



A Comparative Study between International and Thai Students'
Attitude towards Internet Usage

by

Ms. Ei Myat Soe

A Final Report of the Three-Credit Course
CE 6998 Project

Submitted in Partial Fulfillment
of the Requirements for the Degree of
Master of Science
in Computer and Engineering Management
Assumption University

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The Graduate School of Assumption University has approved this final report of the three-credit course, CE 6998 PROJECT, submitted in partial fulfillment of the requirements for the degree of Master of Science in Computer and Engineering Management.


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ABSTRACT

This research was conducted to compare the International and Thai students' attitude towards the Internet usage at the Assumption University.

The research strived to search as much as possible the relevant information concerning 2 sections. There were (1) The personal information and (2) The opinions of respondents. Among these two sections, this research was focused on section 2 into 4 parts as follow: (1) Level of the Internet Usage, (2) Level of the Internet Usage as Educational Tool, (3) Level of satisfaction on the Internet Usage and (4) Level of the satisfaction toward the Internet Service Provided by Assumption University.

To achieve the objective, the questionnaire is the research tool for gathering data. After collecting 560 sets of questionnaires, the gathered data is analyzed by SPSS program. The study shows that most Assumption University student often used the Internet for their daily lives. They realize the significant of the Internet which can help and comfort their lives. International students use the Internet as education tools more than Thai students on the Internet. Both International and Thai students have some problems on Internet Service Provided by Assumption University. Most of the problems could be solved by finding appropriate solutions.

The result of this project can be the information to improve the Internet service provided by Assumption University.

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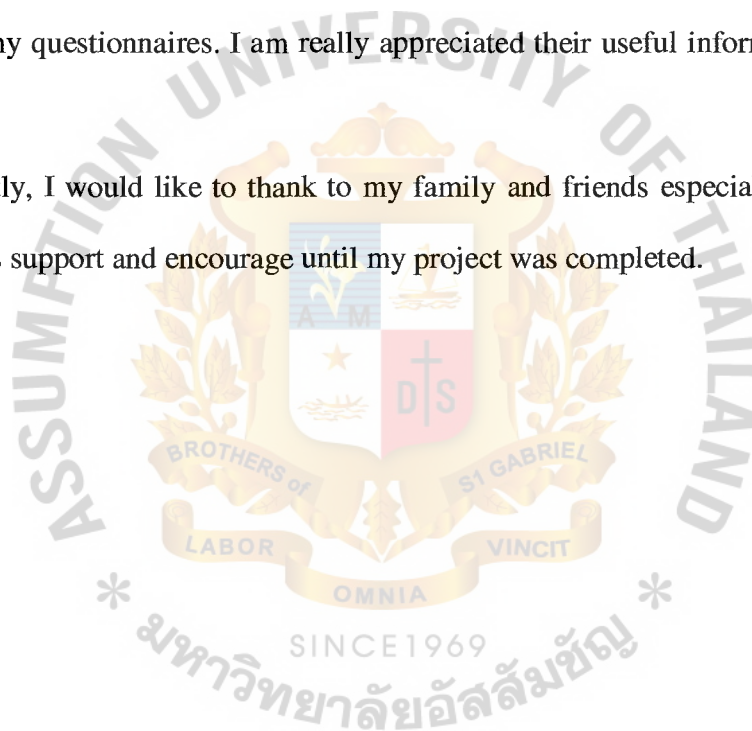


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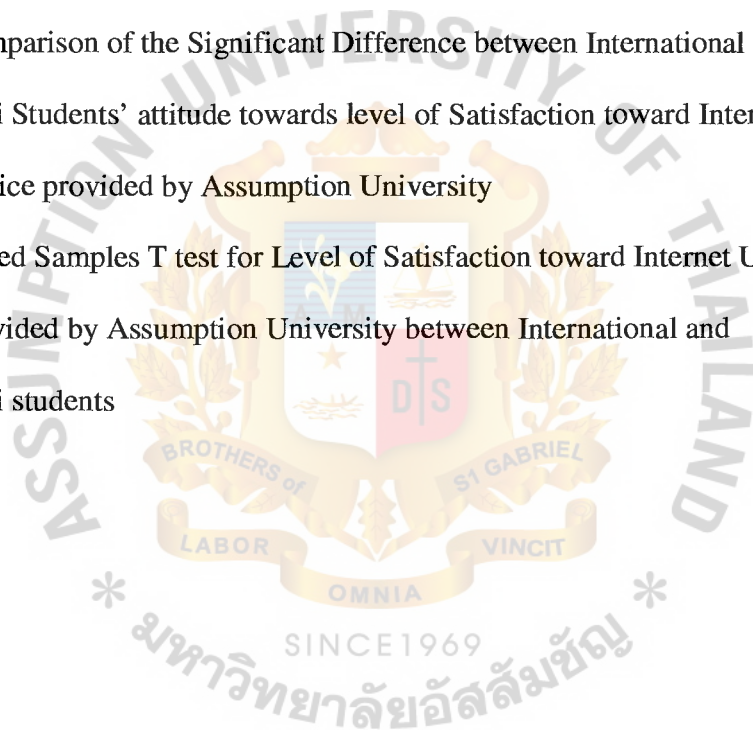
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I. INTRODUCTION

1.1 Background

The communication technology can shrink and collapse space, time and cost barriers in human communication and the global has been turned into a village. Human communications are the sharing of knowledge and experiences, the giving or receiving of orders and cooperation. Common forms of human communication include body language, sign language, speaking, writing, gestures, and broadcasting. For global communication, the broadcasting is the most important one.

The new technologies are developing and changing rapidly day by day. This time is the technology era. Nowadays, people realize how important the technologies are and they should learn and apply to use them in their daily life. Internet is a very important sector of the new communication technology. Moreover, Internet can powerfully extend the ability to find, manage, and share information. The Internet has a rich set of useful features and functions.

Internet is publicly available worldwide system of interconnected computer networks that transmit data by packet switching using a standardized Internet Protocol (IP) and many other protocols. Nowadays, Internet is the largest and widely used global network connecting millions of computers. Organizations are using Internet to exchange information internally (intranet) and externally (extranet) with other organizations.

Internet can be used in many ways and the following are some features of Internet and they provided advantages for users.

- (1) Blog - A blog is information that is instantly published to a Web site. Blog scripting allows someone to automatically post information to a Web site. The information first goes to a blogger Web site. Then the information is automatically inserted into a template tailored for your Web site.

- (2) E-mail - A system of exchanging messages by means of computers attached to a network.
- (3) Chat - A form of synchronous online communication. A discussion between any number of logged-in users to have a typed, real-time, on-line conversation, either by all users logging into the same computer, or more commonly nowadays, via a network.
- (4) FTP - Using file transfer protocol software to receive from upload or send to download files (text, pictures, spreadsheets, etc.) from one computer/server to another.
- (5) Usenet Newsgroup - A way to discuss as a group on electronic bulletin boards.
- (6) Listserv - An e-mail list of e-mail addresses of people with common interests. Software enables people who belong to a list to send messages to the group without typing a series of addresses into the message header. Usually members of the group in the listserv have to subscribe to the mailing list.
- (7) Telnet - a program that you can use to log in to another computer ("host") on the Internet and then use its functions. Some web browsers use Telnet as a "helper application" to connect to a remote machine.
- (8) World Wide Web (WWW) - A hypermedia information storage system which links computer-based resources around the world. Computer programs called Browsers enable words or icons called hyperlinks to display text, video, graphics and sound on a computer screen. The source of the material is at a different location - a different file in the same directory, a file in another computer, which can be located anywhere in the world.

- (9) WAIS is the way to locate files in databases by using keywords.
- (10) Bookmark - a way of storing your favorite sites on the Internet. Browsers like Netscape or Internet Explorer let you to categorize your bookmarks into folders.
- (11) A gopher is the way to search database of documents, software and data files available for downloading.

In the above list, some features of Internet are shown. A worldwide network of computers can be accessed via the campus computer network. The Internet allows local computer users to find and use databases on computers of other academic institutions, research institutes, private companies and government agencies. Internet is the tool of transfer knowledge especially for the education field.

People from all parts of the world can link all information and knowledge from other parts of the world by Internet. In learning and business area, e-learning and e-commerce are provided by Internet. Assumption University (ABAC) is the one of the universities that focuses on all progression of new technologies especially for Internet. The university realizes the importance of Internet towards human life and has the intention to develop students of ABAC as knowledgeable persons who possess knowledge, are responsible to society and updated technologies.

Assumption University is the first university which encourages the students to use the Internet as compulsory. Due to this opportunity, most of the Assumption University students are familiar with Internet and some may get a chance to be an expert in that field. Students use the Internet to search for information in order to prepare for their courses, reports or projects.

This research will focus on comparison between International and Thai students' Internet usage at Assumption University. It will show the levels of Internet usage and

identifying factors influencing the students to use Internet as educational tools. After the results come out, there will be many benefits for Assumption University to develop course curriculum and the interested persons who want to develop the usage of Internet in their lives.

1.2 Objectives

The objectives of the study are as follows;

- (1) To compare the attitude between International and Thai students in using Internet.
- (2) To learn the Internet usage levels of International and Thai students.
- (3) To compare the Internet usage as an educational tools between International and Thai students.
- (4) To learn how they use Internet effectively.

1.3 Scope

The method of this project is survey type. The main purpose of this project is to study the level of Internet usage between International and Thai students by data collection. Moreover, the project will emphasize on the reason for using Internet as educational tools and attitude toward it.

The sample groups are International and Thai students who are studying at Assumption University, including Master's Degree programs only. The students who have already graduated will not be included in this project.

1.4 Expected Benefits

In the globalized society, Internet is very influential to human life. It becomes the tools of communication and it is used to fulfill the purposes of knowledge, business, education, etc. It can narrow the scope of the world and it is easy to link to all worldwide networks. Assumption University is the university which aimed to fulfill all technologies

updated to students to be the tools for them to develop themselves. Most students in Assumption University can use Internet but at different levels. So this research will provide all AU students, staff, the faculty and people who are interested in Internet as the following benefits:

- (1) Understand the opinion and needs of International and Thai students for using Internet as educational tools.
- (2) Realize the importance of Internet towards human life and can be used as the tool to gain for wider knowledge.
- (3) The recommendation is for the consideration of university's improvement of more efficient service.

1.5 Research Methodology

Data will be collected by using questionnaire to survey Assumption University students' attitude.

1.6 Limitation and Delimitation

The data which needed for this project are collected by using questionnaire to International and Thai students who are studying in Master's Degree program at Assumption University as sample group.

The doctoral students, the undergraduate's students and the students who have already graduated are not included in the study area of this project.

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II. LITERATURE REVIEW

In the literature review, background and Internet history and Distance learning are emphasized.

2.1 Background and Internet History

Kenneth C.Laudon and Jane P.Laudon (Management information system 2004) and Larry Long and Nancy Long(Computer and information system) provide about Internet as follows:

The Internet is a global network of computers. It is conceptually similar to the world wide telephone network: it allows any connected computer to contact and exchange information with any other computer on the network. It differs from the telephone network in that the form of information is not limited to speech. Instead, the Internet supports the exchange of arbitrary forms of information - most commonly textual, but also supporting audio information, high quality colour images, and even video materials. Furthermore, whereas the telephone network is exclusively person-to-person, allowing only pairs of subscribers to connect at a time, the Internet allows arbitrary groups of computers to interact simultaneously. These technical considerations mean that the Internet can support and mediate new forms of communication and interaction between computers - and thus between people - that have not previously been feasible.

The Internet is a global resource connecting millions of users; it began as an experiment over 20 years ago by the United States; specifically, its Department of Defense.' Despite its militaristic roots, today's environment of the Internet was envisioned. The Internet originated as a tool for the global Academic community, and virtually all Universities in the world now provide Internet access to academic staff; it has become an indispensable tool to academic research. But access is now rapidly expanding out of education to commercial and governmental organizations; widespread Internet connectivity

has already become

The Internet is technically a "generic" data communications network: it provides only the communications infrastructure. A wide variety of actual "services" can be delivered over this underlying infrastructure. There are just two relevant services:

- *Information Publishing*: This service, also referred to as the World Wide Web, allows arbitrary information to be published by an information provider. "Information" here typically means textual information, but can also include images (high quality, colour), audio (speech, music, etc.) and even video. Once information is published "on the Web", it becomes instantly accessible to anybody with an Internet connection.

This form of electronic publishing is preferable to paper publications in many circumstances. There is no "minimum print run" -- the marginal cost of publishing information in this way is very small, and does not depend at all on how many people access it. The information is instantly (literally, within seconds) available worldwide, to anyone who wants it. It is also, in effect, automatically archived; that is, once published, it stays accessible, worldwide, indefinitely. The information can be kept absolutely up to date, without the need to recirculate revised copies - all interested readers can always, immediately, access the central, "master" copy. The information can be automatically indexed and searched by computer, which is impossible with conventional printed information.

- *Electronic Messaging*: In its simplest form, this is person to person communication, just like conventional mail, except conveyed electronically: electronic mail. Again, this is typically used with text only, but can be extended to handle all forms of information. It can also be automatically encrypted to provide very high security and confidentiality. It is much faster than paper mail (in many cases e-mail can be

transmitted between arbitrary locations around the world within seconds or minutes), more convenient (no need to find a stamp, or figure out the correct postage), and actually often significantly cheaper.

But the real advantage of e-mail is that it need not be limited to simple person-to-person communication. E-mail "mailing lists" or "conferences" can be easily established. In this case, all messages sent by any participant are copied to all the others. The result is a very flexible forum whereby people in arbitrary locations around the world can carry on an extended and coordinated discussion. Such discussion groups have already been established for tens of thousands of different topics, and new groups are being set up all the time. This form of group communication is effectively impossible with conventional paper mail, due to the time delays, and the mechanics of copying all the correspondence; but it is easy with e-mail.

The Internet was the result of some visionary thinking by people in the early 1960s who saw great potential value in allowing computers to share information on research and development in scientific and military fields. J.C.R. Licklider of MIT, first proposed a global network of computers in 1962, and moved over to the Defense Advanced Research Projects Agency (DARPA) in late 1962 to head the work to develop it. Leonard Kleinrock of MIT and later UCLA developed the theory of packet switching, which was to form the basis of Internet connections. Lawrence Roberts of MIT connected a Massachusetts computer with a California computer in 1965 over dial-up telephone lines. It showed the feasibility of wide area networking, but also showed that the telephone line's circuit switching was inadequate. Kleinrock's packet switching theory was confirmed. Roberts moved over to DARPA in 1966 and developed his plan for ARPANET.

The Internet, then known as ARPANET, was brought online in 1969 under a

contract let by the renamed Advanced Research Projects Agency (ARPA) which initially connected four major computers at universities in the southwestern US (UCLA, Stanford Research Institute, UCSB, and the University of Utah). The contract was carried out by BBN of Cambridge, MA under Bob Kahn and went online in December 1969. By June 1970, MIT, Harvard, BBN, and Systems Development Corp (SDC) in Santa Monica, Cal. were added. By January 1971, Stanford, MIT's Lincoln Labs, Carnegie-Mellon, and Case-Western Reserve U were added. In months to come, NASA/Ames, Mitre, Burroughs, RAND, and the U of Illinois plugged in.

The Internet was designed in part to provide a communications network that would work even if some of the sites were destroyed by nuclear attack. If the most direct route was not available, routers would direct traffic around the network via alternate routes. The early Internet was used by computer experts, engineers, scientists, and librarians. There was nothing friendly about it. There were no home or office personal computers in those days, and anyone who used it, whether a computer professional or an engineer or scientist or librarian, had to learn to use a very complex system.

E-mail was adapted for ARPANET by Ray Tomlinson of BBN in 1972. He picked the @ symbol from the available symbols on his teletype to link the username and address. The telnet protocol, enabling logging on to a remote computer, was published as a Request for Comments (RFC) in 1972. RFC's are a means of sharing developmental work throughout community. The ftp protocol, enabling file transfers between Internet sites, was published as an RFC in 1973, and from then on RFC's were available electronically to anyone who had use of the ftp protocol. The Internet matured in the 70's as a result of the TCP/IP architecture first proposed by Bob Kahn at BBN and further developed by Kahn and Vint Cerf at Stanford and others throughout the 70's. It was adopted by the Defense Department in 1980 replacing the earlier Network Control Protocol (NCP) and universally

adopted by 1983.

