The Use of Technology for Teaching and Learning in Hong Kong

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ABSTRACT

The goal of this project, sponsored by the Teaching and Learning Centre at Lingnan University, was to ascertain ways to improve the use of technologies by students and faculty at Lingnan University for teaching and learning. From data collected through classroom observations, interviews, and surveys with faculty and students, several recommendations and opportunities were proposed. These included changing classroom configurations, using text messages for easier communication and investigating collaboration and social networking technologies for possible integration into the curriculum.

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AUTHORSHIP

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EXECUTIVE SUMMARY

Technology and education are a natural mix. Knowing this, Lingnan University in Hong Kong SAR resolved to understand how well its current technological resources were being utilized by students and faculty for teaching and learning purposes. Therefore, the Teaching and Learning Centre at Lingnan teamed up with Worcester Polytechnic Institute to achieve the following goal and objectives:

GOAL:

Identify ways to improve the use of technologies by students and faculty of Lingnan University for teaching, learning, and socializing.

OBJECTIVE:

Identify available technological resources at Lingnan.

OBJECTIVE:

Determine better ways to use teaching and learning technologies.

OBJECTIVE:

Determine current usage and perceptions of technology at Lingnan.

Figure ES.1   Goal and objectives

Background

Lingnan University is a liberal arts institution located in Hong Kong SAR with a relatively small student body of 2,488. The university has the unique characteristic of being the only school in Hong Kong that is solely dedicated to the humanities.

A large factor influencing the educational system in Hong Kong is its history as a British colony. One implication of this is that the education system in Hong Kong currently follows the system introduced during its years as a British colony, a test heavy system that

puts a high emphasis on memorization. A common criticism of the system is that its teachers are unable to make time to teach critical thinking or analysis (Siu, 2002).

Methods

To accomplish our objectives of identifying the teaching and learning technologies available at Lingnan University and identifying opportunities to enhance teaching and learning through the use of technology, we implemented a two part plan. In the first part, we evaluated what current technological resources and facilities are available. This information was gathered by analyzing the results of previously conducted student and faculty surveys, conducting our own student survey, physically auditing the Lingnan campus, and interviewing Information Technology Services Centre (ITSC) staff.

The second part was designed to reveal student and faculty usage and perceptions of the technology at Lingnan University. This information was gathered by conducting student focus groups, interviewing faculty, interviewing research professors, and also by using data gathered in the student and faculty surveys in part one. The outcome of this second part identified opportunities to better exploit current resources and determine which types of technology are best suited for the university.

Results and Analysis

We found that Lingnan University is equipped with computer labs, language labs, lecture theaters, lecture classrooms, and tutorial classrooms. The largest perceived problems with these room types were the limitations of the tutorial classrooms. Interviews revealed that instructors were either not satisfied with the technology offered in these classrooms, or that the environment was not conducive to round table discussions. Many

instructors believe that effective class discussion would increase student creative and critical thinking. As all courses are taught in English, which is not the mother tongue of the vast majority of the student population, increasing creative and critical thinking is difficult using traditional lecture methods.

The Lingnan campus is equipped with both wired and wireless broadband connections; however, the current level of utilization is quite high and has significantly slowed these systems. Online resources include course managers such as WebCT and Moodle, though these tools are not universally used by instructors. Other online tools such as social networking sites, like Facebook, have gained the attention of instructors at Lingnan but are currently not integrated into any curriculum.

Surveys and interviews revealed that most students use text messaging on a daily basis. However, aside from Hong Kong university libraries sending reminder texts to return books, taking advantage of student use of text messages has not been done in an academic context. Even so, instructors are receptive to the idea of using text messages to disseminate information. Since students often neglect their university e-mail accounts, text messages would be better suited for short, time-critical or important course communications.

Recommendations and Opportunities

The following table (ES.1) outlines our recommendations and their benefits.

Table ES.1 Proposed recommendations and perceived benefits

Recommendations	Benefits
Convert some tutorial classrooms to discussion classrooms.	Reduces time needed to rearrange classroom for round table discussion and promotes two-way communication among students and instructors.
Increase network bandwidth.	Alleviates current network congestion and enables the widespread use of online media for teaching and learning.
Increase online learning management system adoption.	Creates a consistent and reliable reference point for students whose primary language is not English.
Utilize classroom polling devices for large classes.	Promotes classroom participation and conveys the strengths or weaknesses of students on particular topics.
Create a student text messaging system for instructors.	Increases instructor-student communication and reduces instructor dependence on conveying messages via e-mail.
Utilize blogs and wikis in teaching and learning.	Promotes creative thinking and provides an easy means for instructors to track student work.
Record lectures for later reference.	Creates a consistent and reliable reference point for students whose primary language is not English.

Opportunities differ from recommendations in that they would benefit from more research or that they address issues inferred rather than explicitly found. The following table (ES.2) outlines our identified opportunities and their benefits.

Table ES.2   Identified opportunities and perceived benefits

Opportunities	Benefits
Utilize online social networking tools for teaching and learning.	Promotes student collaboration and provides a means for instructors to form lasting relations with students.
Utilize YouTube for teaching and learning.	Diversifies class material, fosters creative thought, and promotes social networking.
Utilize Google Apps collaboration tools for teaching and learning.	Promotes student collaboration and provides an easy means for instructors to track student work.
Utilize Second Life's virtual world for teaching and learning.	Diversifies class material, fosters creative thought, and promotes social networking.
Share professors with other universities through video conferencing tools.	Internationalizes Lingnan and strengthens curriculum.
Implement Google Earth campus resource map.	Reduces new student stress and confusion.

We feel these recommendations and opportunities adequately address our goal to identify the perceptions of students and faculty at Lingnan University regarding the current technological resources available and their improved use in teaching, learning, and socializing. Through a continued dialogue among students, faculty and staff, Lingnan University stands to continue its pattern of innovative teaching and learning, while ensuring a quality liberal arts education.

1. INTRODUCTION

In a world where the impact of technology and innovation is seen in everyday life, the future of education will be impacted by the future of technology. Technology is continually evolving in our educational systems and is affecting all ages, genders, and nationalities. In a time when iPhones, personal digital assistants (PDAs), and other small mobile devices (SMDs) have become undeniable resources for everyday tasks, we must ask ourselves if we are using technology effectively to positively impact learning in our society.

Hong Kong is one of the most technologically resourced cities in the world, and technology plays a vital role in its educational system. Lingnan University is a public-supported liberal arts university in Hong Kong that was granted full university status on July 30, 1999 (Lingnan University, 2009, History and Development). Lingnan University, like the other seven universities in Hong Kong, has a limited understanding of the widespread application of teaching and learning technologies, particularly in regard to the balance between social and learning uses of technologies. Providing Lingnan University with detailed knowledge of the uses of technology at the university could highlight areas that need improvement and provide insights as to where technology can be used in the future to improve education quality for faculty and students.

Online classes, distance learning, digital class lectures, online grading systems, and wireless Internet are among many of the technological resources in an educational system that can positively affect students and faculty. Each student or faculty member may use the same technologies in different ways to accommodate their style of learning or teaching. For example, in a live video conference Tammy Worcester (2009) encouraged the use of

mobile phones, commonly used for general communication, as teaching tools and provided an example by demonstrating the ability to perform Google searches from a mobile device by way of text messaging. Small mobile devices, such as mobile phones, could be instrumental in the push to implement information technology in education with their ability to aid certain learning styles and teaching styles.

The Centre for Information Technology in Education (CITE) (2009) was established in Hong Kong in order to "provide support for the education community in Hong Kong in promoting the use of information technology (IT) for quality education" (para. 1). Educational institutions benefit from the development of groups such as CITE to provide more information on technology use in education. Lingnan University has the Teaching and Learning Centre (TLC), which in 2009 hired Dr. David Kennedy as its director, to support technology in teaching and learning. Dr. Kennedy immediately realized that technology use for learning, teaching, or social purposes at Lingnan, had not yet been systematically documented and analyzed.

The purpose of this project was to determine the available technological resources at Lingnan University and identify ways to improve the use of technologies by students and faculty for teaching, learning, and socializing. With the help of our sponsor, Dr. David Kennedy, we developed recommendations for the future use and integration of educational technologies at Lingnan University. We achieved this goal by analyzing previously completed student and faculty surveys and through interviewing and surveying students, faculty, and staff members ourselves. We also investigated and mapped the networks available at the school and investigated which potential small mobile devices could be used for teaching and learning purposes. Our project determined the context in which faculty

and students use technology on campus, the impact technology has or could have on student learning, and which pedagogical approaches are used or could be used by the faculty to incorporate teaching technologies, with the ultimate goal of improving education at Lingnan University.

2. Background

To better understand the complexities of integrating technology in an educational setting, we review some relevant background material to provide a foundation for understanding the focus of the project. First, we explore the current uses, both successes and failures, of technology use in education in various settings around the world. Next, we outline several learning and teaching styles as they relate to technology. Finally, we briefly describe the current technology-assisted educational programs available in Hong Kong.

2.1. Technology in Education

The ever dwindling size and cost of powerful computing systems has given educators new tools to help students learn (Keppell, 2004). From being able to post lecture notes and videos on the Internet, to instant evening communication links with students via e-mail, technology has quickly become an indispensible tool for any modern academic institution. Furthermore, since smart phones and other small media devices have become so prevalent in today's society, it has become a competitive necessity in many career paths to know how to use such devices (Lee, 2008).

2.1.1. Small Mobile Devices

Small mobile devices such as cell phones, personal digital assistants (PDA's), netbooks, etc., have become increasingly versatile in terms of their functionality. No longer just used to make calls, cell phones have become cameras, music and video players, and gateways to the Internet. It is these auxiliary capabilities that have piqued the interest of learning institutions such as The City University of Hong Kong and Lingnan University. In fact, City University of Hong Kong has begun to provide PDA's to all of its business students

(Vogel, Kennedy, Kuan, Kwok, & Lai, 2007). "These devices have been used extensively on and off-campus in conjunction with a portfolio of applications to support learning" (p. 1). Clearly, for the students of business, small mobile devices have become integral to their learning. Business is Lingnan University's most popular major, and these mobile devices could be pivotal in the students' education.

