e-learning course. Nevertheless, students are the best person, who knows themselves which method of learning is best suited them. No one can decide as concise as themselves because some issues may be a big problem for some students, but not for others. They have to keep in mind what purposes of their learning are, and follow their objectives to achieve in the future.

Conclusion

There are both benefits and drawbacks having the e-learning program in the educational system in Thailand due to culture differences and IT issues. The evidences in this research show that Thai students do not treat the computer the same way as they do to other people. Thus, the Media Equation theory is rejected in this study . To summarize the

idea of *Media Equation and E-learning in the Thai Cultural Context* however, it is possible to draw the following conclusions regarding the proposed hypotheses:

1. Thai students do not pay respect to e-teacher as if he/she is a real human.
2. Thai students do not rely on e-teacher as if he/she is a real human.
3. Thai students do not believe that e-learning is an effective method of learning.
4. Thai students prefer to study with a teacher through real-time long distance classroom (synchronous media) rather than doing self-study via e-teacher (asynchronous media).

In short, asynchronous media (one-way communication learning) is considered to be an improper learning method for Thai students in the respect and reliability aspects nowadays, but synchronous media (2-way communication learning with the real teacher having a medium in between) can be taken into account as a substitute when discussing about the e-learning system in Thailand as its degree of the simulation is closer to the actual classroom. However, learning with the teacher in the actual class gains the most preference from Thai students when compared with studying with both asynchronous and synchronous media of e-learning. This is because the relationship between teachers and students during the e-learning program will be altered in respect and reliability as a result of the Thai culture, and that it will deteriorate the traditional seniority in the society. Importantly, this implication tells that respect and reliability are not a psychological process automated in human's brain, but judgment needs to be involved in this process.

Nevertheless, there is still a way to improve the e-learning system at the university in Thailand. The long term solution is to focus on the two critical success factors – the Thai IT culture as well as information about e-learning – must be widely and appropriately educated more to Thai people all over the nation. The short term solution is to combine the actual classroom and the e-learning course into one curriculum so that Thai students will have a chance to ask questions and meet their teachers in person frequently, and also be offered the convenient way to study from home.

In this research, three objectives of scrutinizing the “Media Equation and E-learning in the Thai Cultural Context” have been achieved as the researcher has already acknowledged that e-learning is an inappropriate way of learning for Thai students in some degrees depending on various aspects, such as respect and reliability. Also, the solutions of improving the design of e-learning in Thailand have previously been suggested. Lastly, the understanding of the Media Equation theory in Thailand in the psychological viewpoint has been further discussed and realized that Thai students do not treat and behave towards the computer the same way as they do to other people.

Recommendation for Further Study

This section is to suggest for further research that age and gender of Thai students should be included in the next study design as these two factors might show a better representation why Thai students do not admire asynchronous media. The new IT generation may perhaps suit only the new generation or younger people.

Besides, although the present study selected sample groups from five universities in Thailand and expected to have participants, who were born and raised in Thailand involved, there was no demographic information collected to present the certain racial or ethnic groups. This might not be able to sufficiently represent the population as a whole, and would better take it into consideration as a vital factor in the future research.

Moreover, another area of analysis should not be overlooked. For example, the result of participants at the same universities but different fields of study might represent some meanings if the result of one field is a way far from the other, and vice versa. It can be a result of another intervening factor.

Finally, computer literacy level of participants could increase accuracy of the research because they are really the Internet users and use these communication technologies for their daily activities. Therefore, it is a good idea if there will be pre-test on

computer skills of participants prior to the beginning of the survey. The findings will subsequently be more meaningful in this perspective.



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สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย



APPENDICES

สถาบันวิทยบริการ
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Appendix A: Questionnaire

English Version

Pre-requisite: The answerers must be those who enrolled or are currently enrolling the e-learning course at the universities or other institutions in Thailand.

E-learning is in a various form of teaching and learning that convey content via electronic process or equipment, such as CD, VCD, DVD, Internet, Intranet, Extranet, Satellite, etc. The new trend of teaching and learning has become more popular in Thailand, namely computer based training, Web-based learning, online learning, and real time video conference classroom.