The Unix to Unix Copy Protocol (UUCP) was invented in 1978 at Bell Labs. Usenet was started in 1979 based on UUCP. Newsgroups, which are discussion groups focusing on a topic, followed, providing a means of exchanging information throughout the world. While Usenet is not considered as part of the Internet, since it does not share the use of TCP/IP, it linked unix systems around the world, and many Internet sites took advantage of the availability of newsgroups. It was a significant part of the community building that took place on the networks.

Similarly, BITNET (Because It's Time Network) connected IBM mainframes around the educational community and the world to provide mail services beginning in 1981. Listserv software was developed for this network and later others. Gateways were developed to connect BITNET with the Internet and allowed exchange of e-mail, particularly for e-mail discussion lists. These listservs and other forms of e-mail discussion lists formed another major element in the community building that was taking place.

In 1986, the National Science Foundation funded NSFNet as a cross country 56 Kbps backbone for the Internet. They maintained their sponsorship for nearly a decade, setting rules for its non-commercial government and research uses. As the commands for e-mail, FTP, and telnet were standardized, it became a lot easier for non-technical people to learn to use the nets.

ARPANET designed to support military research into computer communications. From its inception, ARPANET was built on a key assumption: the network is unreliable. Translating this into more practical English, the network was designed to operate during a nuclear attack as a means of allowing data to find their ways to their destinations and to rely upon many computers in many places. A nuclear blast or routine network outage would not impair the webs of communication paths. The core of the design was a computer

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that would act as a switch to route the packets of data back and forth among their sources and destinations.

The model for the design was somewhat like the American Telephone & Telegraph company's telephone system in the United States. Each computer was, and is still today, connected to a local switch from which all other computers can be contacted. The designers engineered additional features into the packet scheme to make certain that data arrived as they were sent. Almost as a by-product of reliability was a foreshadowing of what is now called client-server architecture: in effect, a larger machine linked to smaller machines which could in turn be linked to other computers. Communication took place between the source and destination computer. The network required a computer to accept messages or data packets and keep the pipeline filled. If one of these traffic-cop computers failed, the rest of the network was not affected.

There are some terminologies of the Internet.

AVI - (Audio Video Interleaved) A Microsoft Corporation multimedia video format. It uses waveform audio and digital video frames (bitmaps) to compress animation

Bandwidth - The capacity of an electronic line, such as a communications network or computer channel, to transmit bits per second (bps).

Bitmap - A representation, consisting of rows and columns of dots, of a graphics image in computer memory. The value of each dot (whether it is filled in or not) is stored in one or more bits of data. For simple monochrome images, one bit is sufficient to represent each dot, but for colors and shades of gray, each dot requires more than one bit of data.

Bits and bytes – Bit stands for binary digit: 0 or 1. A byte is made up of 8 bits. It takes 1 bytes to store one ASCII character ASCII stands for the American Standard Code for Information interchange. The combination of bits (which makes up one byte) represents the letters below.

- A 01000001
- B 01000010
- C 01000011

RAM is usually measured in MB. Hard disk spaces are usually measured in gigabytes.

Blog - A blog is information that is instantly published to a Web site. Blog scripting allows someone to automatically post information to a Web site. The information first goes to a blogger Web site. Then the information is automatically inserted into a template tailored for your Web site.

Bookmark - a way of storing the favorite sites on the Internet. Browsers like Netscape or Internet Explorer let you to categorize your bookmarks into folders.

Boolean logic - a type of logic (using **AND**, **OR**, **NOT** operators, for example) used by search engines to find information on the Internet and in electronic databases. (For example, to find computer viruses instead of human viruses, you might try the keywords "computers and viruses.")

Browser - A software program that allows users to access the Internet.

CGI (Common Gateway Interface script) - a specification for transferring information between a Web server and a CGI program, designed to receive and return data. The script can use a variety of languages such as C, Perl, Java, or Visual Basic. Many html pages that contain forms use a cgi program to process the data submitted by users/clients.

Chat - real-time, synchronous, text-based communication via computer.

Cookie - Information (in this case URLs, Web addresses) created by a Web server and stored on a user's computer. This information lets Web sites the user visits to keep of a user's browsing patterns and preferences. People can set up their browsers to accept or not accept cookies.

Cyberculture - "a collection of cultures and cultural products that exist on and/or are made

possible by the Internet, along with the stories told about these cultures and cultural products." David Silver, *"Introducing Cyberculture,"* Resource Center for Cyberculture Studies:

Digit - A single character in a numbering system. In decimal, digits are 0 through 9. In binary, digits are 0 and 1. The 0s and 1s equate to "on and off functions. Digitization allows for perfect copying. When text, music, voice and video are digitized, they can be electronically manipulated, preserved and regenerated without degradation of quality at high speed. Each copy of a computer file is exactly the same as the original.

Domain Name - A method of identifying computer addresses. Your e-mail address has a domain address. If you have an "edu" at the end of your e-mail address that means your account is affiliated with an educational institution. A "com" extension means you have a business account. A government account has a .gov suffix.

dpi - (dots per inch) the way the resolution of display and printing is measured.

FAQs - Frequently Asked Questions. A list of questions and answers to explain products and troubleshoot problems.

FTP - Using file transfer protocol software to receive from (upload) or send to (download) files (text, pictures, spreadsheets, etc.) from one computer/server to another.

Home page - Generally the first page retrieved when accessing a Web site. Usually a "home" page acts as the starting point for a user to access information on the site. The "home" page usually has some type of table of contents for the rest of the site information or other materials. When creating Web pages, the "home" page has the filename "index.html," which is the default name. The "index" page automatically opens up as the "home" page.

HTML - A type of text code in Hypertext Markup Language which, when embedded in a document, allows that document to be read and distributed across the Internet.

HTTP - The hypertext transfer protocol (http) that enables html documents to be read on the Internet.

Hypertext - Text that is non-sequential, produced by writing in HTML (Hypertext Markup Language) language. This HTML coding allows the information (text, graphics, sound, video) to be accessed using HTTP (Hypertext Transfer Protocol).

Hyperlink - Text, images, graphics that, when clicked with a mouse (or activated by keystrokes) will connect the user to a new Web site. The link is usually obvious, such as underlined text or a "button" of some type, but not always.

Instant Messaging (IM) - a text-based computer conference over the Internet between two or more people who must be online at the same time. When you send an IM the receiver is instantly notified that she/he has a message.

World Wide Web (WWW) - A hypermedia information storage system which links computer-based resources around the world. Computer programs called Browsers enable words or icons called hyperlinks to display, text, video, graphics and sound on a computer screen. The source of the material is at a different location - a different file in the same directory, a file in another computer, which can be located anywhere in the world.

The WWW was invented in 1990 by a **CERN** - (European Laboratory for Particle Physics - (<http://www.cern.ch/Public/>) computer scientist. Here is Tim Berners-Lee's original proposal to attempt to persuade CERN management to initiate a global hypertext system, which Berners-Lee called "Mesh" before he decided on the name "World Wide Web" when writing the code in 1990. It was originally conceived and developed for physics collaborations, which require for instantaneous information sharing between scientists working at different universities and institutes all over the world.

2.2 Distance Learning

Picciano, Anthony G.(Distance learning making connections across virtual space and time 2001), Palloff, Rena M. Pratt, Keith, jt. auth.(Building learning communities in cyberspace : effective strategies for the online classroom. 1999) and Bower, Beverly L., ed. Hardy, Kimberly P., jt. ed.(From distance education to e-learning : lessons along the way 2004) provide the knowledge about distance learning. Moreover, the researcher will focus on distance learning by sections as follow:

(1)The definition of distance learning

Distance learning can be defined as a method of instruction delivered primarily by distance using forms of technology such as satellites, computers, teleconferencing networks, televisions/radio broadcasts and other mechanisms. Support programs may be required involving the more conventional institution-based and face-to-face methods of learning but the key component of a distance learning program is delivered outside the institution without face-to-face instruction. One of a group of terms that overlap with each other, including open learning, flexible learning, correspondence courses, and even supported self-study and resource-based learning. The main point about distance learning is that there is geographical distance between the learner and the teacher. For example, the learner is working at home while the teacher is based at a school or college, or is also working from their home. However, this is only one aspect of open or flexible learning. Distance learning may have several names as follows: distance education, distance teaching, open learning, distributed learning, asynchronous learning, telelearning and flexible learning and so on. Several decades ago, the term distance learning was used widely. However, in recent years, the distance learning has become popular in the world. Indeed, the concept of student-centered learning has become popular for all

forms of education whether distance or not, but is especially appropriate when students need to take on greater responsibility for their learning, as is the case when doing so from a distance. Therefore, distance learning will be the basic term used in this study to encompass all the various forms of learning where teacher and student are physically separated. The term distance learning conjures up different images to different people in different settings. Distance learning can refer to a wide variety of instructional delivery processes including correspondence courses, Broadcast television, and computer-mediated instruction.

Distance learners by definition are not in the immediate presence of their instructors, so essential interactions between teachers and students that help clarify information are critical. It is important that instructors facilitate the organization of learning communities. Learning communities are groups of students who meet face-to-face or through electronic means. These groups provide opportunities for students to teach one another, to clarify course-related questions and assignments, to receive academic and social support, and to develop relationships that extend beyond the duration of the telecourses. Faculty promote learning communities by creating reliable means by which learners may interact face-to-face and at a distance through study groups in specified geographic locations, or through listservs or electronic bulletin boards where students can interact freely through email. Questions, responses, or comments may be shared by email with all course participants, several particular participants or just one student, thus encouraging interaction. Palloff and Pratt (1999) indicated that an introverted person might become more successful in an online environment, given the absence of social pressures that exist in face-to-face situations. Conversely, extroverted people may have more difficulty establishing their presence in an online environment. They go

on to identify the following characteristics common to students attracted to online learning (Palloff and Pratt, 1999): Voluntarily seek further education. Motivated with higher expectations of learning. self-disciplined and goal oriented. The requirements of effective learner support vary depending upon the unique needs and characteristics of the learner and their learning style. One important factor to success appears to be motivation and confidence of the learner. Less confident learners may need more group support than more confident learners. Less motivated students may benefit by more interactions with the teacher. While students take responsibility for interactions in most systems, it appears that systems that which encourage interaction show improved retention.

(2) Distance Learners Needs

(a) Access to resources

Students must have access to information about distance learning in general, about how to be a successful distance learner, and about the specific institution(s) and program(s) in which they are interested. In addition, they must have access to library resources and a way to purchase books and supplies. They must also have access to people at the institution to assist them in answering questions and solving problems.

(b) Negotiation of the process

Students need help with maneuvering and succeeding in the complex environment of a college or university. For example, the admissions and financial aid processes can be difficult to negotiate. Students need to be acclimated to the institution. Registration has historically been a difficult process with which students need help. And students with special needs such as physical, cognitive, or emotional disabilities may need additional assistance.

(c) Advising/personal development

Students encounter many experiences and personal crises while in college. These may be academic, such as which course or major to select. They may also be personal, such as exploring or redefining one's identity, coping with a loss, balancing competing life roles, or exploring or redefining one's value system.

(d) Skill development

Students are in a constant process of developing competence. Some skills are directly related to academics, such as the using technology, using one's learning style effectively, study skills, and writing skills. Others are personal, such as developing leadership skills, learning how to conduct a job search from beginning to end, and self-discipline.

(e) Interpersonal

Students need to learn how to interact effectively with other people in many types of situations. Peers are an important part of learning this skill, including people with whom the student is naturally comfortable and from whom the student is different. The development of healthy interpersonal relationships also falls under this category.

(f) Practical application of skills and knowledge

Students need to have the opportunity to use the knowledge and practice the skills that they have learned both within and outside of their coursework. This can be done through community service opportunities, holding leadership positions, or participating in internships or practice during their academic career.

(3) Different kinds of Distance Learning

There are many different kinds of distance learning but the only common kinds were emphasized in this project. They are-

(a) Broadcast Television

An instructor delivering a lecture live over a television network into student homes is a distance learning format that provides for communication by teacher to student via video technology, synchronously (at the same time), from one to many delivery points. This form allows the instructor to conduct the class for hundreds of students. Students do not interact immediately with the instructor but can ask questions using telephone, mail, or e-mail.

(b) Two-ways Videoconferencing

A college professor teaching a course at a main campus that is also being videoconference to a class at a local high school is a format that provides for interaction of teacher to student and student to teacher via video technology, synchronously, in a point-to-point, two way delivery modes. Students can interact immediately and ask questions of the professor and the professor can reply.

(c) Asynchronous Learning Network

An instructor using World Wide Web and group e-mail software to teach an Internet-based course is a form that provides for interaction of teacher to learner and learner to teacher via computer technology, asynchronously (at different times), in a multipoint delivery mode. Students and instructor continually interact but rarely at the same time.

(4) Education and Training on the Internet

One of the chief challenges in training and education today is to find ways to quickly disseminate new policy information, product information, and service-related information to a widely dispersed audience. One cannot rely on traditional

channels for the dissemination of information. In the traditional training environment people often had to wait for months, maybe as long as a year, to get into a required training course. These delays resulted from a shortage of qualified training course. These delays resulted from a shortage of qualified instructors or training facilities and from the personal scheduling conflicts of busy students. In today's business environment, change is a constant. There is a need to create within organizations continuous learning environments that allow employees to easily access the learning resources they need to keep informed about the changes that are occurring in their companies and professions. The Internet offers a basis for creation of flexible learning environments that meet many of the educational and training needs of organizations in today's information society.

Knowledge workers today are constantly confronted with new products and services, policies and procedures, and price structures. These types of changes used to run in 12-24 month planning cycles; today, however, significant changes occur almost on a monthly basis. This phenomenon is especially apparent in the Web software business. These changes in business and industry are causing people to develop new ways to bring geographically dispersed employees up to date quickly. Hewlett-Packard reports that the half-life of a software engineer's knowledge is on the order of two and a half years, half of what the engineer learned in his or her initial training has become obsolete. Without continuously updated training, these engineers can no longer bring the same value to the organization that they did the day they were hired from college. The rapid rate of technological development also means that much of the information a fourth year software engineering student learned in his or her freshman and sophomore years is obsolete upon graduation. There is a need for mechanisms for continuous training and retraining to keep

these professionals knowledgeable in their fields.

The need for perpetual change in curricula may not be as dramatic in some fields as it is in software engineering, but most knowledge workers share a need for continuous training proficient in their jobs. This training is necessary not only for people in technical areas but also for those in sales, service, manufacturing, and human resources. The entire organization needs to remain current so that it can remain competitive.

Corporate executives understand that training and retraining are critical to the success of an organization. However, they also need to understand that changing conditions often necessitate changing training strategies. While face-to-face instruction worked well for many years, it cannot accommodate all of today's training challenges. The rate of change of information and time-to-market pressure dictate the embrace of new delivery systems that can reach large, geographically dispersed audiences in cost-effective, time-efficient ways. In many cases Internet-based distance learning technologies offer the needed solutions.

(a) Web Documents

Web documents are created by using a standard language called Hyper text Markup Language(HTML), which uses short codes called tags to designate graphic elements and links. Clicking on a link brings the documents on the server to a PC's browser. The documents may contain text, images, sounds, movies, or a combination of multimedia elements. Another commonly used Internet term is MIME, which stands for multipurpose Internet mail extension. This is a standardized method for organizing divergent file formats in which the MIME type establishes whether a file format can be read by the browser software's built-in capabilities or whether a suitable helper application is

available to read a file.

Documents are addressed with a uniform resource locator (URL). A URL indicates where the content is located on a networked server; every Internet address has a URL which indicates an organizational affiliation. Browsers provide an easy-to-use “point and click interface to the information on the WWW and make it possible to access documents. Following are some common URL suffixes and the organizational affiliations they represent: .com(commercial), .ed(educational), .gov(government), .mil(military), .net(networking) and .org(noncommercial), URLs from outside the United States often use a two-letter suffix that designates a country, for example, .uk(United Kingdom), .jp(Japan), .ca(Canada), and .nl(Netherlands). Some companies maintain a link to the Internet through a dedicate communication line. Those do not require a dedicated circuit to access the Internet through an Internet Service Provider (ISP). Most individuals access the Internet through ISPs. If user has modern generally with at least 14,400 bits per second (bps) speed-user dial the ISP and log on to a computer that is connected to the Internet. Today’s Internet software and data networking technology make access to training programs virtually ubiquitous for anyone with a Pc and a browser.

2.3 Research Approach

In research approach, there are many ways available to use and some of them are explained in this section. They are experimental research, survey research, observation research, case study, historical research and evaluation. There are differences among these kinds of researches and the explanations of them are as follows:

(1) Experimental Research

The experimental research is used to discover what will happen when

certain variables, independent and dependent, are controlled and manipulated while other variables that could influence them are kept apart.