Figure 2.1.1.a   Examples of Small Mobile Devices

2.1.2. E-Learning

The Internet has become an indispensable information gateway for many people in the developed world. Its ability to disseminate, update, and correlate information instantaneously has not been overlooked by learning institutions. These qualities of the Internet have made schools able to create a less top-down learning structure (Keppell, 2004), and there has been heavy investment in Hong Kong specifically in making sure that modern tools exist for accessing this information network. Furthermore, Internet-based

learning has become popular among continuing education programs in Hong Kong, because of its ability to work around the busy or erratic schedules of adults who have not had the opportunity to experience the life of a typical university student (Leung & Li, 2006).

Aside from the Internet, tools like Symposium and Lecture Capture have become popular methods of using technology in the classroom. Symposium enables a professor to use a stylus-like device to "write" on a computer screen, and then have that information projected onto the wall in real time. Lecture Capture works by recording the audio portion of the lecture, and syncing the recording to the draw history in Symposium, enabling a student to later watch a problem be worked out on his/her own computer screen, while listening to the teacher explain the steps. These techniques have been used at Worcester Polytechnic Institute and their usage by professors has been growing quickly (Harrity & DeSilva, personal communication, November 20, 2009).

2.2. Learning Styles

Before investigating the effectiveness of technology in education, it is first important to describe student learning styles. Since each student learns better in a different environment, the integration of technology in the classroom will impact students differently. Some learning styles may be more receptive to incorporating small mobile devices or other technologies. Therefore, it is worthwhile to determine those learning styles most commonly found among Humanities and Social Science majors (the predominate type of major at Lingnan University) and the styles best suited to include technology-assisted learning.

2.2.1. Types of Learning Styles

Researchers have conducted numerous studies in the area of student learning styles. Teachers are more effective when they understand the differences in learning styles and actively employ teaching strategies that encompass many learning styles (Felder & Spurlin, 2005). According to the Felder-Silverman model, there are four dimensions of student learning: sensing/intuitive, visual/verbal, active/reflective, and sequential/global. Students are rated on a spectrum in each area to determine their learning preference.

Specifically, students categorized as "sensing" prefer facts and rote learning, while intuitive learners would rather "discover possibilities and relationships" (Felder & Soloman, 2009). The visual/verbal style describes a student's preferred medium of communicating knowledge; that is, visual students learn best through visual stimuli, while verbal students learn best through auditory stimuli. Active learners often discuss or apply new information to better retain it; reflective learners, however, prefer to intellectualize the information. Finally, students who solve problems linearly or in a step-wise fashion are considered sequential learners. Global learners solve problems by first understanding the "big picture" and then applying that information to the situation at hand.

These areas of learning can be applied to any students to gain insight on their learning strategies. Groups of similarly-minded students, however, often have the same learning style (Seidel & England, 1997). In a survey of one hundred students at a liberal arts university, Seidel and England evaluated the connection between academic major and Gregorc's Cognitive Styles Model. Gregorc's model is very similar to the Felder-Silverman model presented above. In her study, Seidel determined that Humanities majors were mostly "Dual Random" learners, meaning they prefer project- and discussion-based

instruction and assessment. Assuming these findings are accurate for Humanities majors in Hong Kong, technologies that enhance discussion and collaboration would likely benefit students at Lingnan University.

2.2.2. Technology Enhancing Collaboration

Technologies exist that can enhance student communication. For example, Small Mobile Devices (SMDs) are used heavily by younger generations in everyday life (Vogel et. al., 2007). These SMDs, however, are not just used for pleasure; they can be useful in the classroom, too. A study by Vogel et. al. (2007) of business students at the City University of Hong Kong found that SMDs are a helpful organizational tool. In addition, students used their SMDs to reinforce the material learned in class through numerous software applications. As a result, Vogel et. al. found the students using SMDs scored higher on midterm and final evaluations as well as received higher overall grades.

With advances in SMD technology, students are becoming increasingly more connected with the Internet. As a result, many web applications have arisen to aid learners. In her keynote at the National Education Computing Conference, Tammy Worcester (2009) described numerous ways cell phones can be used in the classroom. For example, PollEverywhere (2009) allows educators to create polls on the fly to survey their class via each student's cell phone. The teacher is able to display a real-time graph of the results. Another SMD to Internet service is Drop.io (2009). Drop.io allows students to collaborate via information drops to share documents, pictures and more. Students can also use the service to leave voicemails or audio reminders to the drop. Worcester also demonstrated a service, SMS 411 (2009), which translates email into text messages. Such a service could improve teacher-student communication by providing educators

uncomfortable with texting a tool to easily send their SMD-embracing students messages (PollEverywhere, 2009).

2.3. Teaching Styles

Teaching styles vary across ages, cultures, and areas of study. The term "teaching style" refers to "a teacher's personal behaviors and media used to transmit data to or receive it from the learner" (Evans, Harkins, & Young, 2008, p. 1). Teachers can present their information to their students through lectures, while others do so through in-class exercises. Some professors will evaluate their class based on how well students can memorize information, while others will focus on having the students understand the material through activities.

2.3.1. Different Teaching Styles

According to Felder and Silverman (1988), teaching styles can be defined by the answers to five questions: 1) Is the information concrete or abstract? 2) How is the information presented: visually, or verbally? 3) How is the presentation organized: inductively or deductively? 4) How is student participation facilitated by the presentation: actively or passively? 5) What type of perspective is provided on the information presented: sequential or global?

2.3.2. Connecting Teaching Styles to Learning Styles

Each teaching style corresponds directly to a specific learning style. A student who learns through a sensing style will benefit from a concrete teaching style, where everything is observational and from data collection, as opposed to a student whose learning style is intuitive. The student will benefit from an abstract teaching style, in which imagination is

encouraged and boundaries are tested. Presentation of information in the average university is verbal and is usually through a professor standing before a class feeding information to the students (Felder & Silverman, 1988, p. 1). This accommodates the auditory learner as opposed to the visual learner, who would benefit more from sights, pictures, and diagrams. How information is given to students and how it is organized work together in attempts to reach the audience. Information that is presented inductively, in which observations and measurements lead to theories, is the direct opposite of deduction, in which theories are applied to applications (Felder & Silverman, 1988, p. 1). Ninety years ago, Albert Einstein (1919) addressed the thought process of a scientist, in relation to induction versus deduction by stating the following:

> … The truly great advances in our understanding of nature originated in a way almost diametrically opposed to induction. The intuitive grasp of the essentials of a large complex of facts leads the scientist to the postulation of a hypothetical basic law or laws. From these laws, he derives his conclusions (p. 3).

Teaching styles at modern technical schools are more likely to be deductive, since most math and science schools begin with core, fundamental classes such as calculus, chemistry and physics, and then develop into more specific design applications as you proceed throughout the curriculum. In contrast, David Moore (1998) states that "Methods, not conclusions, are the core of liberal knowledge" (p. 4). In liberal arts colleges, where the main areas of study are history, performing arts, language, philosophy, social sciences, etc., the method and induction guide the education, and the proper inductive teaching techniques will accommodate this style of learning.

When teachers present information to students, the information can be absorbed in one of two fashions: active experimentation and reflection observation (Felder & Silverman, 1988). Hands on experiments, and learning by doing are common characteristics in active learning, as opposed to a reflection observation style, in which students examine information and work out the information inside their heads. Perception of the material presented to students can be impacted by the perspective given to the students. This concept divides students into sequential learners (linear reasoning) and global learners (intuitive leaps), which divides the teaching styles needed for each type of learning. According to Felder and Silverman, the proper way to teach a sequential learner is by "presenting the material in a steady progression of complexity difficulty" (p.3), and the proper way to teach a global learner is "provide the big picture or goal of a lesson before presenting the steps" (p. 3).

Different areas of study tend to fall into different categories of teaching styles. Although the styles may seem locked in to certain areas of education, there is no set teaching style that works for a specific area of study. Few educational psychologists would dispute that students learn more when information is presented in a variety of modes than when only a single mode is used (Felder & Henriques, 1995).

2.3.3. *Integrating Teaching Styles with Technology*

Technology can be used to benefit the teaching styles defined by Felder and Silverman (1988). Videos and online lectures are among two of the ever-growing popular technology resources used by teachers today. In 2007, John C. Park, an associate professor of science education at North Carolina State University, created a digital video of an egg experiment in which a teacher lights a piece of paper, drops it into a milk bottle, caps the

bottle with a boiled egg, and within seconds, the egg slides into the bottle, whole (Honawar, 2008). A video in which students could pause, rewind, and watch again, brought the effects of this experiment to another level. The students were able to watch every step of the process as many times as needed to ensure that the process was understood. This method of teaching is concrete, visual, inductive, and reflective, which works well for science and math students, who apply the induction based scientific method in their experiments.

Not all technological reforms are being seen in a positive light. Digital lecture halls are a growing trend in colleges around the world, and with the implementation of technology in lecture structures, many educational systems are providing online lecture notes to students. Many professors love the ease of digital teaching, but others such as Cezar Mihalcescu (2007) have a negative outlook on the change. Mihalcescu states:

> The dimming of the lights, required to use this technology, also tends to reduce classroom discussion. These problems persist in today's times, when PowerPoint presentations have replaced slide and overhead presentations. Having lecture materials in digital format has enabled faculty to make their materials available to students through the Internet. This had led to faculty concerns that students would skip lectures since all lecture material was freely available to the student, and that it would be a disaster if students did not frequently attend lecture (p. 5).

Online lecture notes are designed to be a resource to allow students to all have the same information available to them. This method of educating falls under the teaching style visual and reflective observation, which some may argue is not effective, but the effectiveness is determined by the students whose learning styles may or may not complement the teaching style.

2.4. Popular Teaching and Learning Technologies

Since the invention of computers, schools have implemented technologies to help manage the complexities of providing quality student educations. With the introduction of the Internet, those technologies have expanded further. From course registration to employee management to student collaboration to assignment tracking, computers and the Internet have drastically changed teaching and learning in higher education. Numerous software packages are touted by companies as providing simplification of the bureaucratic mess inherent to large organizations.

2.4.1. Web Information Systems

Web Information Systems (WIS's) have become a staple to higher education schools. They can manage everything from employee payroll to student course selection. As a suite of software applications that draw information from a centralized database, WIS's are crucial to school administrators, letting them quickly access information through a web browser from any Internet-connected computer. Students and faculty can also use WIS's to manage their courses, payroll status and evaluate their degree status. In fact, WIS's often provide the foundation other educational technologies use to operate (SunGard Higher Education, 2010). For example, some Learning Management Systems use the course data stored in the WIS to create individualized pages controlled by the professor and accessible to the students.