Section 1 – Personal Information

1. Age:

- | | |
|---------------------------------------|-------------------------------------|
| <input type="checkbox"/> Less than 26 | <input type="checkbox"/> 26 – 30 |
| <input type="checkbox"/> 31 – 35 | <input type="checkbox"/> 36 – 40 |
| <input type="checkbox"/> 41 – 45 | <input type="checkbox"/> 46 or over |

2. Gender:

- | | |
|-------------------------------|---------------------------------|
| <input type="checkbox"/> Male | <input type="checkbox"/> Female |
|-------------------------------|---------------------------------|

3. Religion:

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> Buddhism | <input type="checkbox"/> Christendom |
| <input type="checkbox"/> Muslim | <input type="checkbox"/> Sikh |
| <input type="checkbox"/> Others, please specify | |

4. Education Background – The highest degree that you have completed.

- | | |
|---|---|
| <input type="checkbox"/> High School | <input type="checkbox"/> High Vocational School |
| <input type="checkbox"/> Bachelor Degree | <input type="checkbox"/> Master Degree |
| <input type="checkbox"/> Others, please specify | |

5. Career

- Business Owner Government Officer
 Employee Student
 Others, please specify

Section 2 – Learning Behaviors

6. What is the most important reason you decide to enroll the e-learning program?

- Interested in course content Want to try new thing
 Friend's suggestion Its convenience
 Others, please specify

7. What degree do/did you study while enrolling e-learning?

- Certificate Diploma
 Bachelor Degree or equivalence Master Degree or equivalence
 Others, please specify

8. Which fields of study do/did you enroll by means of taking the e-learning course? (You can answer more than 1 item.)

- Arts Engineering
 Communication Arts Science
 Business Administration Education
 Others, please specify

9. In the e-learning course you enrolled, what type of media have you experienced? (You can answer more than 1 item.)

- Text/Image Audio/Video
 Real-time video conference classroom (2-way communication)
 Others, please specify

10. Refer to the above question, what form of e-learning do you most prefer and why?

Most preferable e-learning material:.....

Reason:.....

Section 3 – Attitudes towards E-Learning

Remark: real-time video conference classroom is a classroom, where teachers and students can both interact, such as students can raise their hands and ask a question.

Remark: E-book/Tape Cassette/Video Tape refer to e-learning content that is contained on CD, DVD, VCD (e-learning software), or other forms of media that gather learning content on the Internet.

11. How much do you feel gratitude towards your teachers because they are a person who gives you knowledge?

	Most	High	Medium	Low	Least
Agree with this belief					

12. In the case that lesson taught is equally good, how much do you feel gratitude to each type of teachers?

	Most	High	Medium	Low	Least
A. Teacher in video conference classroom					
B. Teacher in actual classroom					

13. Do you agree with the proverb in Thai culture that “teachers are the lighter”?

	Most	High	Medium	Low	Least
Agree with this analogy					

14. In Thai culture, we do not walk over textbooks as we believe that they are things to be respected, do you agree with this belief?

	Most	High	Medium	Low	Least
Agree with this belief					

15. In the case that lesson taught is equally good, how much do you pay respect to each type of teachers?

	Most	High	Medium	Low	Least
A. E-Book/Online Journals					
B. Audio/Video					
C. Teacher in video conference classroom					
D. Teacher in actual classroom					

16. In the case that lesson taught is equally good, how much are you comfortable to study with each style of learning method?

	Most	High	Medium	Low	Least
A. Learn from E-Book/Online Journals					
B. Learn from Audio/Video					
C. Learn with teacher in video conference classroom					
D. Learn with teacher in actual classroom					

17. In the case that lesson taught is equally good, how much do you fear each type of teachers?

	Most	High	Medium	Low	Least
A. Teacher in video conference classroom					
B. Teacher in actual classroom					

18. In the case that lesson taught is equally good, how much do you obey each type of teachers?

	Most	High	Medium	Low	Least
A. E-Book/Online Journals					
B. Audio/Video					
C. Teacher in video conference classroom					
D. Teacher in actual classroom					

19. In the case that lesson taught is equally good, how much are you concerned to interrupt your teacher during the lesson in each type of learning method?

	Most	High	Medium	Low	Least
A. Learn with teacher in video conference classroom					
B. Learn with teacher in actual classroom					

20. In the case that lesson taught is equally good, how much do you rely on each type of teachers?

	Most	High	Medium	Low	Least
A. E-Book/Online Journals					
B. Audio/Video					
C. Teacher in video conference classroom					
D. Teacher in actual classroom					

21. In the case that lesson taught is equally good, how much can you concentrate on lesson during each style of learning method?