(2) Survey Research

The survey research usually uses the techniques that can be complex; its primary goal is simple: discover peoples' opinions on a topic. It specifies a central focus, asks questions, and collects data. The more specific the question, the more focused the response. The principal methodology used in survey research is to ask a group of people a set of carefully selected questions to collect their views, values, and beliefs on a topic. Anyone or any agency can use a survey to determine what a population thinks or feels about a plan, issue, policy, event, etc. Most of business companies, schools, the government, television stations, charitable bodies, churches, political parties, and countless other agencies all use survey research.

In this research, there are many sampling methods and survey techniques. First of all, the sampling methods will depend on the objectives of the study, the financial resources available, time limitations, and the nature of the problem under investigation. The major alternative sampling methods can be classified under two headings:

(1) Probability Sampling Methods

Probability sampling methods which always used in which situation that every element of the population has a known, nonzero probability of selection. Probability sampling method can be divided into four categories which are as follows:

(a) Random sampling

Each member of the population to be studied has an equal and independent chance of being chosen to partake in the

sample. There is an equal chance because care has been taken to eliminate bias that one person will be chosen over another. The chance is independent; the fact that one person is selected does not influence the researcher in the selection of another.

(b) Systematic sampling

Subjects are selected in a systematic rather than random manner. For example, individuals can be selected from a list in a certain order.

(c) Stratified sampling

Stratified sample is the probability samples that force sample to be more representative. It is often used as a substitute for simple random sampling. To use this approach, it is necessary to obtain a listing of the population, just as in the case of simple random sampling. The researcher must determine a skip interval and select names based on this skip interval.

This interval can be computed by using the following formula:

$$\text{Skip interval} = \frac{\text{Population size}}{\text{Sample size}}$$

(d) Cluster sample

Cluster sample is the sampling approach used with door-to-door interviewing in which the sampling units are selected in groups to reduce data collection costs.

(2) Nonprobability Sampling Methods

Nonprobability sampling method is the samples that include the selection of specific elements from the population in a nonrandom

manner.

- (a) Convenience samples which is normal used primarily for reasons of convenience.
- (b) Judgment samples are the samples in which the selection criteria are based on personal judgment that the element is representative of the population under study.
- (c) Quota samples are the samples in which quotes are established for population subgroups. Selection is by nonprobability means.



III. RESEARCH METHODOLOGY

3.1 Hypothesis of the Research

(1) Ha: International students use the Internet more often than Thai students.

Ho: International students use the Internet not more often than Thai students.

(2) Ha: International students use the Internet as educational tool more than Thai student.

Ho: International students use the Internet as educational tool not more than Thai student.

(3) Ha: International students have higher level of satisfaction by using the Internet than Thai students.

Ho: International students have not higher level of satisfaction by using the Internet than Thai students.

(4) Ha: International students have higher level of satisfaction toward the Internet service provided by Assumption University.

Ho: International students have not higher level of satisfaction toward the Internet service provided by Assumption University.

3.2 Research Method

This research used descriptive research method which involves collecting data in order to test hypotheses or answer questions concerning the current status of the subject of the study. Related data collection begins with survey of Assumption University students. The nature of this descriptive data is typically collected through a questionnaire survey.

3.3 Data Collection Method

3.3.1 Questionnaire technique:

The researcher collected the primary data by defining 400 questionnaires to survey all graduate students who have already enrolled in the third trimester of January 2007 and they still hold a student status.

3.3.2 Documentary technique:

All secondary data collection of this research are from relevant documents, books and theses concerning Internet Topic.

3.4 Research Tool

After the necessary data were collected, the returned questionnaires were encoded and interpreted by The Statistical program and analyzed in terms of Description statistics; frequency, distributions and cross tab. Descriptive statistics is used to describe or summarize the information of the respondents, such as age, gender, faculty and nationality. The frequency distribution will be summarized with particular value of variable into a percentage value.

The purpose of this research is to compare on Internet usage in an educational intuition. The research tool is questionnaire, which is divided into 2 parts as below:

(a) Part I: The Personal Information

This part is related to the personal information of the respondents consisting of nationality, gender, faculty, type, age, occupation and monthly income.

(b) Part II: The opinions of respondents

This part is related to the opinion and needs of International and Thai students toward using Internet as an educational tool. It is also divided into 4 sections consisting of:

- (1) Level of Internet usage
- (2) Level of Internet usage as educational tools
- (3) Level of satisfaction on Internet Usage
- (4) Level of the satisfaction toward Internet Services Provided by Assumption University

Additionally, in section 1 (level of usage of Internet) and section 2 (level of usage Internet as educational tools), the respondents are asked to indicate whether the sentence reflects his or her view, which are arranged in 5 levels as following:

1. Never
2. Seldom
3. Sometimes
4. Often
5. Always

Otherwise, in section 3 (level of satisfaction by use of Internet) and section 4 (level of satisfaction toward Internet service provided by Assumption University), the respondents are asked to indicate whether the sentence reflects his or her view, which are arranged in 5 levels as following:

1. Strongly disagree
2. Disagree
3. Neither agree or disagree
4. Agree
5. Strongly agree

3.5 Determining Sample Size

This research examines the method that determination by estimating p_1-p_2 because the respondent's chance of being included in the sample is unknown. According to the infinite population, the techniques for determining a sample size for statistical inference are based on the difference between a pair of parameters correct to within ME unites with confidence level $(1 - \alpha)$, let $z_{\alpha/2}$ standard deviations of the sampling distribution of the estimator equal ME. In this case, they will have to be equal sample sizes, that is, $n_1 = n_2 = n_3$. Thus, the formula is:

$$n_1 = n_2 = \frac{(z_{\alpha/2})^2 (p_1q_1 + p_2q_2)}{(ME)^2} = \frac{(z_{\alpha/2})^2 (p_1q_1 + p_2q_2)}{(ME)^2}$$

Where,

$n_1 = n_2$ = Sample Size of two groups

$(z_{\alpha/2})^2$ = Square of the confidence level in standard error units

p = population proportion

q = 1 - p

ME = margin error

Confidence Level

We will apply the 95% confidence level so that the margin error between the true and sample proportion is 5% or 0.05.

Standardized Normal Distribution

A probability distribution that reflects a specific normal curve for the standardized value, Z score, in accordance with the specific confidence level is 1.96.

Estimated Proportion

As we do not have the characteristics of the population, we choose the population

proportion as 0.1 then q is 0.9.

These values are substituted into the following formula:

$$n = \frac{(1.96)^2 (0.1 \times 0.9 + 0.1 \times 0.9)}{(0.05)^2}$$
$$= 276.595 \text{ respondents} \approx 280 \text{ respondents}$$

Therefore, the sample size for this research is 276.595 respondents. The researcher took the approximate value of this result to 280 respondents for International students (n_1) and 280 respondents for Thai students (n_2) as well. The total is 560 respondents.

3.6 Data Analysis

For data analysis, this research used “SPSS” program as statistical method to calculate final questionnaire result.

The researcher analyzed the gathered information by calculating percentage, mean of each result in rating scale format, S.D and comparing the difference between the opinions and needs of International and Thai students towards using the Internet as an educational tool with the t-test.

For Part I and Part II, rating the mean in order to interpret result meaning will be divided into 5 categories as below:

- (1) 4.20 – 5.00 mean always Internet usage
- (2) 3.40 – 4.19 mean often Internet usage
- (3) 2.60 – 3.39 mean sometime Internet usage
- (4) 1.80 – 2.59 mean seldom Internet usage
- (5) 1.00 – 1.79 mean never Internet usage

For Part III and IV, rating the mean in order to interpret result meaning will be divided into 5 categories as below:

- (6) 4.20 – 5.00 mean strongly agree

- (7) 3.40 – 4.19 mean agree
- (8) 2.60 – 3.39 mean neither agree nor disagree
- (9) 1.80 – 2.59 mean disagree
- (10) 1.00 – 1.79 mean strongly disagree



IV. RESULTS AND DISCUSSION

This chapter is analysis of the results of 560 questionnaires from students who are studying Master's degree program at Assumption University. The researcher analyzed between international and Thai students' attitude towards internet usage into two parts. First part is analysis of personal information that is considered to be relevant to this study and support the correct result. The second part is analysis of their opinion and attitude that is more important and useful data for this study.

The output of the questionnaire for students' attitude towards internet usage is analyzed by using Statistical Package for Social Sciences (SPSS) Software.

4.1 The Personal Information of Respondent

This part is related to the personal information of the respondents that consists of nationality, gender, faculty, type, age, occupation, monthly income. The result is presented in the form of table by calculating the percentage of each question.

Table 4.1 The Output of Frequency and Percentage of Personal Information of Respondents Categorized by Nationality.

Nationality					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	International	280	50.0	50.0	50.0
	Thai	280	50.0	50.0	100.0
	Total	560	100.0	100.0	

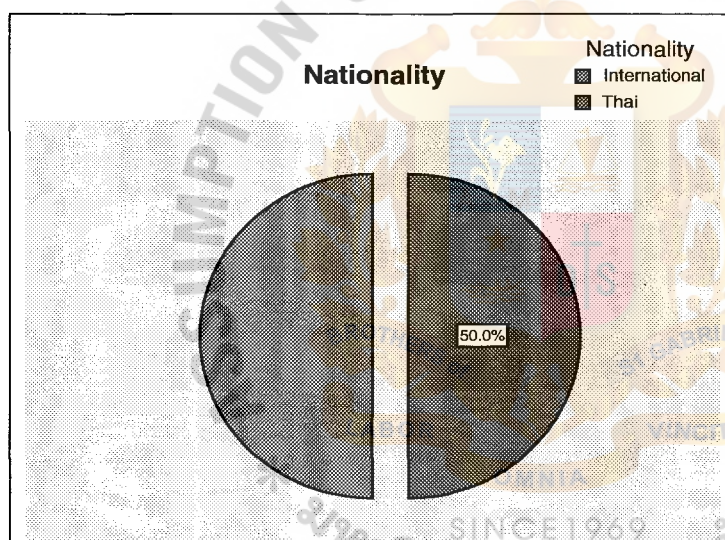


Figure 4.1 Percentage of Personal Information of Respondents Categorized by Nationality.

The above Table 4.1 and Figure 4.1 show the Frequency and Percentage of Personal Information of Respondents which consist of 280 International students(50%) and 280 Thai students (50%). The total number of respondents is 560(100%).

Table 4.2 The Output of Frequency and Percentage of Personal Information of Respondents Categorized by Gender.

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	306	54.6	54.6	54.6
	Female	254	45.4	45.4	100.0
Total		560	100.0	100.0	

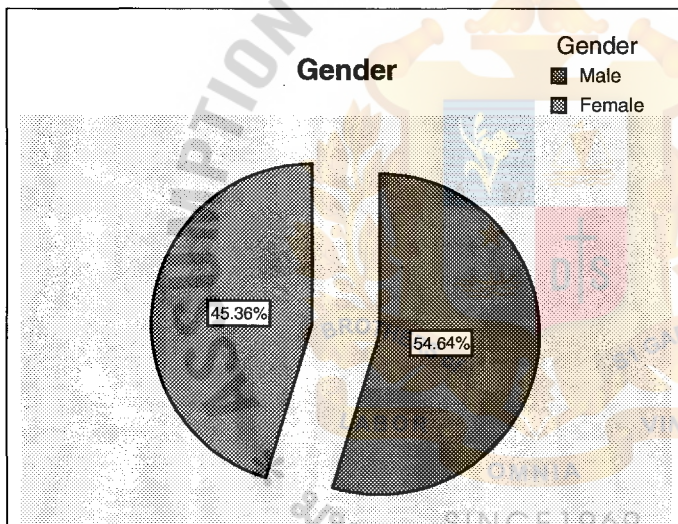


Figure 4.2 Percentage of Personal Information of Respondents Categorized by Gender.

The above Table 4.2 and Figure 4.2 show the Frequency and Percentage of Personal Information of Respondents which consist of 306 Male students(54.64%) and 254 Female students (46.36%). The total number of respondents is 560(100%).

Table 4.3 The Output of Frequency and Percentage of Personal Information of Respondents Categorized by Faculty.

Faculty		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MA	30	5.4	5.4	5.4
	MBA	299	53.4	53.4	58.8
	MS	100	17.9	17.9	76.6
	MM	43	7.7	7.7	84.3
	MSc	56	10.0	10.0	94.3
	M.Ed	22	3.9	3.9	98.2
	M.Eng	10	1.8	1.8	100.0
	Total	560	100.0	100.0	

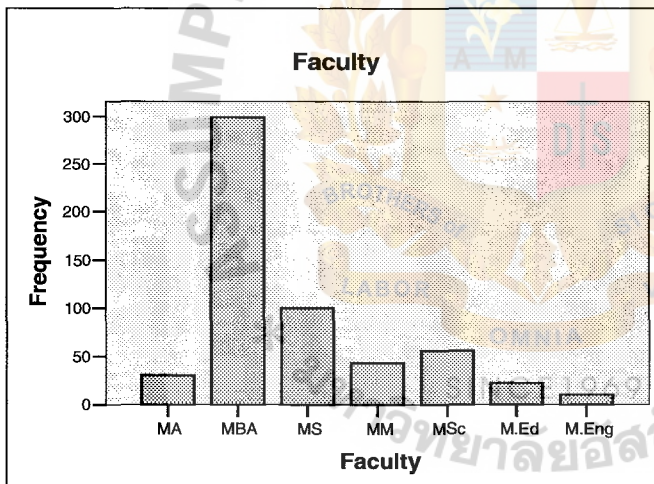


Figure 4.3 Percentage of Personal Information of Respondents Categorized by Faculty.

The above Table 4.3 and Figure 4.3 show the Frequency and Percentage of Personal Information of Respondents which consist of MA(5.4%), MBA(53.4%), MS (17.9%), MM (7.7%), MSc (10%), M.Ed (3.9%), M.Eng (1.8%) respectively.

Table 4.4 The Output of Frequency and Percentage of Personal Information of Respondents Categorized by Type of Study.

Type		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Full-time student	330	58.9	58.9	58.9
	Part-time student	230	41.1	41.1	100.0
	Total	560	100.0	100.0	

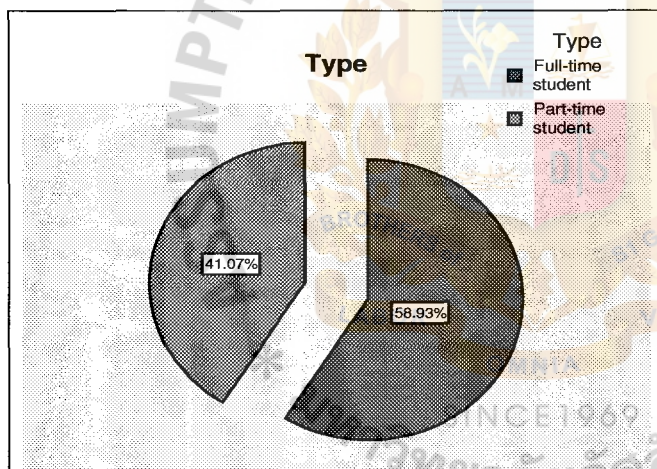


Figure 4.4 Percentage of Personal Information of Respondents Categorized by Type of Study.

The above Table 4.4 and Figure 4.4 show the Frequency and Percentage of Personal Information of Respondents which consist of 330 Full-time students(58.9%) and 230 Part-time students (41.1%) respectively.

Table 4.5 The Output of Frequency and Percentage of Personal Information of Respondents Categorized by Age.

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 20 - 24 years	234	41.8	41.8	41.8
More than 24 - 28 years	221	39.5	39.5	81.3
More than 28 - 32 years	92	16.4	16.4	97.7
Over 32 years	13	2.3	2.3	100.0
Total	560	100.0	100.0	

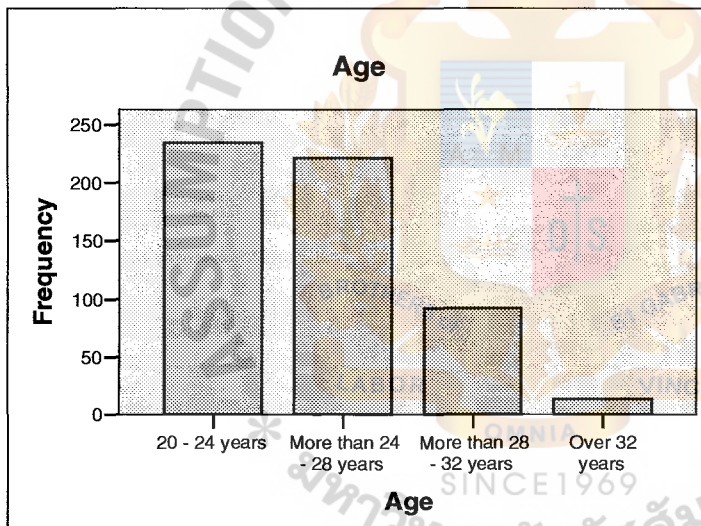


Figure 4.5 Percentage of Personal Information of Respondents Categorized by Age.