One of the most popular WIS's used by school systems worldwide is the Banner Unified Digital Campus operated by SunGard Higher Education (2010). It can be integrated and personalized to a particular institution making it an ideal choice. Furthermore, the

Banner system integrates with many other popular educational technologies, increasing its usefulness.

2.4.2. Learning Management Systems

Learning Management Systems (LMS's) provide professors with an individualized online space for each of their classes. Many provide the ability to post documents, send announcements, manage grades and enable discussions (Powel & Gill, 2003). Professors are able to contact students and track their progress in online assignments. Most LMS's contain the ability to link with WIS's in order to streamline the page creation process (i.e. use class lists to maintain permissions for a particular course).

Some popular LMS's include Blackboard, WebCT and Moodle. Blackboard is the largest and most influential entity of the three since it purchased WebCT. Backboard is in the process of integrating the two companies' software packages (BlackBoard, 2005). Conversely, Moodle is a free open source software package that has recently emerged as a competitor in the higher education LMS realm. As an open source project with hundreds of active developers, Moodle allows any software engineer to create plug-ins to extend its capabilities. Currently, over 45,000 government organizations, corporations, and educational institutions maintain active installations of Moodle worldwide; Hong Kong itself has seventy-eight known installations (Moodle, 2009).

2.4.3. Virtual Reality

Virtual reality can allow students to explore freely, or personalize their learning experience, which then often stimulates learning (Jennings & Collins, 2007). Educators have recognized the strengths of some virtual realities and incorporated them into their teaching. For example, Second Life, an online based virtual reality developed by Linden

Labs, allows people to explore, interact and build. Second Life has been used by universities to enhance library or technical support functions and provide a venue to showcase student achievement. At Lingnan University, for instance, students in a design class were required to landscape areas in Second Life to demonstrate their artistic skills.

2.4.4. Google Apps

With the resurgence of distributed computing, Google has emerged a leader in Internet-based, cloud computing technologies. As their online portfolio has increased, so has their determination to gain enterprise support (Lohr, 2007). Google created Google Apps (2010), a collection of their Internet tools geared toward office productivity and communication.

Google Apps includes:

- **Gmail** – A web-based client email service.
- **Google Calendar** – An online calendar and scheduling system.
- **Google Docs** – A cloud-based approach for document, spreadsheet and presentation creation. It also allows collaborative editing.
- **Google Groups** – A user-created discussion area for sharing content and establishing mailing lists.
- **Google Sites** – A tool for creating individual or team-managed websites without the need for coding knowledge.
- **Google Video** – A video hosting service.

With this bundle of applications, Google targeted businesses, government agencies, and schools. Offering different deals based on the organization type, Google hopes to sway institutions away from other products like Microsoft Exchange and Lotus Notes in favor of their Internet-based approach.

2.5. Education in Hong Kong

The higher education system in Hong Kong is a throwback to the era of British rule (Mark Bray, 2005); children are taught primarily in Cantonese during their primary education and then instructed in English upon entering a university. Though they do learn English as a second language before entering a university, their English language skills are not fully developed (Do, Fredricks, Ratcheva, & Terry-Welsh, 2009). As a result of this multi-lingual education, the education system in Hong Kong poses an interesting dilemma to educators. Students' learning styles must be constantly evaluated and educators' teaching styles altered to mesh with them in order to maintain a top-level learning environment.

2.5.1. *Technology Assisted Education in Hong Kong*

As previously mentioned in Section 2.2.2, Hong Kong universities are already integrating technology in their undergraduate level courses. In Vogel et. al.'s (2007) study, he showed that PDAs are a helpful learning aid that actually helps students improve. As a result, City University now issues every business student a PDA, though the study suggested that smart phones may eventually take their place. City University, though, is not the only post-secondary institution in Hong Kong concerned with technology in education.

In 2002, the Hong Kong Institute of Education (HKIE) created an Information Technology Competency in Education (ITCE) document to detail how the Institute uses technology. In a study of the technology usage at HKIE, Lee (2008) first investigated the ITCE document's pedagogical impact and intended goals. She found that after HKIE adopted the ITCE, students became more competent users of technology and, consequently,

were able to pursue a wider variety of jobs. In this case, technology improved student education by adding another layer of learning at the Institute.

2.5.2. *Lingnan University*

At the moment, Lingnan University (2009a) teaches an entirely Liberal Arts based curriculum. The University is divided into three schools, or Units: Arts, Business and Social Science. Each Unit is then divided into numerous departments in which students can take classes (see Appendix A for a detailed description of Lingnan University). Like other Hong Kong universities, Lingnan University does not know the full extent to which technology is used in the classroom or by students and faculty outside of class.

In order to address the nexus formed between teaching, technology, and learning, Professor David Kennedy, recently appointed Director of the Teaching and Learning Centre at Lingnan University, is drafting the Learning Technologies Strategy Document that will outline the policies and expected outcomes surrounding technology-use in classes. To help create this document and better understand the complex relationship between students, faculty and technology, he wanted to study the usage and perceptions of technology at Lingnan University. It was a goal of our project to investigate this relationship.

3. Methodology

The goal of this project was the creation of recommendations and identification of opportunities for Lingnan University regarding the future use of technology for teaching and learning. To achieve our goal we developed the following objectives: identify the available technological resources, determine better ways to use teaching and learning technologies, and determine the current usage and perceptions of technology at Lingnan. As part of that initiative, we were to determine the availability of technological resources used for learning on the campus. To achieve our goal and objectives, we employed the following methodology for collecting information, which includes interviews, surveys and observations. The following sections detail the research methods used, their purposes, and the reasons they were chosen.

3.1. Current Technology at Lingnan University

In the first part of our project, we determined the technologies and related services that were available at Lingnan University. This information became the basis for our investigation of student and teaching staff opinion, which is detailed further in section 3.2. Additionally, the inventory of learning technologies allowed us to provide detailed documentation of the technological capacity of Lingnan University which was used to explore further expansion of technology-assisted curricula.

3.1.1. Interviews with ITSC Staff

To catalog and quantify the available resources at Lingnan University, we interviewed the Information Technology Services Centre (ITSC) staff at Lingnan. ITSC workers were chosen due to their extensive knowledge regarding on-campus technology as

they are the ones maintaining it. The ITSC department was also selected because of its inherent familiarity with all teaching and learning technology-related services offered to students and staff. Therefore, interviews with ITSC staff revolved around determining which teaching and learning resources Lingnan University offered, which of those services were the most popular, and obtaining usage statistics for each service. In addition, we inquired about their methods for gathering information and statistics on the use of technologies such as wireless Internet and digital library services and how the data collected were being used to achieve their goals. Future plans for expansion of technology services, known to the ITSC staff, were also discussed. The information gathered from interviewing ITSC professionals was used to focus questions later used in interviews with students and faculty.

The ITSC staff was divided into two categories for interviewing purposes: directors and managers. The directors group consisted of the ITSC director and the top-level ITSC managers. Their interviews focused on Lingnan University policies regarding teaching and learning technologies. The interviewees' opinions regarding certain teaching and learning technologies were also discussed. Finally, we gathered input on the university's possible future direction for integrating more collaborative learning technologies (see Appendix D for interview protocol).

The ITSC manager interviews focused more on current uses of teaching and learning technology than our interviews with the department directors, which focused on future uses and university policy. We also inquired about the data collection systems in place to monitor usage and uptime (see Appendix C for interview protocol). In total, three upper level ITSC staff members were interviewed.

3.1.2. *Interviews with Students, Faculty, and Research Professors*

To give us an end-user's perspective of these teaching and learning technologies, we completed a series of interviews with students and faculty regarding their knowledge of teaching and learning technologies. Areas of interest included determining which services were used, which were not used but known about and the frequency of their use. Ascertaining the services students and faculty use was of paramount importance to our project since it revealed if and where there was a lack of communication or understanding of the resources available. The information gained from these interviews was used to guide our recommendations on what teaching and learning technologies Lingnan may benefit from.

To obtain an appropriate sample, we interviewed a cross-section of the campus population. This was accomplished by setting up group interviews with twenty students total from each of the three academic units of Lingnan University (Business, Arts, and Social Sciences). The interviews were conducted at the student hostels in two groups with ten students in each group (see Appendix F for interview protocol).

Besides students, we consulted department heads and professors from each academic unit (see Appendix E for interview protocol). The faculty members were selected based on recommendations from the Teaching and Learning Centre (TLC) with the intention to interview faculty from all of the departments. In total, 5% of the total faculty members at Lingnan were interviewed, and all departments were represented.

Finally, we also interviewed two professors who have completed years of research in the area of teaching and learning technologies. These professors are experts in their field of study and their insights into the future of technology in education contained

valuable information. One professor is employed at City University of Hong Kong; the other at Lingnan University. Refer to Appendix G for the interview protocol.

3.1.3. Physical Inspection of the Campus

A physical survey of Lingnan University's campus was conducted to map learning and support resources. This was accomplished by noting locations of computer labs, places to receive technical support, and wireless Internet signal strength. The information collected was used to create technology resource maps of the university (on Google Earth) and to accentuate areas that would benefit from further investment.

We received a campus tour by an ITSC staff member that highlighted Lingnan's teaching and learning technology infrastructure. During the tour, we marked the locations of teaching and learning technologies, took pictures of the area, and noted the conditions, numbers, and accessibility of those technologies. Additionally, Internet usage data were obtained from the ITSC networks division. Those data included the Internet traffic volume on an hourly basis over various networks used by Lingnan (including the hostels, wireless and Hong Kong University shared networks).

3.1.4. Assessment of the Lingnan Intranet

Using information gathered from the IT professionals' interviews, we navigated the online resources available to Lingnan students and staff. This was accomplished by exploring the Lingnan Library and ITSC websites, viewing WebCT from both the student and staff perspectives, and from information gathered during interviews with faculty members. The data collected were used in conjunction with the information gathered as part of section 3.1.3 to generate maps, create user guides and document resources.

3.2. Current Usage and Perception of Technology at Lingnan University

This section describes the investigation of current usage and perception of teaching and learning technologies at Lingnan University. These methods provided insight into how students and staff use technology and the context in which that technology is used, be it for learning, teaching, or social purposes.