	Most	High	Medium	Low	Least
A. Learn from E-Book/Online Journals					
B. Learn from Audio/Video					
C. Learn with teacher in video conference classroom					
D. Learn with teacher in actual classroom					

22. In the case that lesson taught is equally good, how much knowledge have you gained when studying with each type of teachers?

	Most	High	Medium	Low	Least
A. E-Book/Online Journals					
B. Audio/Video					
C. Teacher in video conference classroom					
D. Teacher in actual classroom					

23. In the case that lesson taught is equally good, how much are you confident to perform well in the exam studying with each type of teachers?

	Most	High	Medium	Low	Least
A. E-Book/Online Journals					
B. Audio/Video					
C. Teacher in video conference classroom					
D. Teacher in actual classroom					



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Thai Version

เงื่อนไขในการทำแบบสอบถาม: ผู้ตอบแบบสอบถามจะต้องเป็นผู้ที่ลงทะเบียนเรียนหรือเป็นผู้ที่เคยลงทะเบียนเรียน e-learning ที่มหาวิทยาลัยหรือสถาบันที่เปิดสอนโปรแกรมดังกล่าวในประเทศไทย

แบบสอบถาม**การปฏิบัติต่อเทคโนโลยีในฐานะครูของผู้เรียนทางไกลในบริบทวัฒนธรรมไทย**

E-Learning คือ การเรียนหรือการสอนในรูปแบบใดก็ได้ ซึ่งถ่ายทอดเนื้อหาผ่านทางสื่ออิเล็กทรอนิกส์ เช่น ซีดี วีซีดี ดีวีดี เครื่องข่ายอินเทอร์เน็ต อินทราเน็ต เอ็กซทราเน็ต ทางสัญญาณโทรทัศน์ สัญญาณดาวเทียม (Satellite) เป็นต้น ซึ่งการเรียนลักษณะนี้ได้มีการนำเข้าสู่ตลาดเมืองไทยอย่างแพร่หลายในปัจจุบัน เช่น คอมพิวเตอร์ช่วยสอนด้วยซีดีรอม, การเรียนด้วยวีดีโอผ่านโทรทัศน์วงจรปิด, การเรียนผ่านเว็บ (Web-Based Learning), การเรียนออนไลน์ (Online Learning), การเรียนทางไกลผ่านดาวเทียม, หรือ การเรียนด้วยวีดีโอผ่านออนไลน์ เป็นต้น

ข้อมูลส่วนตัว

1. อายุ

 น้อยกว่า 26 26 – 30 31 – 35 36 – 40 41 – 45 46 หรือ มากกว่า

2. เพศ

 ชาย หญิง

3. ศาสนา

 พุทธ คริสต์ อิสลาม ซิกข์ อื่นๆ โปรดระบุ

4. การศึกษาที่สำเร็จขั้นสูงสุด

- มัธยมศึกษา หรือ ปวช. อนุปริญญา หรือ ปวส.
 ปริญญาตรี หรือ เทียบเท่า ปริญญาโท หรือ เทียบเท่า
 อื่นๆ โปรดระบุ

5. อาชีพ

- ธุรกิจส่วนตัว ข้าราชการ หรือ รัฐวิสาหกิจ
 พนักงานบริษัทเอกชน นักเรียน นักศึกษา
 อื่นๆ โปรดระบุ

พฤติกรรมการเรียน

6. เหตุผลที่สำคัญที่สุดที่ทำให้ท่านตัดสินใจเลือกที่จะเรียนผ่านระบบ e-learning คืออะไร

- สนใจในตัวเนื้อหาบทเรียน อยากรองอะไรที่แปลกใหม่
 เป็นหลักสูตรบังคับ ความสะดวกสบายในการเรียน
 อื่นๆ โปรดระบุ

7. ระดับการศึกษาที่สมัครเรียนในระบบ e-learning

- ประกาศนียบัตร อนุปริญญา
 ปริญญาตรี หรือ เทียบเท่า ปริญญาโท หรือ เทียบเท่า
 อื่นๆ โปรดระบุ

8. สาขาวิชาที่เรียนหรือเคยเรียนในระบบ e-learning (เลือกตอบได้มากกว่า 1 ข้อ)

- ภาษาศาสตร์ วิศวกรรมศาสตร์
 นิเทศศาสตร์ วิทยาศาสตร์
 บริหารธุรกิจ ศีกษาศาสตร์
 อื่นๆ โปรดระบุ