The above Table 4.5 and Figure 4.5 show the Frequency and Percentage of Personal Information of Respondents which consist of 20 – 24 years(41.8%), more than 24 – 28 years(39.5%), more than 28 – 32 years(16.4%) and over 32 years(2.3%) respectively.

Table 4.6 The Output of Frequency and Percentage of Personal Information of Respondents Categorized by Occupation.

Occupation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Independent Career	69	12.3	12.3	12.3
	Civil Servant	4	0.7	0.7	13.0
	Unemployed	293	52.3	52.3	65.4
	Private employee	194	34.6	34.6	100.0
	Total	560	100.0	100.0	

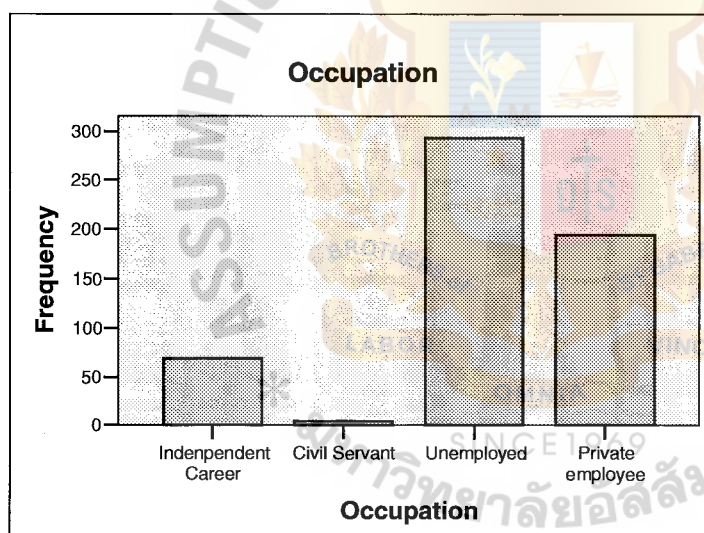


Figure 4.6 Percentage of Personal Information of Respondents Categorized by Occupation.

The above Table 4.6 and Figure 4.6 show the Frequency and Percentage of Personal Information of Respondents which consist of Independent Career (12.3%), Civil Servant (0.7%), Unemployed (52.3%) and Private Employee (34.6%) respectively.

Table 4.7 The Output of Frequency and Percentage of Personal Information of Respondents Categorized by Monthly Income.

Monthly Income				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 5000 - 10000 baht	16	2.9	2.9	2.9
10001 - 25000 baht	158	28.2	28.2	31.1
25001 -35000 baht	55	9.8	9.8	40.9
35001 baht and over	25	4.5	4.5	45.4
No income	306	54.6	54.6	100.0
Total	560	100.0	100.0	

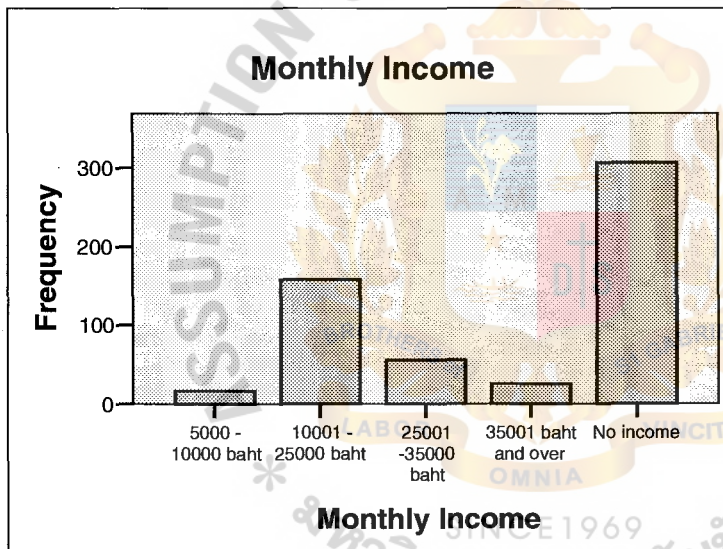


Figure 4.7 Percentage of Personal Information of Respondents Categorized by Monthly Income.

The above Table 4.7 and Figure 4.7 shows the Frequency and Percentage of Personal Information of Respondents categorized by monthly income, which consist of 5000 – 10000 baht(2.9%), 10001 – 25000 baht(28.2%), 25001 – 35000 baht(9.8%), 35001 baht and over(4.5%) and no income(54.6%) respectively.

According to the above tables and figures, the output of Frequency and Percentage of Personal Information of Respondents are categorized by seven parts, nationality, gender, faculty, study type, age, occupation and monthly income. The total number of respondents is 560 which included 280 international students and 280 Thai students. In order to have a clearer result and outcome about each focus group size, this research shows each sample size group details that are divided into International students and Thai students. The conclusion is included in seven parts. The first one is for International students and the second one is for Thai students.

Table 4.8 The Conclusion of Personal Information of International Students

Status	Frequency	Percent	Valid Percent	Cumulative Percent
1. Nationality				
International	280	100.0	100.0	100.0
2. Gender				
Male	183	65.4	65.4	65.4
Female	97	34.6	34.6	100.0
3. Faculty				
MA	11	3.9	3.9	3.9
MBA	153	54.7	54.7	58.6
MS	60	21.4	21.4	80.0
MM	12	4.3	4.3	84.3
MSc	26	9.3	9.3	93.6
M.Ed	10	3.5	3.5	97.1
M.Eng	8	2.9	2.9	100.0

Table 4.8 The Conclusion of Personal Information of International Students(Continued)

Status	Frequency	Percent	Valid Percent	Cumulative Percent
4.Type				
Full-time student	222	79.3	79.3	79.3
Part-time student	58	20.7	20.7	100.0
5. Age				
20 - 24 years	88	31.4	31.4	31.4
More than 24 - 28 years	122	43.6	43.6	75.0
More than 28 - 32 years	66	23.6	23.6	98.6
Over 32 years	4	1.4	1.4	100.0
6. Occupation				
Independent Career	22	7.9	7.9	7.9
Unemployed	194	69.2	69.2	77.1
Private employee	64	22.9	22.9	100.0
7. Monthly Income				
5000 - 10000 baht	13	4.6	4.6	4.6
10001 - 25000 baht	54	19.3	19.3	23.9
25001 -35000 baht	14	5.0	5.0	28.9
35001 baht and over	5	1.8	1.8	30.7
No income	194	69.3	69.3	100.0

Table 4.8 shows the conclusion of personal information of International students which can be described in 7 parts as follow:

- (1) The first part shows how many international students as the sample size to collect the required information. The researcher collected 280 International students for sample size.
- (2) The second part is for gender and 183(65.4%) male international students and 97(34.6%) female international students are the sample size. The percentage of male international students is (30.8%) much more than female.
- (3) According to the faculty, the third part includes MA, MBA, MS, MM, MSc, M.Ed, M.Eng in detail. For MA and MBA, 11(3.9%) and 157(54.7%) students, 60(21.4%) and 12 (4.3%) students are MS and MM, the left 26(9.3%), 10(3.5%) and 8(2.9%) students are MSc, M.Ed, M.Eng students. The maximum amount of the sample size is MBA students (54.7%) more than half of all faculties and the minimum is M.Eng students (2.9%). No wonder why MBA students are much more than the other faculties, AU is well known in business study since established.
- (4) The fourth part is for study type. The researcher described in two parts, full-time student and part-time student. There are 222(79.3%) full – time students and 58(20.7%) part – time students. As shown in record, the percentage of full – time students is obviously greater than part – time students, nearly 59% more.
- (5) The age of sample size students is shown in this part, 88(31.4%) for 20 – 24 years, 122(43.6%) for more than 24 – 28 years, 66(23.6%) for more than 28 –32 years and 4(1.4%) for over 32 years.
- (6) Based on occupation, independent career, unemployed, civil servant and private employee can be categorized in this part. According to the result, the quantity of unemployed students is maximum amount in sample size.

194(69.2%) is the unemployed students, the other 22(7.9%) and 64(22.9%) are independent career and private career. There are no civil servants in this sample size.

- (7) The last part emphasizes on monthly income, the majority of focused group have income in the rage of 5,000 – 10,000 baht (4.6%), 10,001 -25,000 baht (19.3%), 25,001 – 35,000 baht (5.0%) and over 35,000 baht (1.8%). The left (69.3%) is for no income. This part is related with part six, the quantity of unemployed students is equal to the quantity of no income.



Table 4.9 The Conclusion of Personal Information of Thai Students

Status	Frequency	Percent	Valid Percent	Cumulative Percent
1. Nationality				
Thai	280	100.0	100.0	100.0
2. Gender				
Male	123	43.9	43.9	43.9
Female	157	56.1	56.1	100.0
3. Faculty				
MA	19	6.8	6.8	6.8
MBA	146	52.1	52.1	58.9
MS	40	14.3	14.3	73.2
MM	31	11.1	11.1	84.3
MSc	30	10.7	10.7	95
M.Ed	12	4.3	4.3	99.3
M.Eng	2	0.7	0.7	100.0
4.Type				
Full-time student	108	38.6	38.6	38.6
Part-time student	172	61.4	61.4	100.0
5. Age				
20 - 24 years	146	52.1	52.1	52.1
More than 24 - 28 years	99	35.4	35.4	87.5
More than 28 - 32 years	26	9.3	9.3	96.8
Over 32 years	9	3.2	3.2	100.0

Table 4.9 The Conclusion of Personal Information of Thai Students (Continued)

Status	Frequency	Percent	Valid Percent	Cumulative Percent
5. Age				
20 - 24 years	146	52.1	52.1	52.1
More than 24 - 28 years	99	35.4	35.4	87.5
More than 28 - 32 years	26	9.3	9.3	96.8
Over 32 years	9	3.2	3.2	100.0
6. Occupation				
Independent Career	47	16.8	16.8	16.8
Civil Servant	4	1.4	1.4	18.2
Unemployed	99	35.4	35.4	53.6
Private employee	130	46.4	46.4	100
7. Monthly Income				
5000 - 10000	6	2.1	2.1	2.1
10001 - 25000 baht	110	39.3	39.3	41.4
25001 - 35000 baht	45	16.1	16.1	57.5
35001 baht and over	20	7.1	7.1	64.6
No income	99	35.4	35.4	100.0

Table 4.9 shows the conclusion of personal information of Thai students which can be described in 7 parts as follow:

- (1) The first part shows how many Thai students as the sample size to collect the required information. The researcher collected 280 Thai students for sample size.
- (2) The second part is for gender and 123(43.9%) male Thai students and 157(56.1%) female Thai students are the sample size. The range of both male and female is not so much different.
- (3) According to the faculty, the third part is included MA, MBA, MS, MSc, M.Ed, M.Eng in detail. For MA and MBA, 19(6.8%) and 146(52.1%) students, 40(14.3%) and 31 (11.1%) students are MS and MM, the left 30(10.7%), 12(4.3%) and 2(0.7%) students are MSc, M.Ed, M.Eng students. The maximum amount of the sample size is MBA students (52.1%) and the minimum is M.Eng students (0.7%).
- (4) The fourth part is for study type. The researcher described in two parts, full-time student and part-time student. There are 108(38.6%) full – time students and 172(61.4%) part – time students. As shown in the record, the percentage of part – time students is more than full – time students. It is different result from International students because for Thai students it is easier to find a job than International students.
- (5) The age of sample size students is shown in this part, 146(52.1%) for 20 – 24 years, 99(35.4%) for more than 24 – 28 years, 26(9.3%) for more than 28 -32 years and 9(3.2%) for over 32 years. According to the output data, 20 - 24 years and more than 24 – 28 years groups are much more than others.

- (6) Based on occupation, independent career, unemployed, civil servant and private employee can be categorized in this part. According to the result, the quantity of private employee students is the maximum and civil servant students are the minimum one. 99(35.4%) is the unemployed students, the other 130(46.4%) and 47(16.8%) are private employee and independent career. 4(1.4%) is for civil servant.
- (7) The last part emphasizes on monthly income, the majority of focused group have income in the range of 5000 – 10000 (2.1%), 10,001 -25,000 baht (39.3%), 25,001 – 35,000 baht (16.1%) and over 35,000 baht (7.1%). The left (35.4% is) for no income. The monthly income part is related with part 6, the occupation type.



4.2 A Comparative Study on The Opinions of Respondents

This part is to calculate and discuss the opinions of respondents by using SPSS software. It includes the frequency, the mean, Standard Deviation, and t-test of International and Thai students' attitude towards Internet usage.

There are four parts in this section to categorize. They are:

- (1) Level of Internet Usage
- (2) Level of Internet Usage As an Educational Tool
- (3) Level of Satisfaction on Internet Usage
- (4) Level of satisfaction on Internet Service provided by Assumption University



(1) **Level of Internet Usage**

A. Level of Internet Usage of International Students

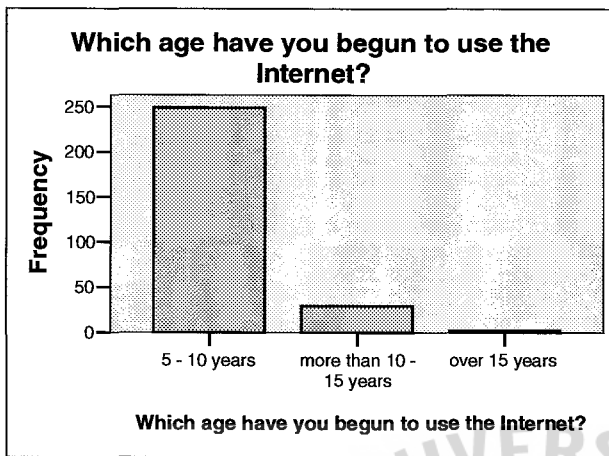


Figure 4.8 The output of the Internet – started using age of Respondents

In this figure 4.8, the Internet – started using age of respondents is shown. The maximum group is 5 – 10 years (88.9%) and the minimum one is over 15 years (0.7%).

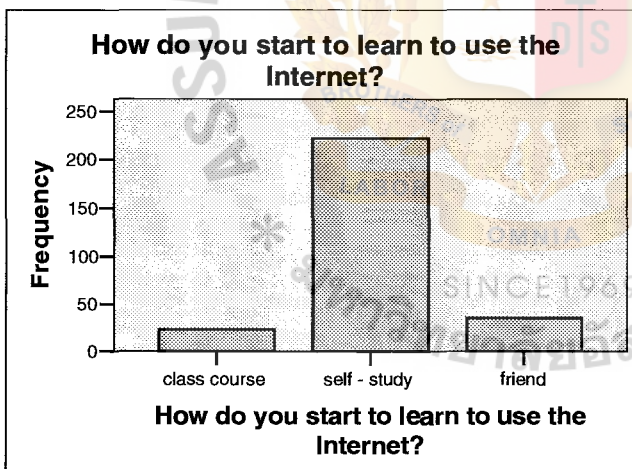


Fig 4.9 The Output of the way the respondents started learning how to use the Internet

According to the figure 4.9, self – study group (79.3%) is obviously more than other group. It means most of the respondents learn themselves to use the Internet.

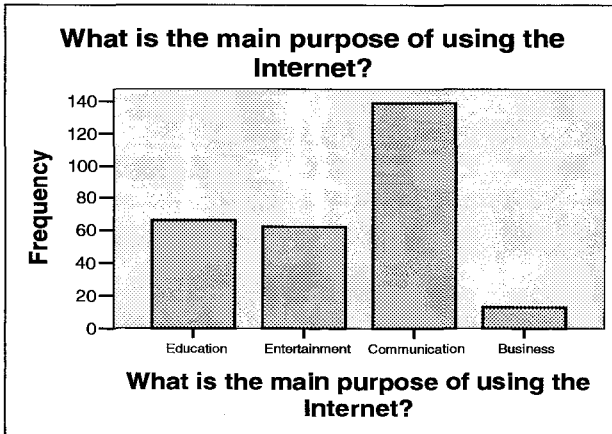


Figure 4.10 Output of the main purpose why the respondents use the Internet

As shown in the above figure, the purpose for communication is the maximum percentage (49.6%) among others. For the purposes of education and entertainment is (23.6%) and (22.1%). The minimum one is business purpose (4.1%).