3.2.1. Surveys with Students and Faculty

The students and the faculty were the main subjects in our information gathering process. Two surveys: "Lingnan University: A Study on Students' Experience with Technology," which targeted incoming first-year students and "IT Usage Survey for Lingnan University Teaching Staff," which was given to Lingnan staff, were conducted by Lingnan's Teaching and Learning Centre (TLC) in 2009. In addition, we took advantage of a Quality Assurance Council (QAC) Audit, a Hong Kong government sponsored inquiry into the university's use of government funds, by distributing our customized survey to the assembled diverse student groups from every year and every discipline. These three surveys represent the vast majority of the quantitative data presented in the Results Chapter.

Our customized QAC survey contained multiple choice questions that focused on student access to learning and mobile technologies and their opinions regarding learning technologies (see Appendix I). It was distributed to all levels of students at Lingnan at the beginning of the 2nd semester, which began on January, 11th, 2010. The group of students who participated in the QAC represented a select group of exceptional students picked by the academic and registry staff. Similarly, the first-year student survey asked both multiple choice and free response questions (see Appendix H). That questionnaire covered student

access to technology, frequency of use of those technologies and opinions on learning and mobile technologies. The staff survey contained both multiple choice and free response questions targeting teacher usage and opinions on technology which could be used in or out of class (see Appendix J).

In total, 783 of the 800 first-year students and 93 of the 172 members of the Lingnan teaching staff responded to the original surveys, yielding response rates of 98% and 54% respectively. Figures 3.2.1.a and 3.2.1.b show the percentages of respondents versus the percentage of students or teaching staff in each academic unit. The QAC audit interviewed 144 students total; of those 108 students participated in the customized QAC survey yielding a 75% response rate. The students who did not participate in the survey were not able to because of time constraints. Considering Lingnan University has a total of 2,353 enrolled students, the QAC survey represents fewer than 5% of the school. Figure 3.2.1.c shows the percentages of respondents versus the percentage of students in each academic unit.
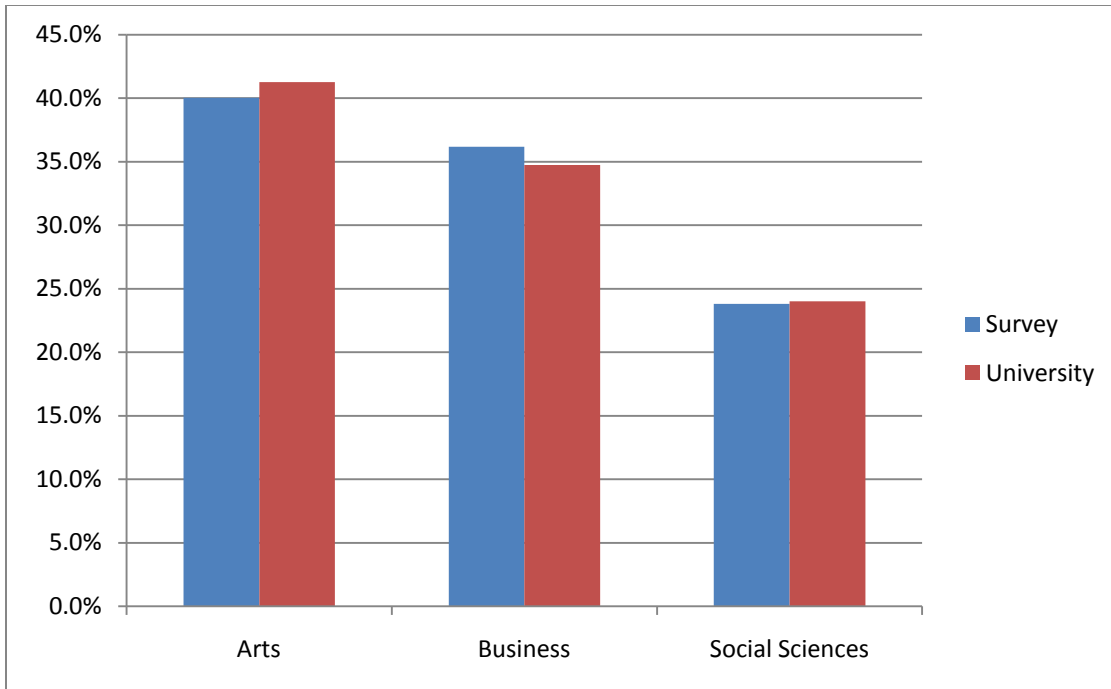
Figure 3.2.1.a   First-year student survey respondents by academic unit (n=783)
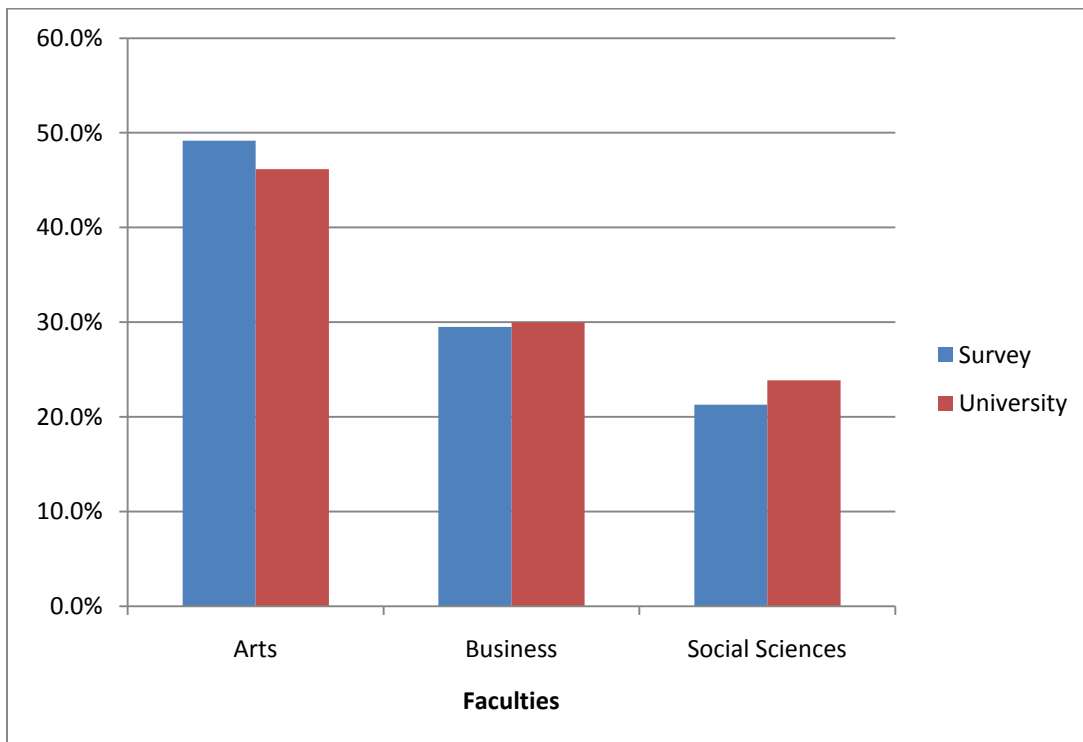
Figure 3.2.1.b   Teaching staff survey respondents by academic unit (n=93)
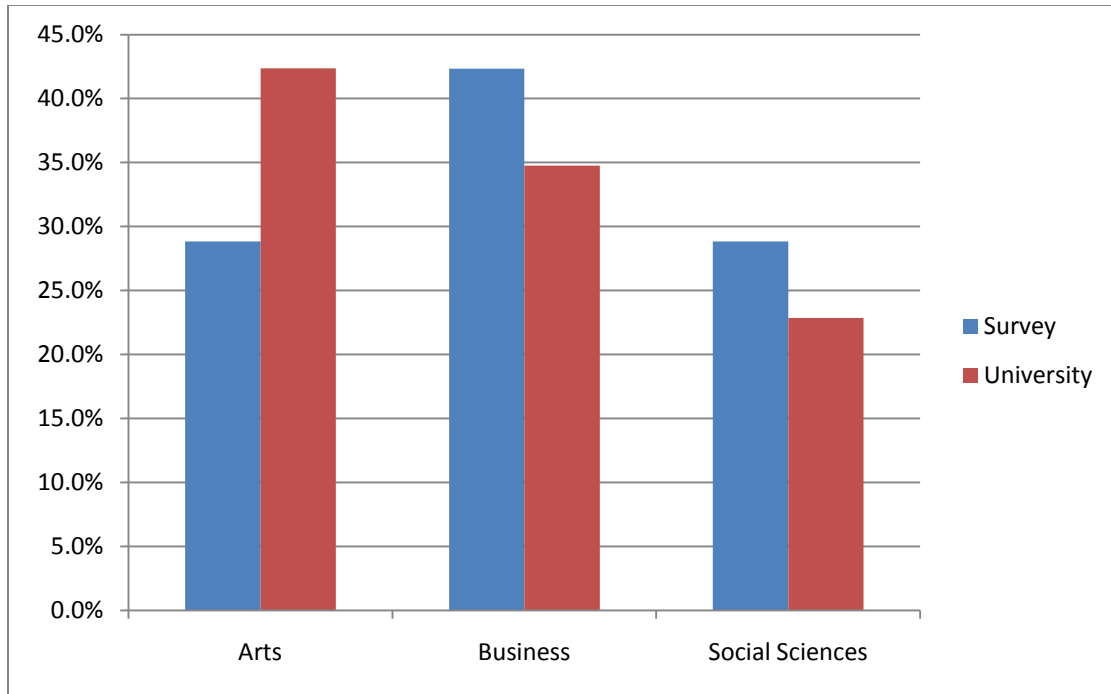
Figure 3.2.1.c   QAC student survey respondents by academic unit (n=108)

3.2.2. *Interviews with Students, Faculty, and Research Professors*

Besides determining student and faculty usage habits of teaching and learning

technologies, we needed to identify their perceptions of those same technologies at

Lingnan. Additionally, we interviewed research professors with teaching experience in

other Hong Kong universities, in order to uncover possible differences between the

technology uses at Lingnan and other Hong Kong universities.   These interviews helped us

determine whether the teaching and learning technology usage at Lingnan was

appropriate, or if room for improvement existed. They also provided insights into whether

underlying pedagogical issues existed that could be solved through the use of teaching and

learning technologies.

To simplify the data collection process, this information was obtained during the

usage interviews described in section 3.1.2 (see Appendices E and F for interview

protocols).