9. ท่านเคยมีประสบการณ์ในการใช้สื่อการเรียนการสอนผ่านระบบ e-learning แบบใด (เลือกตอบได้มากกว่า 1 ข้อ)

- ตำราออนไลน์ (ตัวหนังสือและภาพ) เทปบันทึกเสียงและ/หรือภาพ
- การเรียน Real-time ผ่านห้องเรียนทางไกล (การสื่อสาร 2 ทาง)
- อื่นๆ โปรดระบุ

10. จากคำถามข้างบน ท่านชอบรูปแบบการนำเสนอสื่อการสอนของ e-learning ในรูปแบบใดมากที่สุด เพราะอะไร

ชนิดของสื่อคือ.....เหตุผล.....

ทัศนคติต่อการเรียนในระบบ E-learning

ข้อควรรู้ ห้องเรียนทางไกล คือ ห้องเรียนที่สอนผ่านระบบ real-time video conference ซึ่งเป็นห้องเรียนที่ผู้เรียนและผู้สอนสามารถมีปฏิสัมพันธ์ต่อกันได้ เช่น การถามคำถาม

ข้อควรรู้ ตำราออนไลน์ (ตัวหนังสือและรูปภาพ) และ เทปบันทึกเสียง/เทปบันทึกภาพ เนื้อหาบทเรียนที่บรรจุอยู่ในแผ่นซีดี แผ่นดีวีดี และแผ่นวีซีดี (โปรแกรมคอมพิวเตอร์ e-learning) หรือตัวสื่อใดๆก็ตามที่ใช้เป็นแหล่งรวบรวมข้อมูลของความรู้บนอินเทอร์เน็ต

11. ท่านเห็นด้วยกับความคิดที่ว่า ครูเป็นผู้มีบุญคุณต่อท่านในฐานะที่เป็นผู้ให้ความรู้ และท่านควรกตัญญูรู้คุณเป็นการตอบแทนมากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
เห็นด้วยกับความคิดเห็นข้างบน					

12. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านจะมีความกตัญญูต่อครูประเภทต่างๆมากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. ครูสอนผ่านห้องเรียนทางไกล					
ข. ครูสอนในห้องเรียน					

13. ท่านเห็นด้วยกับคำกล่าวที่ว่า “ครูคือผู้ให้แสงสว่าง” มากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
เห็นด้วยกับคำกล่าวข้างบน					

14. ท่านรู้สึกเห็นด้วยกับความเชื่อนี้ที่ว่า คนไทยจะไม่เดินข้ามหนังสือเรียนเพราะว่าถือเป็นสิ่งสมควรแก่การเคารพบูชาอย่างน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
เห็นด้วยกับความเชื่อข้างบน					

15. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านจะให้ความเคารพต่อครูประเภทต่างๆ มากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. ตำราออนไลน์					
ข. เทปบันทึกภาพและ/หรือเสียงของบทเรียน					
ค. ครูสอนผ่านห้องเรียนทางไกล					
ง. ครูสอนในห้องเรียน					

16. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านรู้สึกสบายใจในการเรียนประเภทต่างๆ มากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. เรียนจากตำราออนไลน์					
ข. เรียนจากเทปบันทึกภาพและ/หรือเสียง					
ค. เรียนกับครูจริงๆ ที่สอนผ่านห้องเรียนทางไกล					
ง. เรียนกับครูจริงๆ ที่สอนในห้องเรียน					

17. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านกลัวการถูกลงโทษจากครูประเภทต่างๆ มากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. ครูสอนผ่านห้องเรียนทางไกล					
ข. ครูสอนในห้องเรียน					

18. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านเชื่อฟังครูประเภทต่างๆ มากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. ตำราออนไลน์					
ข. เทปบันทึกภาพและ/หรือเสียงของบทเรียน					
ค. ครูสอนผ่านห้องเรียนทางไกล					
ง. ครูสอนในห้องเรียน					

19. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ถ้าท่านจะขัดจังหวะครูผู้สอนในห้องเรียนเกี่ยวกับเนื้อหาที่เรียนอยู่ ท่านจะรู้สึกเกรงใจครูในการเรียนแบบต่างๆมากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. เรียนกับครูจริงๆที่สอนผ่านห้องเรียนทางไกล					
ข. เรียนกับครูจริงๆที่สอนในห้องเรียน					

20. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านให้ความเชื่อถือแก่ครูประเภทต่างๆมากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. ตำราออนไลน์					
ข. เทปบันทึกภาพและ/หรือเสียงของบทเรียน					
ค. ครูสอนผ่านห้องเรียนทางไกล					
ง. ครูสอนในห้องเรียน					

21. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านคิดว่าท่านมีสมาธิใจจดใจจ่อกับบทเรียนในการเรียนแบบต่างๆมากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. เรียนจากตำราออนไลน์					
ข. เรียนจากเทปบันทึกภาพและ/หรือเสียง					
ค. เรียนกับครูจริงๆที่สอนผ่านห้องเรียนทางไกล					
ง. เรียนกับครูจริงๆที่สอนในห้องเรียน					

22. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านคิดว่าท่านได้รับความรู้จากครูที่สอนโดยใช้วิธีต่างๆมากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. ตำราออนไลน์					
ข. เทปบันทึกภาพและ/หรือเสียงของบทเรียน					
ค. ครูสอนผ่านห้องเรียนทางไกล					
ง. ครูสอนในห้องเรียน					

23. ในกรณีที่เนื้อหาบทเรียนเหมือนกัน ท่านมีความเชื่อมั่นว่าจะทำข้อสอบได้ดีจากการเรียนกับครูประเภทต่างๆมากน้อยแค่ไหน

	มากที่สุด	มาก	ปานกลาง	น้อย	น้อยที่สุด
ก. ตำราออนไลน์					
ข. เทปบันทึกภาพและ/หรือเสียงของบทเรียน					
ค. ครูสอนผ่านห้องเรียนทางไกล					
ง. ครูสอนในห้องเรียน					



สถาบันวิทยบริการ
จุฬาลงกรณ์มหาวิทยาลัย

Appendix B: In-Depth Interview Questions

English Version

The interviewee will introduce his/herself prior to the interview session.

Remark: real-time video conference classroom is a classroom, where teachers and students can both interact, such as students can raise their hands and ask a question.

Remark: E-book/Tape Cassette/Video Tape refer to CD, DVD, VCD (e-learning software), or other forms of media that gather learning content on the Internet.

1. Please share general comments about the e-learning course at the university.
2. What do you think about text-based e-learning?
3. What do you think about multimedia-based e-learning?
4. In your view, which one (text-based e-learning vs. multimedia-based e-learning) is better, and why?
5. In your view, what are the differences between learning virtually with the real teacher in another location and learning from e-learning software?
6. Do you feel respectful to textbooks the same way as towards e-learning software?
7. Do you feel respectful to textbooks the same way as towards real teachers in real-time classroom?
8. Do you think that people believe that gratitude is essential in life as it will bring them to become successful due to their religion and/or traditional belief?
9. Do you feel more comfortable to learn something without seeing the teacher face-to-face?
10. Please describe good/bad things about learning via the e-learning content in the following aspects
 - A. Concentration while studying
 - B. Your performance after the lesson complete
 - C. Effectiveness of content you have learnt
11. In your view, is e-learning software reliable for students as if they are real teacher, who they know face-to-face, and why?

12. In your view, are the teacher in a virtual class reliable for students as if they are real teacher, who they know face-to-face, and why?
13. There were many researches proved that online resources were lack of reliability comparing with print resources. However, if the e-learning content has been certified by a reliable institution, will you think it can call back the source credibility?
14. What was the most difficult thing in the virtual learning class that you have experienced?
15. What was the easiest thing in the virtual learning class that you have experienced?
16. What was the most difficult thing to learn with e-learning software that you have experienced?
17. What was the easiest thing to learn with e-learning software that you have experienced?
18. In your view, what is the strength of e-learning in the Thai cultural context?
19. In your view, what is the weakness of e-learning in the Thai cultural context?
20. Do you think e-learning is such an efficient method for Thai students?