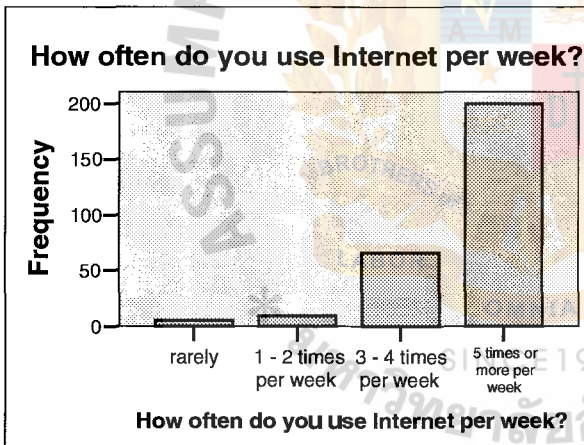


Figure 4.11 Output of the times of using the Internet in one week

As in the above figure, 5 times or more per week is the maximum percentage (71.4%) and rarely (1.8%) is the minimum one.

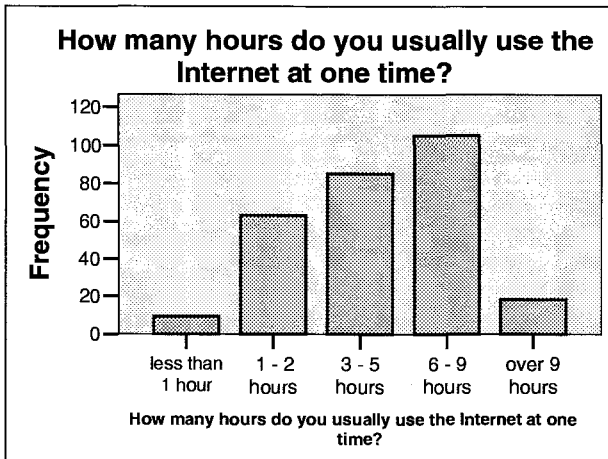


Figure 4.12 Output of the hours of using the Internet at one time

As shown in figure, the maximum percentage is 6 – 9 hours (37.5%) and 3 – 5 hours (30.4%) is the second one. 1 – 2 hours is (22.5%) and over 9 hours is (6.4%) and the last one are (3.2%) less than 1 hour .

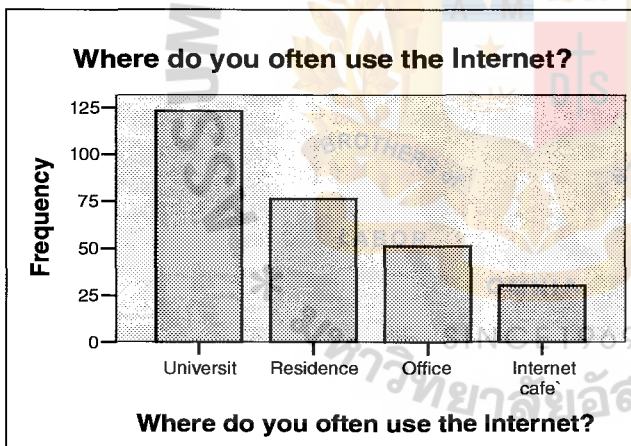


Figure 4.13 Output of the locations the respondents using the Internet

The respondents often use the Internet at University according to the output and the maximum percentage (43.9%), the second one is at the residence (27.1%), the third one is at the office (18.2%) and the last one is at the Internet cafe` (10.7%).

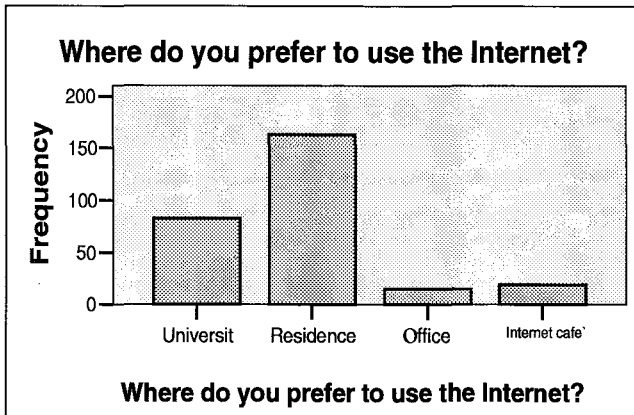


Figure 4.14 Output of the locations the respondents prefer to use the Internet

Most of the respondents prefer to use the Internet at the residence (58.2%) and some of them prefer to do so at the university (29.6%). The others prefer at the Internet cafe` and (6.8%) and the office (5.4%). It's the same maximum preferred place to use the Internet as International students.



B. Level of Internet Usage of Thai Students

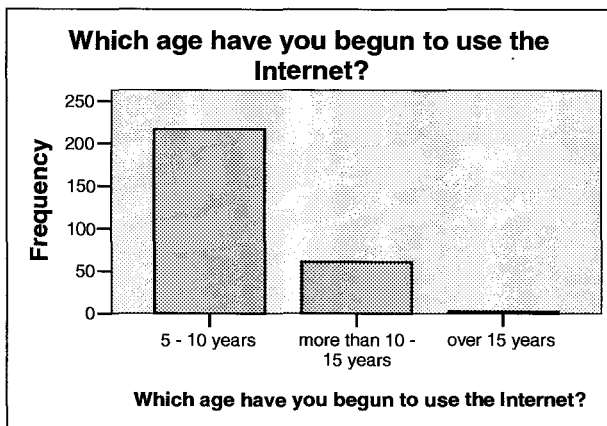


Figure 4.15 The output of the Internet – started using age of Respondents

In this figure 4.15, the Internet – started using age of respondents is shown. The maximum group is 5 – 10 years (77.5%) and the minimum one is over 15 years (0.7%).

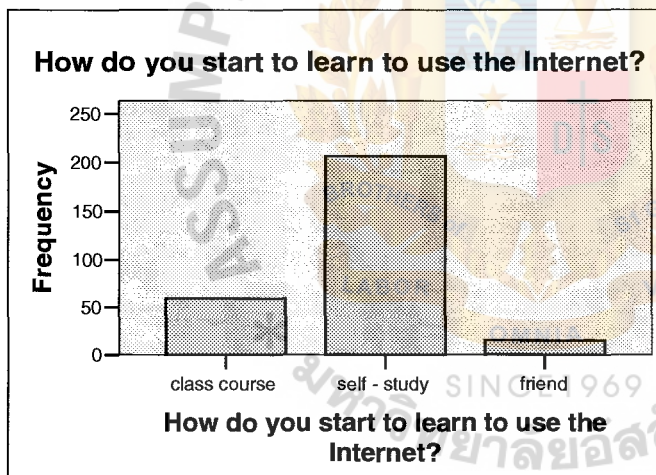


Fig 4.16 The Output of the way the respondents started learning how to use the Internet

According to the figure 4.16, self – study group (73.6%) is obviously more than other group. It means most of the respondents learn themselves to use the Internet.

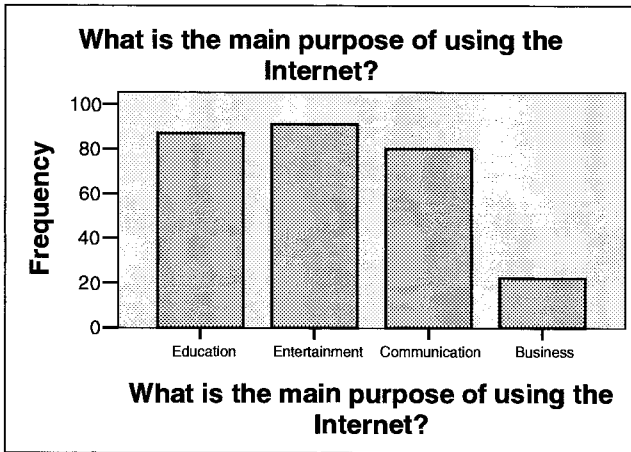


Figure 4.17 Output of the main purpose why the respondents use the Internet

As shown in above figure, the purpose for entertainment is the maximum (32.5%) and the next one is Education (31.1%). The third one is communication (28.6%) and the minimum one is business purpose (7.9%).

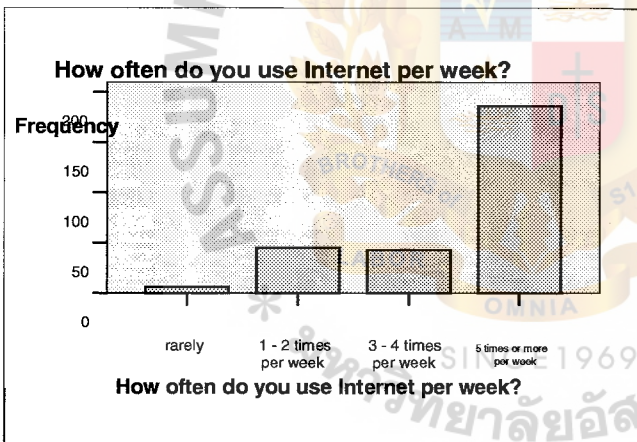


Figure 4.18 Output of the times of using the Internet in one week

At the above figure, 5 times or more per week is the maximum percentage (66.4%) and rarely (2.1%) is the minimum one.

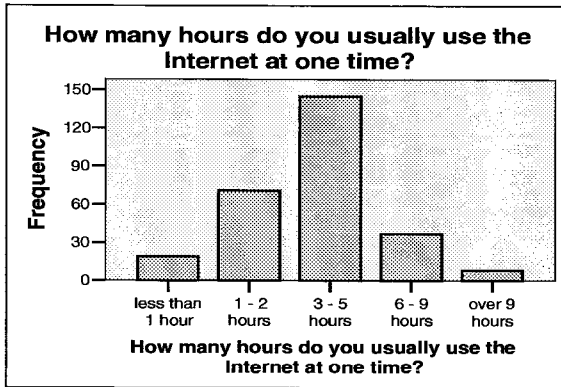


Figure 4.19 Output of the hours of using the Internet at one time

As shown in figure, 3 – 5 hours is the maximum percentage (51.8%) and the second one is 1 – 2 hours (25.4%). The third one is 6 – 9 hours (13.2%) and the last two are (6.8%) less than 1 hour and (2.9%) over 9 hours.

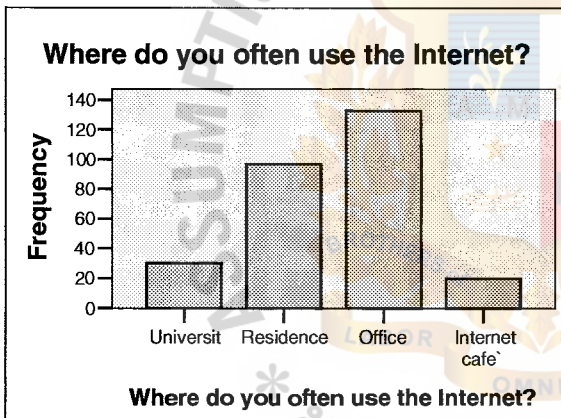


Figure 4.20 Output of the locations the respondents using the Internet

The respondents often use the Internet at Office according to the output and the maximum percentage (47.5%), the second one is at the residence (34.6%), the third one is at the university (10.7%) and the last one is at the Internet cafe` (7.1%). This is totally different result from International students. Most of the International students live near by university and thy often use at university. For Thai students, they use at their residence and most of them are employed so the amount using Internet from office is more than International students.

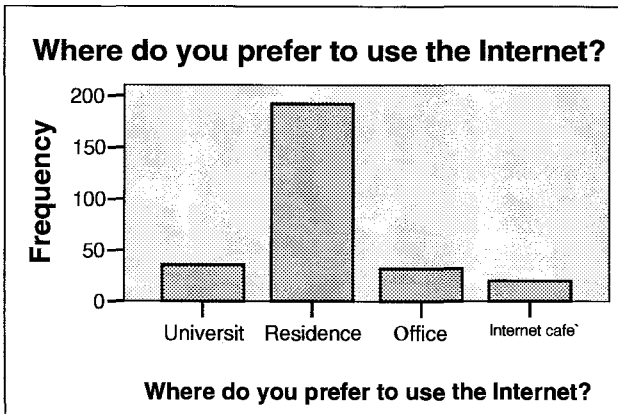


Figure 4.21 Output of the locations the respondents prefer to use the Internet

Most of the respondents prefer to use the Internet at the residence (68.6%) and some of them prefer the university (12.9%). The others prefer the office and Internet cafe` (11.4%) and (7.1%).



Table 4.10 Comparison of the Significant Difference between International and Thai students attitude towards level of Internet Usage

Questions	International Students		Thai Students	
	Frequency	Percentage	Frequency	Percentage
1. Which age have you begun to use the Internet?				
5 – 10 years	249	88.9	217	77.5
10 – 15 years	29	10.4	61	21.8
Over 15 years	2	0.7	2	0.7
2. How do you start to learn to use Internet?				
Class course	22	8.2	59	21.1
Self - study	222	79.3	206	73.6
From friends/other people	35	12.5	15	5.4
3. What is the main purpose of using Internet?				
Education	66	23.6	87	31.1
Entertainment	62	22.1	91	32.5
Communication	139	49.6	80	28.6
Business	13	4.6	22	7.9

Table 4.10 Comparison of the Significant Difference between International and Thai students attitude towards level of Internet Usage (Continued)

Questions	International Students		Thai Students	
	Frequency	Percentage	Frequency	Percentage
4. How often do you use Internet?				
Rarely	5	1.8	6	2.1
1 – 2 times per week	9	3.2	45	16.1
3 – 4 times per week	66	23.6	43	15.4
5 times or more per week	200	71.4	186	66.4
5. How many hours do you usually use the Internet at one time?				
less than 1hour	9	3.2	19	6.8
1 – 2 hours	63	22.5	71	25.4
3 – 5 hours	85	30.4	145	51.8
6 – 9 hours	105	37.5	37	13.2
Over 9 hours	18	6.4	8	2.9
6. Where do you often use the Internet?				
University	123	43.9	30	10.7
Residence	76	27.1	97	34.6
Office	51	18.2	133	47.5
Internet café	30	10.7	20	7.1

Table 4.10 Comparison of the Significant Difference between International and Thai students attitude towards level of Internet Usage (Continued)

Questions	International Students		Thai Students	
	Frequency	Percentage	Frequency	Percentage
7. Where do you prefer to use the Internet?				
University	83	29.6	36	12.9
Residence	163	58.2	192	68.6
Office	15	5.4	32	11.4
Internet café	19	6.8	20	7.1

Table 4.10 shows the comparison of the significant difference between International and Thai students' attitude towards level of Internet Usage. The detail of data will be described in the following:

- (1) The international students' Internet started using age between 5 – 10 years is more than Thai students by comparing percentage between (88.9%) and (77.5%). But at the age between 10 – 15 years, the percentage of Thai students (21.8%) is more than International students (10.4%). At over 15 year's age range; the percentage for International students and Thai students is the same (0.7%). The International students are younger than Thai students in Internet started using age.
- (2) The percentage for International students self – study way to start using the Internet is more than Thai students but not much difference (79.3%) and (73.6%). But Thai students learn to use the Internet by class course more than International students by comparing between (21.1%) and (8.2%). The

next way to learn is from the friend or other people that International students (12.5%) used this way more than Thai students (5.4%). According to the result, both international and Thai students used to learn themselves how to use the Internet can be proved.

- (3) The main purpose of using the Internet of International students is for communication by comparing to other purpose such as education, entertainment and business. The percentage of International students for communication is (49.7%) and for Thai students is entertainment (34.4%). The second one is for both International and Thai students are the same, education (23.6%) and (31.1%). While International students aim to entertainment (22.1%) as third purpose, for Thai students is communication (28.6%). The last purpose, business, is the same for both (4.6%) and (7.9%).
- (4) The largest time ranges for both students is 5 times or more per week, (71.4%) for International and (66.4%) for Thai students but the international students are more often use the Internet than Thai students. The rest are rarely (1.8%) for International and (2.1%) for Thai students, 1 – 2 times per week (3.2%) for international and (16.1%) for Thai students, 3 – 4 times per week (23.6%) for international and (15.4%) for Thai students.
- (5) The majority of period for International students using the Internet is at 6- 9 hours (37.5%) and for Thai students using for the majority period is 3 – 5 hours (51.8%). The second period for International students is 3 – 5 hours (30.4%) and for Thai students is 1 – 2 hours (25.4%). International students use the Internet for a duration of 1 – 2 hours as (22.5%) as third majority period, 6 – 9 hours(13.2%) is for Thai students. while only (2.9%) of Thai students used Internet for over 9 hours, International students used (6.4%).