3.2.3. Classroom Observation

Permission was granted for our team to attend three classes, one from each of the three academic units at Lingnan, in order to observe students in a learning environment. We positioned ourselves in the back of the classrooms to minimize our impact on the normal flow of class. By attending classes and viewing the normal learning habits, we determined how technology is used in university life and the areas in which technology could improve the learning experience. Specific attention was paid to the number of computing devices present (laptops, PDAs, mobile phones, etc), technology used by the lecturer to convey information, and how students processed that information (see Appendix K).

Furthermore, our team aided in a Second Life workshop for a Visual Studies course titled, Environmental Aesthetics and the Visual Environment. Through this session we were able to directly interact with students learning to use the Second Life environment to produce virtual landscapes and express their creativity by creating custom online avatars. From this experience, we observed first-hand how a virtual reality can be combined with traditional lectures to create a blended learning environment.

3.3. Summary

The two part approach to our methodology made collecting data easier by having discrete outcomes in order to relate the results of each method to its respective objective. The first part of our methodology had the goal of identifying the current technology availability at Lingnan University and was accomplished through a combination of interviews, physical campus inspections, and an assessment of the Lingnan intranet. The second part of our methodology had the goal of discovering current technology usage and

perceptions and was accomplished through a combination of interviews, surveys, and classroom observations. The conducted interviews were the most useful method because they concurrently advanced both parts of data collection while providing depth to the data collected by the surveys.

4. RESULTS AND ANALYSIS

In this chapter, we present the relevant information gathered during our study of Lingnan University in order to fulfill our goal of identifying the current technological resources available and their use and potential use in teaching, learning, and socializing. First, we identify the technologies present at Lingnan University to provide insight into the technological infrastructure and potential – in relation to teaching and learning – at the time the data were gathered. Then we present and explain the students' and faculty's uses and perceptions of teaching and learning technologies.

4.1. Available Technologies

The ITSC and TLC are the two departments at Lingnan University that are responsible for the implementation, support, advancement, and education of technology use in teaching and learning. Interviews with ITSC staff showed Lingnan University values technology that furthers its goal of providing a high-quality education.

4.1.1. Campus Resources

Campus resources include the library, computer labs, software, and technologies found in each of the four types of classrooms. Table 4.1.1.a provides a listing of the technologies found in each type of classroom. These technologies may be used as the lecturer sees fit but are always present and maintained by the ITSC. All rooms of the same type are upgraded together when new technologies are added or improved.

Table 4.1.1.a   Available Technologies by Campus Resource

	Language Laboratories	Lecture Classroom	Lecture Theatre	Tutorial Rooms	Computer Laboratories
Language System	✔				
LCD Projector	✔	✔	✔		✔
Sound System	✔	✔	✔		✔
Wired microphone	✔	✔	✔		✔
Wireless infrared microphone	✔	✔	✔		✔
Cassette player	✔	✔	✔		✔
DVD/ VCD/ CD/ VHS Player	✔	✔	✔	✔	✔
Overhead Projector	✔	✔	✔	✔	✔
Projection Screen	✔	✔	✔	✔	✔
Lecturer PC	✔	✔	✔		✔
Central AV Control System		✔	✔		✔
LCD TV				✔	
Visualizer			✔		

There are four language labs on the Lingnan University campus. One is located in the Leung Kau Kui Building and the remaining three are located in the New Academic Block. The language labs are primarily used for teaching foreign languages, enabling students to submit class assignments via cassette using the headsets available at each computer. The language lab system facilitates both independent work by students and instructor-led learning via audio cassette playback and recording through headsets. Each station has its own computer, and the seating capacity in the language labs ranges from 24-37, with those seats arranged in a U-style format, with each seat facing away from the

middle of the classroom. This gives instructors the ability to supervise the activity occurring at each computer. An example is seen in Figure 4.1.1.b below.

Figure 4.1.1.b   An example language lab at Lingnan University (NAB 215)

There are 39 lecture classrooms and nine lecture theaters at Lingnan. The main difference between the lecture rooms and the lecture theatres is seating capacity. Lecture room seating capacities range from 40-60, while lecture theatre seating capacities range from 70-395.

Lingnan University has 15 tutorial rooms on campus, with seating capacities ranging from 20-24. Tutorial rooms are used for smaller, discussion-based classes in which the instructors have the ability to interact on a more personal level with their students. There is currently a proposal, awaiting approval from the administration, to upgrade the technologies available in the tutorial rooms. If approved, this proposal would add a LCD projector and computer, with control station, to each room. Out of the eight faculty members whom we interviewed, five of them expressed their desire to see this proposal implemented as quickly as possible.

There are two types of computer laboratories at Lingnan: teaching laboratories and general laboratories. Teaching laboratories can be used by professors in conjunction with a class, while general laboratories are for common student use. A list of the software available on the computers in these labs is noted in Appendix S, as found on the ITSC website. The ITSC provides software for all PCs in teaching venues, language labs and computers labs. Microsoft Office 2007 Suite (includes Microsoft Word, Excel, and PowerPoint), a commonly requested software package, is provided by the ITSC in all lecture classrooms, lecture theatres, language laboratories, and on all the computer laboratories' computers. Additionally, select computers located in the library and computer labs are equipped with Adobe Creative Suite (includes Photoshop, InDesign, and Illustrator) as students are frequently required to complete artistic projects. The ITSC may also install additional software on a case-by-case basis for specialized use in different computer labs.

The locations of every lecture theater, language lab, teaching lab and general computer lab were noted during a survey of the campus. This information was used to create a virtual resource map of the Lingnan campus using Google Earth. Using Google Earth, users are able to identify rooms at Lingnan University by type and obtain information, such as hours of operation or technology available, for individual venues. Additionally, this map provides links to the Lingnan website where users can find additional information. Appendix B provides more details and instructions for using this resource map.

4.1.2. Internet Connections

The Internet at Lingnan University is available as both a wired and wireless connection. The wireless connection is available campus wide, aside from the underground parking garage located under the Main Building. The wireless network was installed by a third-party contractor operating under the requirement of the system to have campus wide coverage (excluding the underground parking facility). However, student interviews revealed that the wireless connection in the hostels is unreliable, as students frequently have connection problems.

The wired connection (aside from the hostels) is served through a shared network called HARNET. This network is shared among the eight Hong Kong universities, supporting a total capacity of 1.2 Gigabits per second.

The wireless connection is serviced through a network called HKBN, and the wired connection at the hostels is serviced through a connection called Wharf T&T. However, HARNET can serve as a backup link to the Internet if the HKBN or Wharf T&T lines are malfunctioning.

Furthermore, aside from the hard bandwidth limits of the network medium itself, another main limitation exists for traffic called bandwidth shaping. Through bandwidth shaping, the administrators of the networks can prioritize certain types of traffic on the network. High bandwidth activities like streaming video and online video games, for example, can be given a lower priority than traffic accessing online library resources.

4.1.3. Online Resources

Like many other universities, Lingnan also employs web based technologies to increase classroom accessibility. Lingnan University offers students and instructors online

course managers, collaborative software applications, and library resources. These administrative, teaching, and learning technologies all help increase Lingnan University's productivity by interacting with one another to create a dynamic, centralized suite of useful information.

The BannerWeb Information System, created by SunGard, serves as the primary administrative control interface. Student, Human Resources, Payroll, Advancement, General and Self-Service modules are currently installed on the system. These modules allow BannerWeb to manage course registration, employment status, payroll, degree achievements, and miscellaneous information about courses, students, and staff. Students and staff are able to manipulate the information contained within the BannerWeb system to their appropriate privilege level. For example, students can check on their degree status, change their personal information like home address, and register or drop classes. In addition, the information BannerWeb contains is shared among other services, like Infosilem TPHi Time Tabling Software (to manage class timetables and room reservations), Turnitin (anti-plagiarism software), and Blackboard WebCT.

Instructors at Lingnan University also have access to the Blackboard WebCT web portal to stimulate out-of-class student involvement. Instructors who choose to use WebCT can create a custom, though template-based, class website that their students may access. Students may receive class announcements, grades, assignments, and other course information posted by the lecturer through WebCT. Discussion boards are also available to use. WebCT allows instructors to track their students' usage of the site, which is useful in determining their students' out-of-class participation. WebCT integrates with Turnitin and SafeAssign for assessing plagiarism in student work.

Lingnan University also supports ePortfolio software to allow students the chance to create an online academic portfolio. Because the posted information is public, students can critique each others' work or showcase it to potential employers. In addition, students' previous online work can be directly linked into the portfolio.

The Lingnan University library offers many tools to help students conduct research, design creative works, and manage assignments. The library subscribes to many online databases, including LexisNexis and EBSCOhost, and a wide range of academic journals encompassing the Arts, Humanities, Business, and Social Sciences, that students may freely access. They also offer support via online chat from the university library webpage.

4.1.4. Student Technology Access

Student surveys showed over 90% of students at Lingnan have access to a mobile phone. Faculty interviews identified these devices as a potential portal for education and to enhance communication between professors and their students. Instructors at Lingnan are looking for new ways to engage their students, and students are finding ways to use their mobile phones to organize their lives. Students, being increasingly interconnected via mobile devices, create the potential for these devices to enrich education. For example, Figure 4.1.4.a shows that the majority of students have access to the Internet and a video camera from their mobile phones. As an example, when used together these features could allow students to submit videos of field work to their instructors.