Thai Version

ก่อนการสัมภาษณ์ ผู้ถูกสัมภาษณ์จะต้องแนะนำตัวเอง

ข้อควรรู้ ห้องเรียนทางไกล คือ ห้องเรียนที่สอนผ่านระบบ real-time video conference ซึ่งเป็นห้องเรียนที่ผู้เรียนและผู้สอนสามารถมีปฏิสัมพันธ์ต่อกันได้ เช่น การถามคำถาม

ข้อควรรู้ ตำราออนไลน์ (ตัวหนังสือและรูปภาพ) และ เทปบันทึกเสียง/เทปบันทึกภาพ หมายความว่าแผ่นซีดี แผ่นดีวีดี และแผ่นวีซีดี (โปรแกรมคอมพิวเตอร์ e-learning) หรือตัวสื่อที่ใช้เป็นแหล่งรวบรวมข้อมูลของความรู้บนอินเทอร์เน็ต

1. กรุณาเล่าถึงประสบการณ์ทั่วไปในการเรียนผ่านระบบ e-learning ให้ฟังหน่อย
2. ท่านมีความคิดเห็นอย่างไรเกี่ยวกับการเรียนระบบ e-learning ที่มีแต่ตัวหนังสืออย่างเดียว (ไม่มีรูปภาพ ภาพเคลื่อนไหว หรือเสียงประกอบ เป็นต้น)
3. ท่านมีความคิดเห็นอย่างไรเกี่ยวกับการเรียนระบบ e-learning ที่มีสื่อหลายอย่างประกอบกัน เช่น มีตัวอักษร รูปภาพ ภาพเคลื่อนไหว หรือเสียงประกอบ
4. ท่านคิดว่าการเรียนระบบ e-learning ที่เป็นตัวอักษรอย่างเดียว กับ การเรียนระบบ e-learning ที่มีสื่อการเรียนการสอนหลายรูปแบบ อย่างไหนดีกว่า เพราะอะไร
5. ท่านคิดว่าอะไรคือความต่างของการเรียนจากครูผ่านระบบ e-learning แบบ real-time โดยใช้ video conference และ การเรียนด้วยตัวเองจากโปรแกรมคอมพิวเตอร์ e-learning
6. ท่านรู้สึกเคารพต่อหนังสือเรียนเหมือนที่รู้สึกต่อโปรแกรมคอมพิวเตอร์ e-learning หรือไม่ อย่างไร
7. ท่านรู้สึกเคารพต่อหนังสือเรียนเหมือนที่รู้สึกต่อครูที่สอน e-learning ผ่าน video conference หรือไม่ อย่างไร
8. ท่านคิดว่า ความเชื่อเรื่อง “ความกตัญญู” ที่ว่า เป็นสิ่งจำเป็นในชีวิตที่ทุกคนต้องมีเพื่อที่จะสามารถทำให้ท่านประสบความสำเร็จได้ เป็นผลเกี่ยวเนื่องมาจากความเชื่อทางศาสนา ใช่หรือไม่ อย่างไร และท่านเห็นด้วยกับความเชื่อนี้หรือไม่
9. ท่านรู้สึกสบายใจในการเรียนอะไรบางอย่างโดยที่ไม่ต้องเห็นหน้าครูผู้สอน ใช่หรือไม่ เพราะอะไร
10. กรุณาบอกข้อดีและข้อเสียของการเรียน e-learning ในมุมมองต่างๆดังต่อไปนี้
 - ก. ความมีสมาธิใจจดใจจ่อต่อบทเรียน
 - ข. ความสามารถในการทำข้อสอบหลังจากจบบทเรียน
 - ค. ประสิทธิภาพของการเรียนรู้จากสื่อที่เรียน