Thai students used the Internet more than International students for these time ranges less than 1 hour, (3.2%) is for International and (6.8%) is for Thai students.

- (6) International students usually use the internet at the university more than Thai students. The percentage (43.9%) for International students and (10.7%) for Thai students can be proved that. Most of Thai students use the Internet at their office (47.5%) more than International students (18.2%). At the residence, Thai students (34.6%) usage is more than International students (27.1%). Minority of international students (10.7%) also use at Internet cafe` while Thai students (7.1%) use there.
- (7) The most preferable place to use the Internet for both group is at the residence by known that (58.2%) for International students and (68.6%) for Thai students. The second convenience place is at the University for both, International (29.6%) and Thai students (12.9%). At the office is for the third place for Thai students (7.1%) and at the Internet cafe` is for international students (6.8%). The least preferable place for International students is at the office (5.4%) and for the Thai students is at the internet cafe` (7.1%).

Table 4.11 Comparison of the Significant Difference between International and Thai students attitude towards level of Internet Usage

Feature of Internet	International Students			Thai Students		
	Mean	SD	Variance	Mean	SD	Variance
1. World Wide Web (WWW)	4.92	0.31	0.094	4.91	0.30	0.089
2. E - mail	4.77	0.64	0.408	4.64	0.61	0.375
3. Chat	3.96	0.98	0.952	3.62	1.05	1.097
4. File transfer protocol	3.01	1.03	1.061	3.36	1.02	1.040
5. Telnet	1.87	1.04	1.090	1.76	0.72	.525
6. Newsgroups	3.17	1.18	1.395	2.45	1.13	1.281
7. Gophers	4.06	1.02	1.035	3.53	1.23	1.512

Table 4.11 shows the Level of the Internet Usage as detail as below:

- (1) Level of World Wide Web usage between International and Thai students is nearly the same. Mean of International students of WWW usage is 4.92 and Thai students is 4.91. The result is in the range of 4.20 – 5.00 which means that International and Thai students always used the WWW.
- (2) Level of Email usage between International and Thai students is nearly the same. Mean of International students of Email usage is 4.77 and Thai students is 4.64. The result is in the range of 4.20 – 5.00 which means that International and Thai students always used the Email.
- (3) Level of Chat usage between International and Thai students is nearly the same. Mean of International students of Chat usage is 3.96 and Thai students is 3.62. The result is in the range of 3.40 – 4.19 which means that International and Thai students often used the Chat.
- (4) Level of File Transfer Protocol (FTP) usage between International and Thai students is in the same range. Mean of International students of File Transfer

Protocol (FTP) usage is 3.01 and Thai students is 3.36. The result is in the range of 2.60 – 3.39 which means that International and Thai students sometimes used the File Transfer Protocol (FTP).

- (5) Level of Telnet usage between International and Thai students is nearly the same but in the different range. Mean of International students of Telnet usage is 1.87, in the range of 1.80 – 2.59 which means that International students seldom used the Telnet. Mean of Thai students is 1.76. The result is in the range of 1.00– 1.79 which means that Thai students never used the Telnet.
- (6) Level of Newsgroups usage between International and Thai students is different. Mean of International students of Newsgroups usage is 3.17 and Thai students is 2.45. The result of International students is in the range of 2.60 – 3.39 which means that International students sometimes used the Newsgroups. The result of Thai students is in the range of 1.80 – 2.59 which means that Thai students seldom used the Newsgroups.
- (7) Level of Gophers usage between International and Thai students is in the same range. Mean of International students of Gophers usage is 4.06 and Thai students is 3.53. The result of International students and Thai students is in the range of 3.40 – 4.19 which means that International and Thai students often used the Gophers.

Table 4.12 Paired Samples T test for Level of Internet Usage between International and Thai students.

Features of Internet	Paired Differences					t	Sig (2-tailed)
	Mean	SD	Std Error Mean	95% CI of the Difference			
				Lower	Upper		
1. (WWW)	0.01	0.44	0.03	-0.04	0.06	0.411	0.681
2. E - mail	0.13	0.89	0.05	0.02	0.23	2.426	0.016
3. Chat	0.35	1.5	0.09	0.17	0.52	3.841	0.000
4. FTP	-0.34	1.50	0.09	-0.52	-0.17	-3.833	0.000
5. Telnet	0.10	1.17	0.07	-0.03	0.24	1.481	0.140
6. Newsgroups	0.71	1.59	0.09	0.53	0.90	7.529	0.000
7. Gophers	0.53	1.65	0.098	0.34	0.73	5.410	0.000

Hypothesis Testing

$$H_0 : t_{cal} \leq t_{crit}$$

$$H_a : t_{cal} > t_{crit}$$

The value of $t_{crit} = \pm 1.960$ is the same for all hypothesis testing in this project for being 95% confidence level.

First of all, the researcher decided α , df, t_{crit} according to the 95% confidence level.

$$\alpha = 0.05$$

$$df = 279$$

$$t_{crit} = \pm 1.960$$

According to the Table 4.11: Mean (International)	= 4.9214
Variance (International) (s_1)	= 0.089
Sample number (n_1)	= 280
Mean (Thai)	= 4.9107
Variance (Thai) (s_2)	= 0.094
Sample number (n_2)	= 280

$$s_p^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{(n_1 - 1) + (n_2 - 1)} = 0.0915$$

$$s_{x_1 - x_2} = \sqrt{\frac{s_p^2}{n_1} + \frac{s_p^2}{n_2}} = 0.02557$$

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s_{x_1 - x_2}} = 0.4185$$

This value of t is nearly the same as above table 4.12 for Word Wide Web.

The above calculation shows the manual calculation of t value and the value from SPSS program is approximately the same.

Furthermore, all hypothesis testing will be based on the t value from SPSS program.

Hypothesis 1

H_{a1} : International students use the Internet more often than Thai students.

H_{01} : International students use the Internet not more often than Thai students.

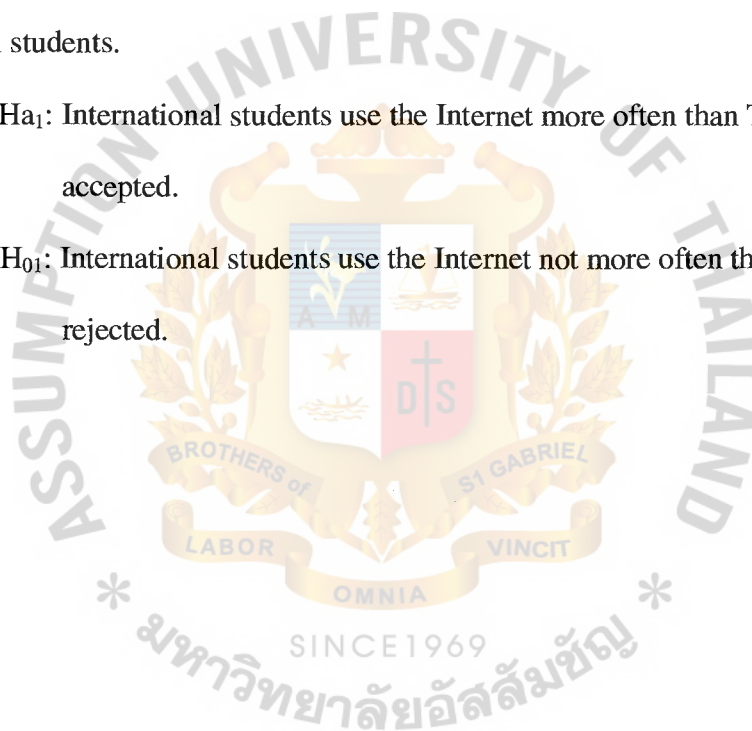
1. WWW: $0.411 \leq 1.960$; Reject H_a , Accept H_0
2. E-mail: $2.426 > 1.960$; Reject H_0 , Accept H_a

3. Chat: $3.841 > 1.960$; Reject H_0 , Accept H_a
4. FTP: $-3.833 \leq -1.960$; Reject H_a , Accept H_0
5. Telnet: $1.481 \leq 1.960$; Reject H_a , Accept H_0
6. Newsgroups: $7.529 > 1.960$; Reject H_0 , Accept H_a
7. Gophers: $5.410 > 1.960$; Reject H_0 , Accept H_a

As shown in above hypothesis testing, there are 4 accept H_a and 3 accept H_0 among 7 tests. Therefore, the level of Internet usage between International and Thai students can be determined as International students use the Internet not more than Thai students.

H_{a1} : International students use the Internet more often than Thai students is accepted.

H_{01} : International students use the Internet not more often than Thai students is rejected.



B. Level of the Internet Usage as an Educational Tool

Table 4.13 Comparison of the Significant Difference between International and Thai students attitude towards level of Internet Usage as Educational Tool

	International			Thai Student		
	Mean	SD	Variance	Mean	SD	Variance
1. For using the search engine to find further information or data to use in project, presentation, class work and etc.	3.97	0.85	0.719	4.37	0.69	0.478
2. For communicating and exchanging knowledge and idea with instructors and fellow students	3.21	0.98	0.955	3.58	0.82	0.675
3. For creating educational aids like multimedia and presentation materials.	3.21	0.77	0.590	3.15	0.97	0.933
4. For creating and maintaining a web page or websites for educational purposes.	2.75	1.28	1.642	2.22	1.01	1.024

Table 4.13 shows the International and Thai students' attitude towards level of Internet Usage as Educational Tool as detailed in the following:

- (1) Level of the Internet usage for using the search engine to find further information or data to use in project, presentation, and class work of the international and Thai students' average significance is not different. The average significance of the International students is 3.97 and Thai students are

4.37. The result for International students is in the range of 3.40 – 4.19 which mean that **International students often used** the Internet for using the search engine to find further information related with education. The average significance of Thai students is 4.37 and it's in the range of 4.20 – 5.00 which means **Thai students always used** the Internet for using the search engine to find further information related with education.

- (2) Level of the Internet usage for communicating and exchanging knowledge and idea with instructors and fellow students of the international and Thai students' average significance is different. The average significance of the International students is 3.21 that is in the range of 2.60 - 3.39 which means the **International students sometimes used** the Internet as communicating and exchanging knowledge. The average significance of Thai students is 3.58 that is in the range of 3.40 - 4.19 which means **Thai students often used** the Internet as communicating and exchanging knowledge.
- (3) Level of the Internet usage for creating educational aids like multimedia and presentation materials of the international and Thai students' average significance is not different. The average significance of the International students is 3.21 and Thai students are 3.15. Both results are in the range of 2.60 – 3.39 which means that **International and Thai students sometimes used** the Internet for creating educational aids like multimedia and presentation materials.
- (4) Level of the Internet usage for creating and maintaining a web page or websites for educational purposes of the international and Thai students' average significance is different. The average significance of the International students is 2.75 that are in the range of 2.60 - 3.39 which means the **International students sometimes used** the Internet as creating and maintaining a web page or websites

for educational purposes. The average significance of Thai students is 2.22 that are in the range of 1.80 - 2.59 which means **Thai students seldom used the Internet as creating and maintaining a web page or websites for educational purposes.**



Table 4.14 Paired Samples T test for Level of Internet Usage as Educational Tool between International and Thai students

	Paired Differences					t	Sig (2-tailed)
	Mean	SD	Std Error Mean	95% CI of the Difference			
				Lower	Upper		
1. For using the search engine to find further information or data to use in project, presentation, class work and etc.	-0.40	1.09	0.07	-0.53	-0.28	-6.196	0.000
2. For communicating and exchanging knowledge and idea with instructors and fellow students	-0.36	1.17	0.07	-0.50	-0.23	-5.190	0.000
3. For creating educational aids like multimedia and presentation materials.	0.06	1.15	0.07	-0.08	0.19	0.83	0.408
4. For creating and maintaining a web page or websites for educational purposes.	0.54	1.71	0.10	0.33	0.74	5.24	0.000

Hypothesis 2

H_{a2} : International students use the Internet as educational tool more than Thai students.

H_{02} : International students use the Internet as educational tool not more than Thai students.

1. For using the search engine to find further information or data to use in project, presentation, class work and etc:

$$-6.196 \leq -1.960; \quad \text{Reject } H_a, \text{ Accept } H_0$$

2. For communicating and exchanging knowledge and idea with instructors and fellow students:

$$-5.190 \leq -1.960; \quad \text{Reject } H_a, \text{ Accept } H_0$$

3. For creating educational aids like multimedia and presentation materials:

$$0.83 \leq 1.960; \quad \text{Reject } H_a, \text{ Accept } H_0$$

4. For creating and maintaining a web page or websites for educational purposes:

$$5.24 > 1.960; \quad \text{Reject } H_0, \text{ Accept } H_a$$

As shown in above hypothesis testing, there are 3 accept H_0 and 1 accept H_a among 4 tests. Therefore, the level of Internet usage as an educational tool between International and Thai students can be determined as International students use the Internet not more than Thai students.

H_{a2} : International students use the Internet as educational tool more than Thai students is rejected.

H_{02} : International students use the Internet as educational tool not more than Thai students is accepted.

C. Level of the Satisfaction on Internet Usage

Table 4.15 Comparison of the Significant Difference between International and Thai Students' attitude towards level of Satisfaction on Internet Usage

	International Students			Thai Students		
	Mean	SD	Variance	Mean	SD	Variance
1. User can use the Internet as a self-study tool.	4.43	0.50	0.253	4.23	0.57	0.329
2. Information on the Internet is useful and up - to - date.	4.31	0.65	0.423	3.95	0.75	0.561
3. Information on the Internet is accurate and believable.	3.29	0.75	0.566	3.14	0.78	0.603
4. Internet can provide any information that users want to find.	3.73	0.79	0.621	3.75	0.79	0.627
5. Internet can save users' time to find out information rather than from the books.	3.84	0.82	0.666	3.84	0.78	0.604
6. Internet can save users' money for finding information.	3.86	0.75	0.558	3.90	0.96	0.918
7. Internet can serve as a tool to get knowledge.	4.31	0.56	0.314	4.32	0.72	0.512
8. Internet is the source of information that users want.	3.93	0.58	0.335	3.99	0.74	0.545
9. Internet is a valuable tool for contacting with other people or organization.	4.04	0.72	0.521	4.15	0.89	0.795
10. Internet can save manpower of the organization.	3.64	0.92	0.854	3.61	0.89	0.798

In Table 4.15, the information of the level of satisfaction on the Internet usage was shown and the details will be explained in the following:

- (1) The first information to survey whether agree or disagree is user can use the Internet as a self – study tool. According to the result, International students and

Thai students' average significance, 4.43 and 4.23, is within one range 4.20 – 5.00. In this range, both **International and Thai students strongly agree** that the Internet can be used as a self – study tool.

- (2) The second one is to survey the level of satisfaction for the information on the Internet whether it is useful and up-to-date. The average significance of the International students is 4.31, in the range of 4.20 – 5.00 which means **International students strongly agree** that information on the Internet is useful and up-to-date. The average significance of Thai students is 3.95 which are in the range of 3.40 – 4.19. Therefore, it means **Thai students agree** the information on the Internet is useful and up-to-date.
- (3) Level of satisfaction on the Internet Usage, in aspect of information on the Internet is accurate and believable, between International and Thai students is not different. Average significance of International students toward information on the Internet is accurate and believable is 3.29 and average significance of Thai students toward information on the Internet is accurate and believable is 3.14. Both results are in the same range 2.60 – 3.39 which means that **International and Thai students neither agree nor disagree** that information on the Internet is accurate and believable.
- (4) The fourth one is Internet can provide any information that users want to find or not. The mean for International students is 3.73 and for the Thai students is 3.75, which are in the same range 3.40 – 4.19 which means that **International and Thai students agree** Internet can provide any information that users want to find.
- (5) Level of satisfaction, in aspect of Internet can save users' time to find out information rather than from the books, between International and Thai students

are in the same range 3.40 – 4.19 which means that **both International and Thai students agree** that Internet can save users' time to find out information rather than from the books.