Interviews also revealed that instructors and students have communication problems at Lingnan. Currently, the primary means of communication outside of class is e-mail. However, considering less than 20% of students are able to receive e-mail on their

mobile phones (Figure 4.1.4.a), students rarely check their campus e-mail in real-time, thus making e-mail virtually useless to disseminate time critical information.
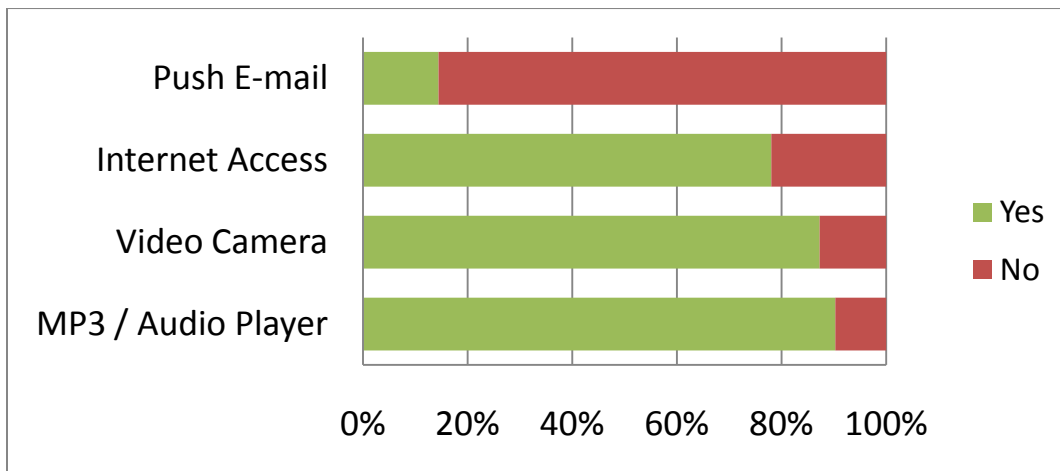
Figure 4.1.4.a   Features found on student mobile phones (n=108)

Besides mobile phones, students have access to a plethora of desktop computers located in the four on-campus computer labs. Additionally, 80% of Lingnan students, as evidenced by the survey results seen in Figure 4.1.4.b, own a desktop or laptop computer. Therefore, most students are able to access online resources and other computing services without relying soley on university owned technology. This statistic was further confirmed during student interviews. The reminaing 20% of students still have twenty-four hour computer access through one of Lingnan University's general computer labs; the small percentage of students claiming to have no computer access is, therefore, an error on behalf of the survey respondents (Figure 4.1.4.b). Since these data come from the survey of first-year students, those who selected "No Access" were likely unaware of Lingnan's twenty-four hour access computer labs. Such high ownership of computers means instructors can freely use software and web-connected technologies in their teaching with little fear of students not having accessibilty.
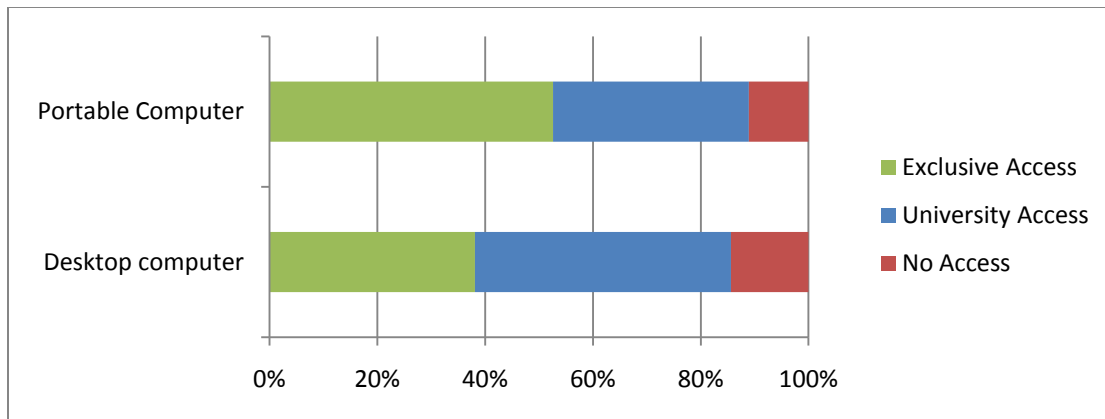
Figure 4.1.4.b   Student computer accessibility (n=783)

Faculty members at Lingnan have commented, during interviews, on the use of laptops in class. One of the faculty members said during an interview, "I believe that it makes life for the students easier if they can view the lecture slides on their laptop while I'm presenting. They may miss a few words, or have trouble understanding, and the lecture notes help them." Information collected during the faculty interviews shows that in general, faculty encourage students to use their laptops in class to help them follow along; it is both beneficial to student learning and more environmentally friendly than using hard copies of the faculty presentations.

4.2. Technology Usage & Perceptions

From interviews with faculty and students, it is apparent that teaching and learning styles play an important role in deciding how technology is viewed in education. Prior experiences, their successes or failures, and the classroom setup are also important factors in the use and perception of technology. This section describes how students and faculty utilize and view various technologies that are or can be used in teaching and learning.

4.2.1. Campus Resources

Lingnan University, being a liberal arts institution, values critical thinking, and many classes place emphasis on student-student and student-instructor discussions. Information gathered through faculty interviews shows that larger classes struggle to develop a discussion based environment, while smaller classes are often based on the round table discussion format. Some instructors even break up their larger classes into smaller tutorial groups that feature discussion-based components because they perceive the learning style of most students in Hong Kong as being too passive. Instructors feel that the tutorial rooms, however, are not always conducive to the discussion style of teaching and learning because of the difficulty of rearranging furniture and chairs into a circular format.

Filled with rows of tables or desks, tutorial rooms are designed to accommodate a lecture-style of teaching. Currently, only two or three conference-style rooms exist on the Lingnan campus. Unfortunately, these are generally reserved for departmental meetings, job interviews, and campus speakers. Rarely are instructors able to book these rooms. Half of the faculty members interviewed requested that more tutorial rooms be outfitted with a single, large table rather than the current forward-facing rows of desks.

The faculty survey showed that the two most popular class tools were class management systems and presentation technology. Faculty interviews revealed that WebCT and PowerPoint were the most popular of these tools. Instructors explained that the especially widespread use of PowerPoint is due to their perception that it lowers the language barrier that exists between themselves and students in class. Out of the eight instructors interviewed, seven of them use WebCT to upload PowerPoint lectures, which gives students the ability to access course information via the Internet. Although less than

20% of surveyed instructors use wikis, social networking sites, and blogs in their teaching as seen in Figure 4.2.1.a, these technologies can also provide students with the ability to access course information via the Internet. Interviews also showed that faculty and students lack confidence in the university's ability to support these Internet-based teaching technologies. An increase in Internet functionality may motivate instructors to more confidently explore some of these other teaching and learning technologies.
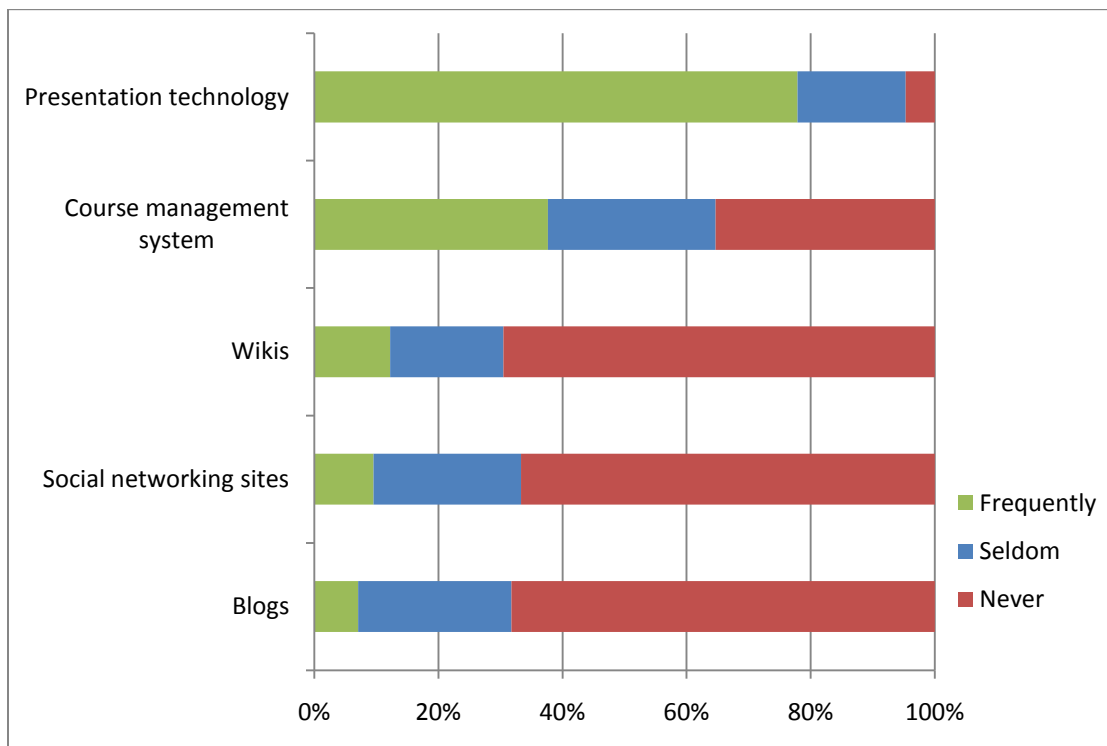
Figure 4.2.1.a   Faculty usage of teaching and learning technologies (n=93)

4.2.2. Internet Connections

Though the ITSC, students, and faculty all agree that the Internet is one of the most important tools for teaching and learning, a debate exists regarding the Internet connection speeds and costs at Lingnan. In question is whether it is right for someone working on school assignments and using very little bandwidth, to subsidize the cost of a high-speed network that someone else fully utilizes through bandwidth intensive programs. Students,

though, have voiced criticism of the current Internet connections in their hostels, saying they are insufficient even to use for school work. Several professors remarked that students are unable to complete their homework because of hostel Internet connection problems.

As shown in Figures 4.2.2a, b, and c, the least congested time of day is early morning. It is shown to be true of all of Lingnan's links to the Internet. ITSC interviews revealed that a top strain on the network is YouTube traffic. Instructors often use YouTube for educational media demonstration, however during group interviews, students admitted to streaming TV shows via YouTube and other online websites. Since YouTube has both educational and recreational uses, the use of bandwidth shaping to slow this type of traffic may be inappropriate.