11. ท่านคิดว่าเนื้อหาในโปรแกรมคอมพิวเตอร์ e-learning นำเชื่อถือได้เสมือนหนึ่งท่านได้เรียนจากครูจริงๆที่สอนต่อหน้าในห้องเรียนหรือไม่ อย่างไร
12. ท่านคิดว่าเนื้อหาที่ครูสอนผ่านระบบ real-time video conference นำเชื่อถือได้เสมือนหนึ่งท่านได้เรียนจากครูจริงๆที่สอนต่อหน้าในห้องเรียนหรือไม่ อย่างไร
13. จากผลการวิจัยที่ผ่านมาพบว่า ข้อมูลข่าวสารความรู้ที่ได้มาจากอินเทอร์เน็ตนั้น ถือได้ว่ามีความน่าเชื่อถือที่ต่ำ เมื่อเทียบกับสื่อสิ่งพิมพ์ อย่างไรก็ตาม ถ้าเนื้อหาในบทเรียนได้รับการรับรองจากสถาบันที่น่าเชื่อถือหรือมีชื่อเสียงเป็นที่ยอมรับของคนในประเทศ ท่านคิดว่าชื่อเสียงของสถาบันจะสามารถเรียกคืนความน่าเชื่อถือจากท่านได้หรือไม่ อย่างไร
14. กรุณาบอกสิ่งที่ท่านคิดว่ายากที่สุดที่ท่านประสบจากการเรียนในระบบ e-learning จากครูผ่านห้องเรียนแบบ real-time
15. กรุณาบอกสิ่งที่ท่านคิดว่าง่ายที่สุดที่ท่านประสบจากการเรียนในระบบ e-learning จากครูผ่านห้องเรียนแบบ real-time
16. กรุณาบอกสิ่งที่ท่านคิดว่ายากที่สุดที่ท่านประสบจากการเรียนในระบบ e-learning จากครูผ่านโปรแกรมคอมพิวเตอร์ e-learning
17. กรุณาบอกสิ่งที่ท่านคิดว่าง่ายที่สุดที่ท่านประสบจากการเรียนในระบบ e-learning จากครูผ่านโปรแกรมคอมพิวเตอร์ e-learning
18. ท่านคิดว่าอะไรเป็นจุดแข็งของการเรียนทางไกลในบริบทของวัฒนธรรมไทย
19. ท่านคิดว่าอะไรเป็นจุดอ่อนของการเรียนทางไกลในบริบทของวัฒนธรรมไทย
20. ท่านคิดว่า e-learning เป็นวิธีการสอนที่เหมาะสมแก่เด็กไทยหรือไม่ อย่างไร

Appendix C: Consent Form

DEPARTMENT OF JOURNALISM
FACULTY OF COMMUNICATION ARTS
CHULALONGKORN UNIVERSITY
INFORMED CONSENT FORM

You are invited to participate in a study entitled “Media Equation and E-Learning in Thai Cultural Context”. Please read this form carefully, and feel free to ask question you might have.

Researcher: Sarinthorn Chuchatpong, Post-Graduate Student – Department of Journalism,
Faculty of Communication Arts, Chulalongkorn University.

This consent form, a copy of which has been given to you, is only part of the process of informed consent. It should give you basic overview of what the research is all about and what your participation will involve. If you would like more details about something mentioned here, or further information, please do not hesitate to ask. Please take the time to read this form carefully and to understand any accompanying information.

This research is concerned with evaluating the human interaction between students and computers through the use of e-learning in the Thai cultural context. The objective of this study is to determine whether Thai culture has an impact on altering the online learning effectiveness.

The interview session will require 30 minutes from each participant to answer 10 questions about your experience in relation with e-learning. At the end of the interview, you will be given more information about the goal of this study, and there will be time for you to ask questions about the research if needed.

As one way of thanking you for your precious time, we will be pleased to make a summary of the result in this study available to you after this research has been completed. The summary will outline the research and discuss about the findings as well as recommendations. If you would like to receive a copy of this summary, please write down your e-mail address below.

Your E-mail Address: _____

All of the information collected in this interview session will be stored so that your name is not associated with it. The research materials will also be kept safely throughout the entire investigation.

You are free to withdraw from this study at any time without penalty and without losing any promised benefits. If you withdraw, your data will be deleted from the study and destroyed. Furthermore, you are free to not answer specific items or questions that you feel offensive or uncomfortable to do so. Your continued participation should be as informed as your initial consent; therefore, you should feel free to ask for clarification throughout your participation.

Your signature on this form indicates that you have understood to your satisfaction regarding participation in this research and agree to act as a participant. If you have further questions about this study as a participant, please contact Sarinthorn Chuchatpong (E-mail: sarinthornc@chevron.com).

Interviewee's Signature

Date: ___ / ___ / ___

Interviewer's Signature

Date: ___ / ___ / ___

BIOGRAPHY

My name is Sarinthorn Chuchatpong. I was born on May 9th, 1983 in Bangkok, Thailand. I graduated from Queensland University of Technology, Brisbane, Australia in 2004 with a Bachelor Degree in Information Technology majoring Information Systems. In the last year of my study, I was selected to be an exchange student to participate in the exchange program at California State University, San Francisco, US.

I have been working for Chevron Thailand Exploration and Production Limited as an Engineering Assistant, Production Engineering Department since November 2005. However, I will start a new job with Chevron Thailand Exploration and Production Limited as a Production Administrator, Information Technology Department in June 2007.



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