- (6) In the sixth, the one need to survey is Internet can save users' money for finding information. The mean for International students is 3.86 and for the Thai students is 3.90, which are in the same range 3.40 – 4.19 which means that **International and Thai students agree** that Internet can save Internet can save users' money for finding information.
- (7) The average significance for International students is 4.31 and Thai students is 4.32, in aspect of Internet can serve as a tool to get knowledge. Both results are in the same range 4.20 – 5.00 which means that **International and Thai students strongly agree** Internet can serve as a tool to get knowledge.
- (8) Level of satisfaction on the fact that Internet is the source of information that users want, the average significance of International students is 3.93 and Thai students is 3.99, which are in the same range of 3.40-4.19. It's mean that **International and Thai students agree** Internet is the source of information that users want.
- (9) Regarding Internet is a valuable tool for contacting with other people or organization, International and Thai students' average significance is different. 4.04 is for the international students and 4.15 is for Thai students which are in the same range, 3.40 – 4.19 which means that **both International and Thai students agree** Internet is a valuable tool for contacting with other people or organization.

(10) The last one is Internet can save manpower of the organization, 3.64 is for International students and 3.61 is for Thai students which are in the same range of 3.40 – 4.19. Therefore, **both International and Thai students agree** that Internet can save manpower of the organization.

In this part C, one obvious observation is that no disagree and most agree to all questions. That means most students believe that the Internet can support user benefit.

Table 4.16 Paired Samples T test for Level of Satisfaction on Internet Usage between International and Thai students.

Features of Internet	Paired Differences					t	Sig (2-tailed)
	Mean	SD	Std	95% CI of the			
			Error Mean	Lower	Upper		
1. User can use the Internet as a self - study tool.	0.196	.76	0.05	0.11	0.29	4.311	0.000
2. Information on the Internet is useful and up - to - date.	0.36	1.04	0.06	0.23	0.48	5.722	0.000
3. Information on the Internet is accurate and believable.	0.15	1.12	0.07	0.02	0.28	2.248	0.025
4. Internet can provide any information that users want to find.	-0.02	1.12	0.07	-0.15	0.11	-0.266	0.790
5. Internet can save users' time to find out information rather than from the books.	.004	1.08	0.06	-0.12	0.13	0.055	0.956

Table 4.16 Paired Samples T test for Level of Satisfaction on Internet Usage between International and Thai students. (Continued)

Features of Internet	Paired Differences					t	Sig (2-tailed)
	Mean	SD	Std Error Mean	95% CI of the Difference			
				Lower	Upper		
6. Internet can save users' money for finding information.	-0.04	1.11	0.07	-0.17	0.09	-0.538	0.591
7. Internet can serve as a tool to get knowledge.	-0.01	0.91	0.05	-0.12	0.096	-0.197	0.844
8. Internet is the source of information that users want.	-0.06	0.91	0.05	-0.17	0.05	1.114	0.266
9. Internet is a valuable tool for contacting with other people or organization.	-0.11	1.17	0.07	-0.25	0.03	1.527	0.128
10. Internet can save manpower of the organization.	0.03	1.06	0.06	-0.09	0.16	0.510	0.611

Hypothesis 3

Ha₃: International students have higher level of satisfaction by using the Internet than Thai students.

Ho₃: International students have not higher level of satisfaction by using the Internet than Thai students.

1. User can use the Internet as a self - study tool:

$$4.311 > 1.960; \quad \text{Reject } H_0, \text{ Accept } H_a$$

2. Information on the Internet is useful and up - to - date:
 $5.722 > 1.960$; Reject H_0 , Accept H_a
3. Information on the Internet is accurate and believable:
 $2.248 > 1.960$; Reject H_0 , Accept H_a
4. Internet can provide any information that users want to find:
 $-0.266 > -1.960$; Reject H_0 , Accept H_a
5. Internet can save users' time to find out information rather than from the books:
 $0.055 \leq 1.960$; Reject H_a , Accept H_0
6. Internet can save users' money for finding information:
 $-0.538 > -1.960$; Reject H_0 , Accept H_a
7. Internet can serve as a tool to get knowledge:
 $-0.197 > -1.960$; Reject H_0 , Accept H_a
8. Internet is the source of information that users want:
 $1.114 \leq 1.960$; Reject H_a , Accept H_0
9. Internet is a valuable tool for contacting with other people or organization:
 $1.527 \leq 1.960$; Reject H_a , Accept H_0
10. Internet can save manpower of the organization:
 $0.510 \leq 1.960$; Reject H_a , Accept H_0

As shown in above hypothesis testing, there are 4 accept H_0 and 6 accept H_a among 4 tests. Therefore, the level of satisfaction on Internet usage between International and Thai students can be determined as: International students have higher level of satisfaction by using the Internet more than Thai students.

Ha₃: International students have higher level of satisfaction by using the Internet than Thai students is accepted.

Ho₃: International students have not higher level of satisfaction by using the Internet than Thai students is rejected.



D. Level of Satisfaction toward Internet Service Provided by Assumption University (ABAC)

Table 4.17 Comparison of the Significant Difference between International and Thai Students' attitude towards level of Satisfaction toward Internet service provided by Assumption University

	International			Thai		
	Mean	SD	S	Mean	SD	S
1. Internet speed is fast.	3.59	0.93	0.866	3.44	0.89	0.785
2. Not enough standardized software in each computer.	3.26	0.85	0.722	3.23	0.83	0.684
3. Not enough computers for using the Internet.	3.18	0.82	0.671	3.11	0.77	0.601
4. Not enough space and facility to use the Internet.	3.19	0.89	0.792	3.13	0.78	0.610
5. Wireless connection makes lagging while using the Internet.	3.23	0.91	0.831	2.97	0.71	0.508
6. Time is limited for using the Internet service.	3.23	1.10	1.202	2.99	0.95	0.896
7. Problem of password in case of lack of continued Internet usage.	2.96	0.82	0.679	3.17	0.63	0.391
8. Lack of assistance from officers in the computer center.	3.16	0.84	0.704	3.31	0.92	0.853
9. Three hours is enough for using the Internet from home by using AU account.	2.39	1.24	1.536	2.38	0.10	0.996
10. Quality of computers provided is not appropriate.	2.85	0.80	0.642	2.75	1.02	1.036
11. High Internet fee is charged to students each semester.	3.69	0.98	0.953	3.56	1.01	1.021
12. There is not enough space of AU's mailbox.	3.23	0.96	0.921	2.91	0.59	0.351

Table 4.17 Comparison of the Significant Difference between International and Thai Students' attitude towards level of Satisfaction toward Internet service provided by Assumption University (Continued)

	International			Thai		
	Mean	SD	S	Mean	SD	S
13. There are not enough telephone lines to log in to the Internet from home (Most of the time, the telephone lines are busy)	3.58	0.95	0.898	3.79	0.97	0.939
14. There are too many steps to log in to the Internet.	3.06	0.79	0.628	2.99	0.70	0.487
15. The Internet is usually disconnected.	3.25	0.74	0.552	3.40	0.94	0.879
16. Rarely updated virus scan and lack of virus protection from outside sources.	3.26	0.72	0.518	3.38	0.86	0.745
17. Lack of hardware / software maintenance at computer lab.	2.94	0.77	0.591	3.20	0.62	0.390
18. Assumption University web page is useful for students.	3.45	0.93	0.858	3.60	0.95	0.893
19. Students want to pay for the Internet fees to use AU servers.	2.42	1.08	1.162	2.33	1.02	1.031
20. Password security protection is not secure for students' account.	2.97	0.70	0.494	3.19	0.80	0.641

Table 4.17 shows the comparison of the significant difference between International and Thai Students' attitude towards level of satisfaction on Internet service provided by Assumption University. The further detailed explanation is provided below:

- (1) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.59 and Thai students is

3.44, in aspect of Internet speed is fast. The results are in the same range of 3.40 – 4.19 which means **both International and Thai students agree** that Internet speed is fast.

- (2) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.26 and Thai students is 3.23, in aspect of not enough standardized software in each computer. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that not enough standardized software in each computer.
- (3) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.18 and Thai students is 3.11, in aspect of not enough computers for using the Internet. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that there are not enough computers for using the Internet.
- (4) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.19 and Thai students is 3.13, in aspect of not enough space and facility to use the Internet. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that there are not enough space and facility to use the Internet.
- (5) In the satisfaction level of International and Thai students' attitude towards

level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.23 and Thai students is 2.97, in aspect of wireless connection makes lagging while using the Internet. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that wireless connection makes lagging while using the Internet.

- (6) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.23 and Thai students is 2.99, in aspect of wireless connection makes lagging while using the Internet. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that wireless connection makes lagging while using the Internet.
- (7) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 2.96 and Thai students is 3.17, in aspect of problem of password in case of lack of continued Internet usage. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that problem of password in case of lack of continued Internet usage.
- (8) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.16 and Thai students is 3.31, in aspect of lack of assistance from officers in the computer center. The results are in the same range of 2.60 – 3.39 which means both

International and Thai students neither agree nor disagree that there is lack of assistance from officers in the computer center.

- (9) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 2.39 and Thai students is 2.38, in aspect of three hours is enough for using the Internet from home by using AU account. The results are in the same range of 1.80 – 2.59 which means **both International and Thai students disagree** that three hours is enough for using the Internet from home by using AU account.
- (10) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 2.85 and Thai students is 2.75, in aspect of quality of computers provided is not appropriate. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that quality of computers provided is not appropriate.
- (11) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by AU, the average significance of International students 3.69 and Thai students is 3.56, in aspect of high Internet fee charged to students each semester. The results are in the same range of 3.40 – 4.19 which means **both International and Thai students agree** that high Internet fee is charged to students each semester.
- (12) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.23 and Thai students is

2.91, in aspect of there is not enough space of AU's mailbox. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that there is not enough space of AU mail box.

- (13) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.58 and Thai students is 3.79, in aspect of there are not enough telephone lines to log in to the Internet from home (Most of the time, the telephone lines are busy). The results are in the same range of 3.40 – 4.19 which means **both International and Thai students agree** that there are not enough telephone lines to log in to the Internet from home.
- (14) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.06 and Thai students is 2.99, in aspect of there are too many steps to log in to the Internet. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that there are too many steps to log in to the Internet.
- (15) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.25 and Thai students is 3.40, in aspect of the Internet is usually disconnected. The results are in the different range, International students' is in the range of 2.60 – 3.39 which means that **International students neither agree nor disagree** that the

Internet is usually disconnected but Thai students' is in the range of 3.40 – 4.19 which means **Thai students agree** that the Internet is usually disconnected.

- (16) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 3.26 and Thai students is 3.38, in aspect of rarely updated virus scan and lack of virus protection from outside sources. The results are in the same range of 2.60 – 3.39 which means that **both International and Thai students neither agree nor disagree** that rarely updated virus scan and lack of virus protection from outside sources.
- (17) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 2.94 and Thai students is 3.20, in aspect of lack of hardware / software maintenance at computer lab. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that there is a lack of hardware / software maintenance at computer lab.
- (18) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International 3.45 and Thai students is 3.60, in aspect of Assumption University web page is useful for students. The results are in the same range of 3.40 – 4.19 which means **both International and Thai students agree** that Assumption University web page is useful for students.

- (19) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 2.42 and Thai students is 2.33, in aspect of students want to pay for the Internet fees to use AU servers. The results are in the same range of 1.80 – 2.59 which means **both International and Thai students disagree** that students want to pay for the Internet fees to use AU servers.
- (20) In the satisfaction level of International and Thai students' attitude towards level of satisfaction on Internet service provided by Assumption University, the average significance of International students 2.97 and Thai students is 3.19, in aspect of password security protection is not secure for students' account. The results are in the same range of 2.60 – 3.39 which means **both International and Thai students neither agree nor disagree** that password security protection is not secure for students' account.

In the above section A, B, C, D, Level of the Internet usage and satisfaction of International and Thai students are not too different.

Table 4.18 Paired Samples T test for Level of Satisfaction toward Internet Usage Provided by Assumption University between International and Thai students.

Features of Internet	Paired Differences					t	Sig (2-tailed)
	Mean	SD	Std Error Mean	95% CI of the Difference			
				Lower	Upper		
1. Internet speed is fast.	0.15	1.26	0.08	0.001	0.299	1.986	0.048
2. Not enough standardized software in each computer.	0.03	1.18	0.07	-0.106	0.171	0.457	0.648
3. Not enough computers for using the Internet.	0.07	1.16	0.07	-0.069	0.204	0.978	0.329
4. Not enough space and facility to use the Internet.	0.06	1.13	0.07	-0.076	0.191	0.843	0.400
5. Wireless connection makes lagging while using the Internet.	0.26	1.21	0.07	0.118	0.403	3.608	0.000
6. Time is limited for using the Internet service.	0.24	1.36	0.08	0.076	0.395	2.910	0.004
7. Problem of password in case of lack of continued Internet usage.	-0.21	1.09	0.06	-0.338	-0.083	-3.249	0.001
8. Lack of assistance from officers in the computer center.	-0.15	1.26	.08	-0.294	0.001	-1.949	0.052

Table 4.18 Paired Samples T test for Level of Satisfaction toward Internet Usage
 Provided by Assumption University between International and Thai
 students. (Continued)

Features of Internet	Paired Differences					t	Sig (2-tailed)
	Mean	SD	Std Error Mean	95% CI of the Difference			
				Lower	Upper		
9. Three hours is enough for using the Internet from home by using AU account.	0.01	1.50	0.09	-0.166	0.188	0.119	0.905
10. Quality of computers provided is not appropriate.	0.11	1.21	0.07	-0.035	0.249	1.485	0.139
11. High Internet fee is charged to students each semester.	0.13	1.34	0.08	-0.033	0.283	1.555	0.121
12. There is not enough space of AU's mailbox.	0.31	1.16	0.07	0.175	0.447	4.491	0.000
13. There are not enough telephone lines to log in to the Internet from home (Most of the time, the telephone lines are busy)	-0.22	1.35	0.08	-0.377	-0.059	-2.702	0.007
14. There are too many steps to log in to the Internet.	0.06	1.01	0.06	-0.055	0.184	1.061	0.290
15. The Internet is usually disconnected.	-0.15	1.19	0.07	0.294	-0.013	-2.150	0.032

Table 4.18 Paired Samples T test for Level of Satisfaction toward Internet Usage

Provided by Assumption University between International and Thai

students. (Continued)

Features of Internet	Paired Differences					t	Sig (2-tailed)
	Mean	SD	Std Error Mean	95% CI of the Difference			
				Lower	Upper		
16. Rarely updated virus scan and lack of virus protection from outside sources.	-0.11	1.09	0.07	0.243	0.015	-1.747	0.082
17. Lack of hardware / software maintenance at computer lab.	-0.26	1.05	0.06	0.388	-0.141	-4.220	0.000
18. Assumption University web page is useful for students.	-0.15	1.27	0.08	0.299	-0.001	-1.977	0.049
19. Students want to pay for the Internet fees to use AU servers.	0.09	1.46	0.09	0.083	0.262	1.020	0.309
20. Password security protection is not secure for students' account.	-0.22	1.05	0.06	0.341	-0.094	-3.471	0.001

Hypothesis 4

Ha₄: International students have higher level of satisfaction toward the Internet service provided by Assumption University.

Ho₄: International students have not higher level of satisfaction toward the Internet service provided by Assumption University.