When faculty experience low-bandwidth problems during class, such as a slow-streaming YouTube video, it leads to frustration and makes the faculty appear unprepared for lectures. Faculty members experiencing these problems have said that they are less willing to experiment with new technologies to avoid future embarrassment in front of their students.
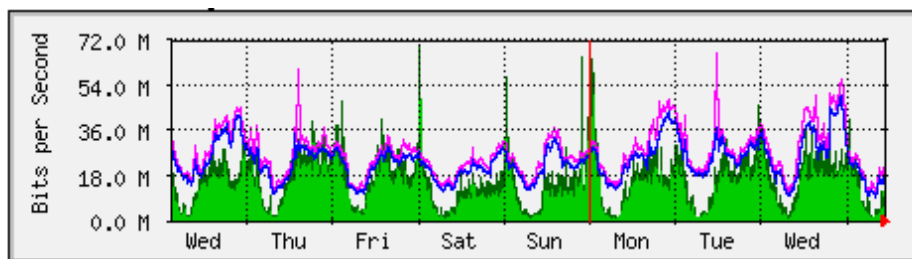
Figure 4.2.2.a   Main campus bandwidth utilization (source: Lingnan ITSC)
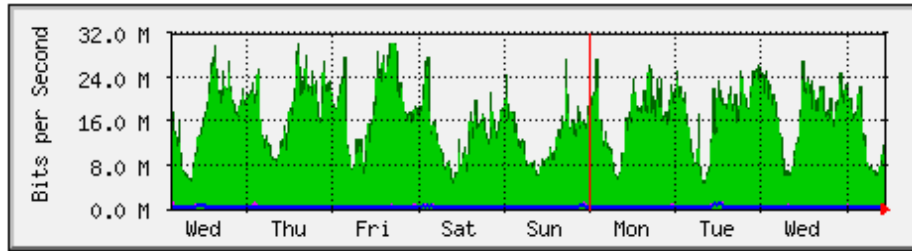
Figure 4.2.2.b   Hostel bandwidth utilization (source: Lingnan ITSC)
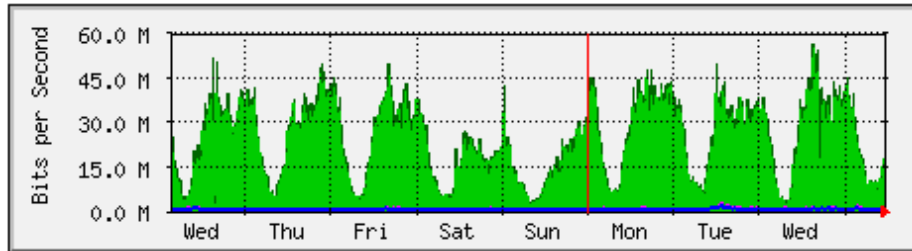
Figure 4.2.2.c   WiFi bandwidth utilization (source: Lingnan ITSC)

These networks are each guaranteed to maintain a 30 Mbps connection, but they permit bursting, which allows them to achieve temporarily higher speeds. This means that for short periods of time, the network will enable traffic flow beyond its guaranteed capacity. Considering each of these networks operates over the guaranteed bandwidth level for large portions of each weekday, the required bandwidth for smooth daily operation at Lingnan may have outgrown the network capacity. Bursting should be minimized in order to maximize network stability.

4.2.3. Online Resources

Blackboard WebCT is Lingnan University's online course manager of choice. Figures 4.2.3.a, b show that a large percentage of instructors do use WebCT as a course management tool to upload lectures, media files, and assignments; however, faculty do not frequently use WebCT for sending and receiving messages. Instructors most often use WebCT to post course materials, like PowerPoint presentations. They seem to like it more

for class organization and as a convenient way to store documents. One instructor

mentioned that WebCT was a good way to manage students of different backgrounds.

Those weaker in a subject could review material on WebCT that had been covered in

previous classes in order to catch up; this alleviates embarrassment and "saves face" for the

student, an important characteristic of Chinese culture.

All of the students interviewed agreed with that assessment. They enjoy the

convenient access to PowerPoint presentations and other course materials. One student

commented that WebCT was a good platform, but instructors seemed to neglect many of its

capabilities. Another student echoed that sentiment stating, "I don't know why; [the

WebCT discussion features] can be quite useful, but many professors don't know how to

use it." As many of the classes are discussion-based, the WebCT chat and discussion board

features could be useful to students. If utilized, students would have a centralized place to

discuss their school work. At the moment, students communicate most frequently via MSN

chat, according to interview data.
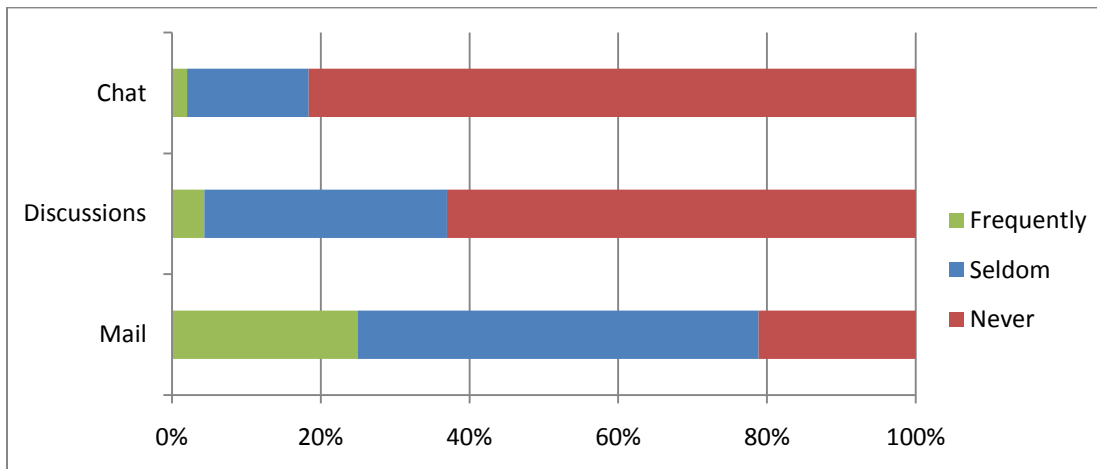
Figure 4.2.3.a   Faculty usage of WebCT for communication (n=93)
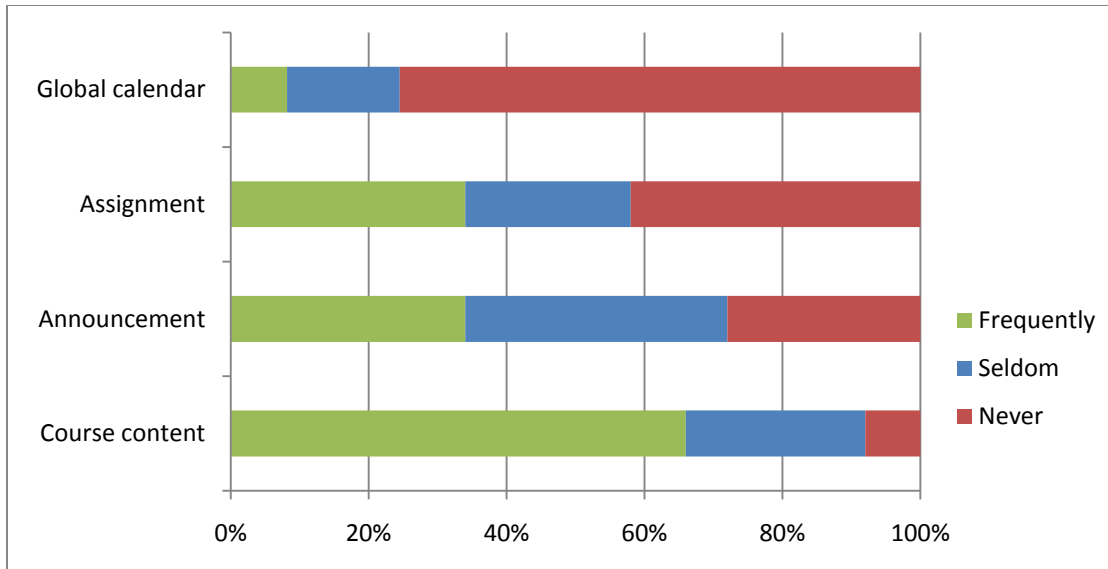
Figure 4.2.3.b   Faculty usage of WebCT for course management (n=93)

For instructors who do not use WebCT, the most common reason against adoption was that WebCT is "too time consuming" to use. Faculty interviews explained that the user interface itself was primarily responsible for the high time requirement needed to create a course WebCT site. Another reason cited was the steep learning curve associated with some features. Figure 4.2.3.c shows the main reasons why instructors at Lingnan do not use WebCT.
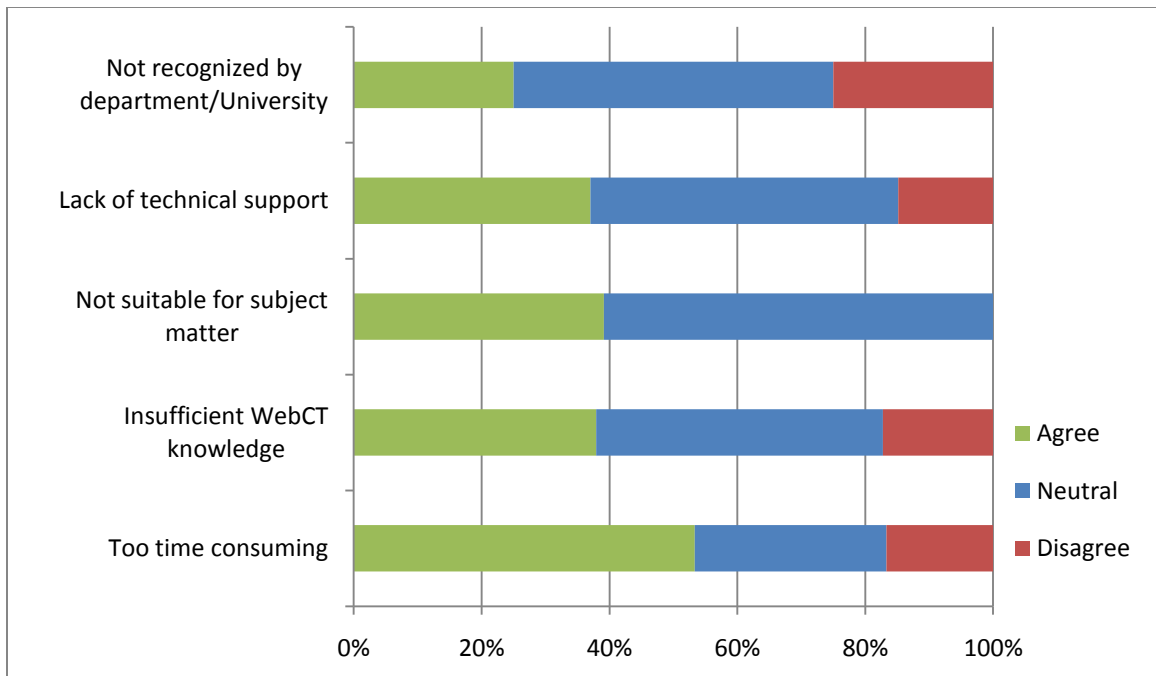
Figure 4.2.3.c   Reasons faculty do not use WebCT (n=93)

Most instructors have made positive comments on their use of WebCT, though. Some remarks include, "It really helps me stay organized", and "I think this tool is great because I teach a class where the level of competency has a wide range. WebCT allows me to easily post documents on WebCT, making them available for those who need it for extra help." Because some students have weaker English comprehension abilities, instructors find it beneficial to post their lecture presentations. Students are able to review material presented in class to ensure their understanding. This helps overcome the language barrier, which otherwise could prevent students from gleaning all of the important material from a single lecture.