1. Internet speed is fast:

1.986 > 1.960; Reject H₀, Accept H_a

2. Not enough standardized software in each computer:
 $0.457 \leq 1.960$; Reject H_a , Accept H_0
3. Not enough computers for using the Internet:
 $0.978 \leq 1.960$; Reject H_a , Accept H_0
4. Not enough space and facility to use the Internet:
 $0.843 \leq 1.960$; Reject H_a , Accept H_0
5. Wireless connection makes lagging while using the Internet:
 $3.608 > 1.960$; Reject H_0 , Accept H_a
6. Time is limited for using the Internet service:
 $2.910 > 1.960$; Reject H_0 , Accept H_a
7. Problem of password in case of lack of continued Internet usage:
 $-3.249 \leq -1.960$; Reject H_a , Accept H_0
8. Lack of assistance from officers in the computer center:
 $-1.949 > 1.960$; Reject H_0 , Accept H_a
9. Three hours is enough for using the Internet from home by using AU account:
 $0.119 \leq 1.960$; Reject H_a , Accept H_0
10. Quality of computers provided is not appropriate:
 $1.485 \leq 1.960$; Reject H_a , Accept H_0
11. High Internet fee is charged to students each semester:
 $1.555 \leq 1.960$; Reject H_a , Accept H_0
12. There is not enough space of AU's mailbox:
 $4.491 > 1.960$; Reject H_0 , Accept H_a
13. There are not enough telephone lines to log in to the Internet from home
(Most of the time, the telephone lines are busy):

- 0.119 \leq 1.960; Reject H_a , Accept H_0
14. There are too many steps to log in to the Internet:
1.061 \leq 1.960; Reject H_a , Accept H_0
15. The Internet is usually disconnected:
-2.150 \leq -1.960; Reject H_a , Accept H_0
16. Rarely updated virus scan and lack of virus protection from outside sources:
-1.747 $>$ -1.960; Reject H_0 , Accept H_a
17. Lack of hardware / software maintenance at computer lab:
-4.220 \leq -1.960; Reject H_a , Accept H_0
18. Assumption University web page is useful for students:
-1.977 \leq -1.960; Reject H_a , Accept H_0
19. Students want to pay for the Internet fees to use AU servers:
1.020 \leq 1.960; Reject H_a , Accept H_0
20. Password security protection is not secure for students' account:
-3.471 \leq -1.960; Reject H_a , Accept H_0

As shown in above hypothesis testing, there are 14 accept H_0 and 6 accept H_a among 20 tests. Therefore, the level of satisfaction on Internet usage between International and Thai students can be determined as: International students have not higher level of satisfaction toward the Internet service provided by Assumption University.

H_{a4} : International students have higher level of satisfaction toward the Internet service provided by Assumption University is rejected.

H_{o4} : International students have not higher level of satisfaction toward the Internet service provided by Assumption University is accepted.

V. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this project is to examine the attitude towards the use of Internet among International and Thai students at AU and to learn the factors and reasons they use the Internet as educational tools. Moreover, to compare the opinions concerning the reasons between International and Thai students in using Internet and the levels of using Internet as educational tools between International and Thai students. The last one is this project focused on Assumption University which has a reputation for English medium instruction and also advanced technology supporting organization.

As the world of high technology, the Internet becomes the most popular communication tool to connect each other around the world with less cost and more speed. The Internet is also a source of knowledge, entertainment tool, updating news and important tool for business. In addition, the leader and government of each country realized the significance of the Internet development and it required many policies to support this kind of technology world.

After studying the level of Internet usage between International and Thai students at Assumption University, the researcher can determine the conclusion as follows:

5.1 Conclusion on the Personal Information of the Respondent

From the gathered data, it can conclude that the respondents of two types International and Thai students are the same quantity. Firstly, the percentage was emphasized on International students among these two, the majority of respondents are the male students (65.4%), MBA students (54.7%), full – time students (79.3%), age between 24 – 28 years (43.6%), unemployed (69.2%) and no income (69.3%).

The second one, the percentage was emphasized on Thai students; the majority of respondents are the female students (56.1%), MBA students (52.1%), and part – time

students (51.4%), age between 20 – 24 years (52.1%), private employee (46.4%), and income between 10001 - 25000 baht (39.3%).

5.2 Conclusion on the Level of the Internet Usage

From the gathered data, firstly, the percentage was emphasized on International students among these two; the majority of respondents' Internet started using age is between 5 – 10 years (88.9%), learn to use Internet by self study (79.3%), use Internet for the main purpose of communication (49.6%), 5 times or more per week (71.5%), between 6 – 9 hours at one time(37.5%), often use the Internet at the University (43.9%) and prefer to use the Internet at the residence (58.2%). Additionally, the opinions of International students toward the frequency of using the feature of the Internet, the attitude score can be ranged from the highest one to lower one as follows:

- (1) World Wide Web
- (2) E-mail
- (3) Gophers (searching information)
- (4) Chat
- (5) Newsgroup
- (6) File Transfer Protocol
- (7) Telnet

The researcher emphasized on Thai students and it can be concluded that the majority of respondents' Internet started using age is between 5 – 10 years (77.5%), learn to use Internet by self study (73.6%), use Internet for the main purpose of entertainment (32.5%), 5times or more per week (56.4%), between 3 – 5 hours at one time(51.8%), often use the Internet at the office (47.5%) and prefer to use the Internet at the residence (68.6%). Additionally, the opinions of International students toward the frequency of using the feature of the Internet, the attitude score can be ranged from the highest one to lower one as

follows:

- (1) World Wide Web
- (2) E-mail
- (3) Chat
- (4) Gophers (searching information)
- (5) File Transfer Protocol
- (6) Newsgroup
- (7) Telnet

5.3 Conclusion on the Internet Usage as an Educational Tool

According to the frequency of using the Internet as an educational tool of the students, the attitude score of International students can be ranged from the highest score to lowest score as follows:

1. For using the search engine to find further information or data to use in project, presentation, class work and etc.
2. For communicating and exchanging knowledge and idea with instructors and fellow students.
3. For creating educational aids like multimedia and presentation materials.
4. For creating and maintaining a web page or websites for educational purposes.

According to the frequency of using the Internet as an educational tool of the students, the attitude score of Thai students can be ranged from the highest score to lowest score as follows:

- (1) For using the search engine to find further information or data to use in project, presentation, class work and etc.
- (2) For communicating and exchanging knowledge and idea with instructors and fellow students.

- (3) For creating educational aids like multimedia and presentation materials.
- (4) For creating and maintaining a web page or websites for educational purposes.

5.4 Conclusion on the Satisfaction on the Internet Usage

Based on the satisfaction of the Internet usage, the attitude score of the International students can be ranged from the highest one to lowest one as follows:

- (1) User can use the Internet as a self - study tool.
- (2) Information on the Internet is useful and up - to - date.
- (3) Internet can serve as a tool to get knowledge.
- (4) Internet is a valuable tool for contacting with other people or organization.
- (5) Internet is the source of information that users want.
- (6) Internet can save users' money for finding information.
- (7) Internet can save users' time to find out information rather than from the books.
- (8) Internet can provide any information that users want to find.
- (9) Internet can save manpower of the organization.
- (10) Information on the Internet is accurate and believable.

Based on the satisfaction of the Internet usage, the attitude score of the International students can be ranged from the highest one to lowest one as follows:

- (1) Internet can serve as a tool to get knowledge.
- (2) User can use the Internet as a self - study tool.
- (3) Internet is a valuable tool for contacting with other people or organization.
- (4) Internet is the source of information that users want.
- (5) Information on the Internet is useful and up - to - date.
- (6) Internet can save users' money for finding information.

- (7) Internet can save users' time to find out information rather than from the books.
- (8) Internet can provide any information that users want to find.
- (9) Internet can save manpower of the organization.
- (10) Information on the Internet is accurate and believable.

5.5 Conclusion on the Satisfaction toward Internet Service Provided by Assumption University

The attitude score of International students toward the satisfaction of the Internet service provided by AU can be arranged from the highest to lowest score as below:

- (1) The respondents think high Internet fee is charged to students each semester.
- (2) Internet speed is fast.
- (3) There are not enough telephone lines to log in to the Internet from home
(Most of the time, the telephone lines are busy)
- (4) Assumption University web page is useful for students. Assumption University web page is useful for students.
- (5) Not enough standardized software in each computer.
- (6) Rarely updated virus scan and lack of virus protection from outside sources.
- (7) Internet is usually disconnected.
- (8) Time is limited for using the Internet service.
- (9) Wireless connection makes lagging while using the Internet.
- (10) There is not enough space of AU's mailbox.
- (11) Not enough space and facility to use the Internet.
- (12) Not enough computers for using the Internet.
- (13) Lack of assistance from officers in the computer center.
- (14) There are too many steps to log in to the Internet.

- (15) Password security protection is not secure for students' account.
- (16) Problem of password in case of lack of continued Internet usage.
- (17) Lack of hardware / software maintenance at computer lab.
- (18) Quality of computers provided is not appropriate.
- (19) Students want to pay for the Internet fees to use AU servers.
- (20) Three hours is enough for using the Internet from home by using AU account.

While, the attitude score of Thai students toward the satisfaction of the Internet service provided by AU can be arranged from the highest to lowest on as follow:

- (1) There are not enough telephone lines to log in to the Internet from home
(Most of the time, the telephone lines are busy)
- (2) Assumption University web page is useful for students.
- (3) The respondents think high Internet fee is charged to students each semester.
- (4) Internet speed is fast.
- (5) Internet is usually disconnected.
- (6) Rarely updated virus scan and lack of virus protection from outside sources.'
- (7) Lack of assistance from officers in the computer center.
- (8) Not enough standardized software in each computer.
- (9) Lack of hardware / software maintenance at computer lab.
- (10) Password security protection is not secure for students' account.
- (11) Problem of password in case of lack of continued Internet usage.
- (12) Not enough space and facility to use the Internet.
- (13) Not enough computers for using the Internet.
- (14) There are too many steps to log in to the Internet.
- (15) Time is limited for using the Internet service.

- (16) Wireless connection makes lagging while using the Internet.
- (17) There is not enough space of AU's mailbox.
- (18) Quality of computers provided is not appropriate.
- (19) Three hours is enough for using the Internet from home by using AU account.
- (20) Students want to pay for the Internet fees to use AU servers.

5.6 Conclusion of hypothesis testing

- Ha₁: International students use the Internet more often than Thai students is accepted.
- H₀₁: International students use the Internet not more often than Thai students is rejected.
- Ha₂: International students use the Internet as educational tool more than Thai students is rejected.
- H₀₂: International students use the Internet as educational tool not more than Thai students is accepted.
- Ha₃: International students have higher level of satisfaction by using the Internet than Thai students is accepted.
- H₀₃: International students have not higher level of satisfaction by using the Internet than Thai students is rejected.
- Ha₄: International students have higher level of satisfaction toward the Internet service provided by Assumption University is rejected.
- H₀₄: International students have not higher level of satisfaction toward the Internet service provided by Assumption University is accepted.

5.7 Recommendation

From the data collected, researcher found that both International and Thai students often use the Internet in their daily life for assignment, entertainment and communication. They use Internet nearly everyday but they also still have some problems of the Internet usage especially at Assumption University where there are not enough telephone lines to connect the Assumption University server from home with Assumption University account and connection lagging. Due to lack of this facility they don't want to pay for the internet service and they think the university charged them high Internet fee. The management of Assumption University should focus on these problems to get students' satisfaction. Other problems at the university campus are they think there are not enough standardized software in each computer, rarely updated virus scan and lack of virus protection from outside sources and lack of staff at computer center. These facts are also emphasized and protected by providing the policy to staff and users. Moreover, the detailed of International and Thai students satisfaction on Internet usage that Assumption University provided, the researcher emphasize on International students first, the international students think Assumption University provided fast internet speed but they also have a problem of high Internet fee charged and not enough telephone lines to log in and three hours is very limited to them. Therefore, they don't want to pay for the Internet. According to these problems, Assumption University management team should focus on them and improve to satisfy the students. As seen in the result, these problems occurred not only to the international students but also to the Thai students. Though both International and Thai students think Assumption University website is useful for them, they still have some problems about Assumption University computer lab. There are not enough standardized software, rarely updated virus scan, not enough space of Assumption University mail box and lack of assistant from computer lab. If Assumption University wants student to be satisfied with

the Internet service provided, the Assumption University management team should solve these problems in the future to be a good Internet service provider for both International and Thai students.





Questionnaire

A Comparative Study between International and Thai Students' Attitude towards Internet Usage

I. The Personal Information

1. Nationality

International

Thai

2. Gender

Male

Female

3. Faculty

.....

4. Type

Full-time student

Part-time student

5. Age

20 – 24 years

More than 24 – 28 years

More than 28 – 32 years

Over 32 years

6. Occupation

Independent Career

Unemployed

Civil Servant

Private employee

Others (please specify).....

7. Monthly Income

5,000 – 10,000 baht

10,001 – 25,000 baht

25,001 – 35,000 baht

35,001 baht and over

II. The opinions of respondents

Level of Internet usage

1. Which age have you begun to use the Internet?
 - 5 – 10 years
 - more than 10 – 15 years
 - Over 15 years

2. How do you start to learn to use the Internet?
 - University
 - Self- study
 - Others (specify).....

3. What is the main purpose of using the Internet?
 - Education
 - Entertainment
 - Communication
 - Business
 - Others (please specify).....

4. How often do you use Internet?
 - Rarely
 - 1 – 2 times per week
 - 3 – 4 times per week
 - 5 times or more per week

5. How many hours do you usually use the Internet at one time?
 - Less than 1 hour
 - 1 – 2 hours
 - 3 – 5 hours
 - 6 – 9 hours
 - Over 9 hours

6. Where do you often use the Internet?
 - University
 - Residence
 - Office
 - Internet café
 - Others (please specify).....

7. Where do you prefer to use the Internet?
 - University
 - Residence
 - Office
 - Internet café
 - Others (please specify).....

8. How often do you use the following features of the Internet?

Feature of Internet	Never	Seldom	Sometime	Often	Always
1. World Wide Web					
2. E-mail					
3. Chat					
4. File transfer protocol					
5. Telnet					
6. Newsgroups					
7. Gophers(searching info)					

Level of Internet Usage as an Educational Tool

Feature of Internet	Never	Seldom	Sometime	Often	Always
1. For using the search engine to find further information or data to use in project, presentation, class work and etc.					
2. For communicating and exchanging knowledge and idea with instructors and fellow students.					
3. For creating educational aids like multimedia and Presentation materials.					
4. For creating and maintaining a web page or web sites for educational purposes.					

Level of Satisfaction on Internet Usage

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. User can use Internet as a self- study tool.					
2. Information on the Internet is useful and up-to-date.					
3. Information on the Internet is accurate and believable.					
4. Internet can provide any information that users want to find.					
5. Internet can save users' time to find out information rather than from the books.					
6. Internet can save users' money for finding information.					
7. Internet can serve as a tool to get knowledge.					
8. Internet is the sources of information for relevant information that users want.					
9. Internet is a valuable tool for contacting with other people or organization.					
10. Internet can save manpower of the organization.					

Level of the Satisfaction toward Internet Services Provided by Assumption University

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1. Internet speed is fast.					
2. Not enough standardized software in each computer.					
3. Not enough computers for using Internet.					
4. Not enough space and facility to use Internet.					
5. Wireless connection make lagging while using the Internet.					
6. Time is limited for using the Internet service.					
7. Problem of password in case of lack of continued Internet usage.					
8. Lack of assistance from officers in the computer center.					
9. Three hours is enough for using Internet from home by using AU account.					
10. Quality of computers provided is not appropriate.					
11. High Internet fee is charged to students each semester.					
12. There is not enough space of AU's mailboxes.					
13. There are not enough telephone lines to log in to the Internet from home (Most of the time, the telephone lines are busy).					

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
14. There are too many steps to log in to the Internet.					
15. The Internet usage is usually disconnected.					
16. Rarely updated virus scan and lack of virus protection from outside sources					
17. Lack of hardware/software maintenance at computer lab.					
18. Assumption University web page is useful for students.					
19. Students want to pay for the Internet fees to use Assumption University Servers.					
20. Password security protection is not enough for students' account.					

Comments:

BIBLIOGRAPHY

1. <http://www.au.edu>
2. Hoffer, Jeffrey A, George, Joey F. and Valacich , Joseph S. Modern systems analysis and design (4th Edition)
3. Laudon, Kenneth C. and Laudon, Jane P. Management Information Systems (8th Edition), Upper Saddle River, New Jersey: Prentice Hall, 2004
4. James T. McClave, P. George Benson and Terry Sincich. Statistics: For Business and Economics (9th Edition), Upper Saddle River, New jersey: Prentice Hall, 2005
5. Kurose, James F and Ross, Keith W., jt. Auth. Computer networking : a top-down approach featuring the internet. Bostan : Addison Wesley, 2003
6. Black, Uyles D. Advanced Internet technologies. Upper Saddle River, NJ : Prentice Hall , 1999.
7. Schank, Roger C. Designing world class e-learning : how IBM, GE, Harvard Business School, and Columbia University are succeeding at e-learning. New York : McGraw-Hill, 2002
8. Picciano, Anthony G. Distance Learning Making Connections Across Virtual Space and Time. New York: Prentice Hall, 2001.
9. Chute, Alan G., Thompson, Melody M., jt. auth and Hancock, Burton W., jt. auth. The McGraw-Hill handbook of distance learning. New York : McGraw-Hill, 1999
10. Long, Larry, Long, Nancy, jt. auth.. Computer and Information system, 5th edition. Upper Saddle River, New Jersey: Prentice Hall, 1997
11. McClave, Benson, Siocich. Statistics for Business and Economics, Prentice Hall 2005