During interviews, instuctors labeled time constraints or potential time savings as the primary factors when considering the incorporation of new technologies into their teaching style. According to faculty interviews, if a new technology is perceived to require even a modest time investment, most instructors would be hesitant to adopt it.

Implementing technology in a time efficient manner, or showcasing the time savings a particular technology can achieve is, therefore, the best way to convey new technologies to instructors. Once this point is made, instructors may be more willing to embrace a new technology. This can clearly be seen in Figure 4.2.3.d below.
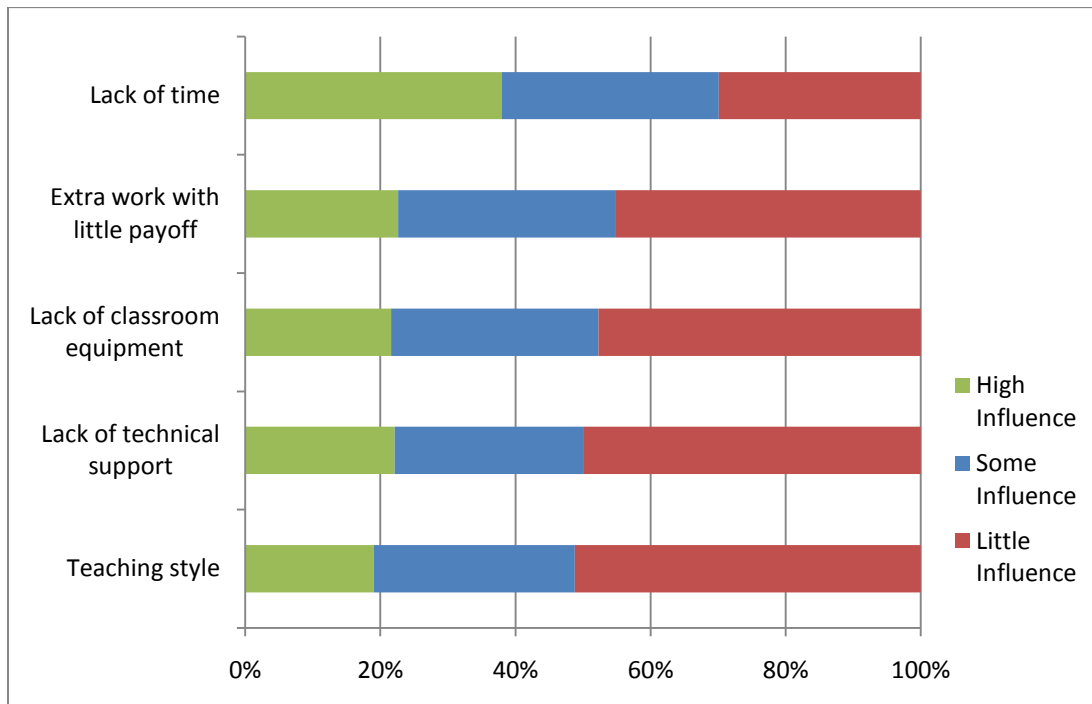
Figure 4.2.3.d   **Factors that influence a faculty member's usage of technology (n=93)**

Another large factor in incorporating new technologies into teaching is the support of departmental staff. Faculty feel more comfortable receiving support from those with whom they work. Therefore, it is critical to keep departmental staff up to speed with new teaching and learning technologies. If new ideas are collaborative group efforts, faculty may be more open and willing to buy into a new system. Two possible areas where department-wide support could be critical are when adopting social networking and Web 2.0 technologies. Both are discussed in further detail later in section 4.2.5.

Furthermore, if both the green and blue sections in Figure 4.2.3.d are considered, all but "Teaching style" are at least 50% influential when instructors consider using new technologies. It shows that a number of factors are considered; in fact, environmental factors are shown to be about as important as the perceived benefits. Not only do instuctors like to see a time and workload decrease when implementing new technologies, but they must feel that the classroom equipment can handle the increased load. This relates to section 4.2.2, which reveals that instructors hope to avoid embarrasment in front of their students. If they feel the classroom equipment could malfunction, they may choose not to implement the technology. Therefore, instructors should be shown that new technologies operate well on existing classroom equipment.

4.2.4. Student Culture

Faculty interviews revealed that the most common complaint concerning student communication was that students did not check their university e-mail accounts regularly. At the beginning of each semester, instructors receive an e-mail alias containing all of their students' e-mail addresses. This alias is used to send out class reminders and emergency notifications. Students mostly use their mobile phones to communicate, however, not e-mail. As seen in Figure 4.2.4.a, roughly 77% of students send text messages on a daily basis, with more than 90% sending them weekly. This is by far the most common use of mobile devices and hightlights a potential for increased instructor-student communication.
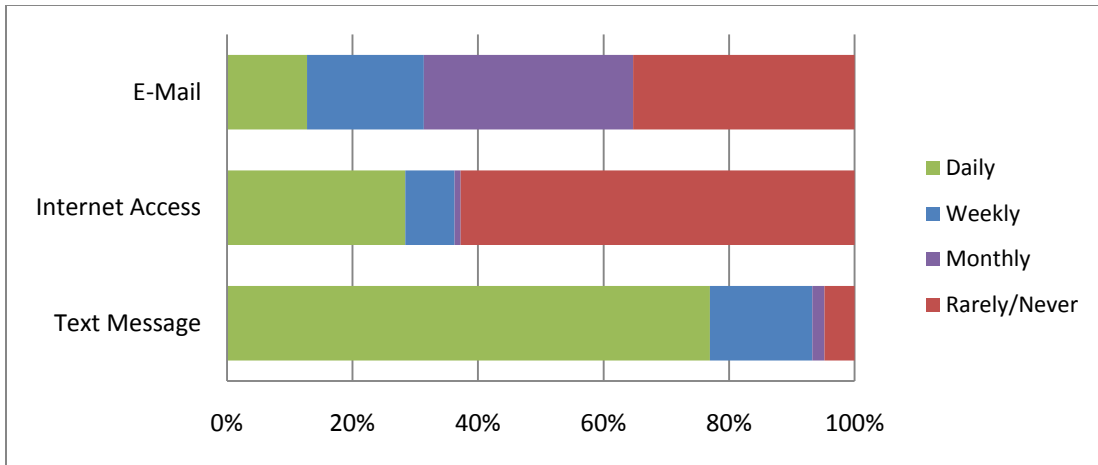
Figure 4.2.4.a   Frequency of mobile phone feature usage by students (n=108)

As the following Figure 4.2.4.b shows, though, students are not as willing to use their mobile phones to access university services. Considering that over 60% of students do not use their phones to access the Internet (Figure 4.2.4.a), and the rather ambivalent position on using mobile phones to access campus resources, it is not likely that students would adopt the use of mobile phone-based course mangers. This could be explained by the types of mobile phone plans to which students subscribe. Many cannot afford the more expensive data plans and, therefore, only use the calling and texting features of their phones for communication.
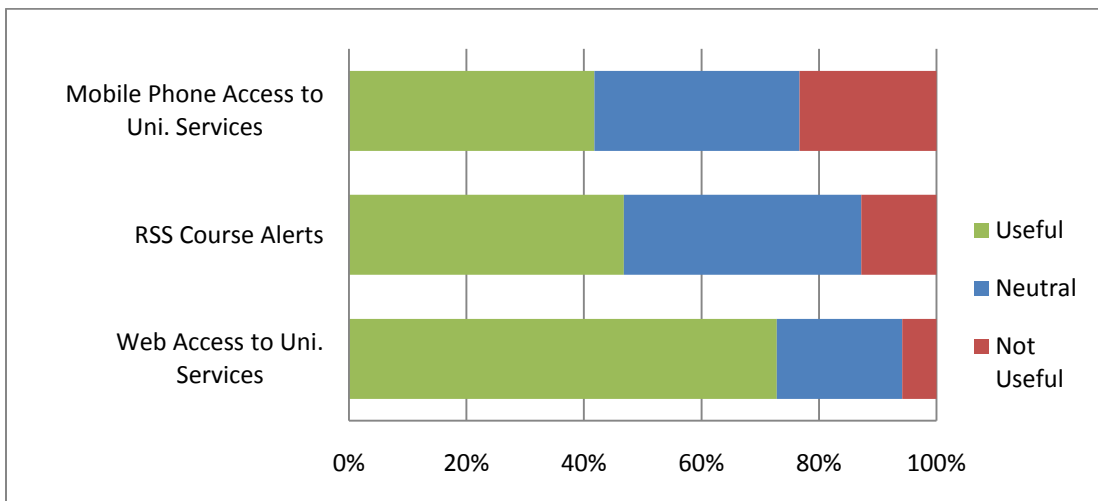
Figure 4.2.4.b   Student perceptions of certain mobile learning technologies (n=108)

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Figure 4.2.4.b also shows that students believe web access to university services is critical. While mobile phone access to online course managers may not be efficient to implement due to the small number of students capable of using it, increasing students' abilities to access those services via traditional web enabled devices (e.g. desktops, laptops) is. Any additional web resources, such as Really Simple Syndication (RSS) feeds for periodic class updates, would be welcomed by students as well. RSS feeds, which are used to display content from websites without forcing the user to check the actual website for updates, have a higher potential for adoption because they integrate well with modern web browers.

Surveys also showed that students are interested in accessing lectures online, as seen in Figure 4.2.4.c. Continuing with the trend of increasing traditional web services, students favor the ability to re-watch portions of their instructor's lectures. Only about 15% of students, at most, said they would find the service "not useful." However, instructors are more hesitant about the idea of recorded lectures. Most are unsure if their students would utilize the recorded lectures correctly, or if the recorded lectures would be an excuse to miss classes. Based on interviews with faculty and the survey results in Figure 4.2.4.c, there is a disconnect between students and instructors when it comes to the topic of recorded lectures. Material is presented in a secondary language for most students, therefore, information can be easily misinterpreted, or completely missed. Students believe the recorded lectures allow them to revisit portions of the lecture they struggled to understand, allowing the students to reassure themselves of the material presented.
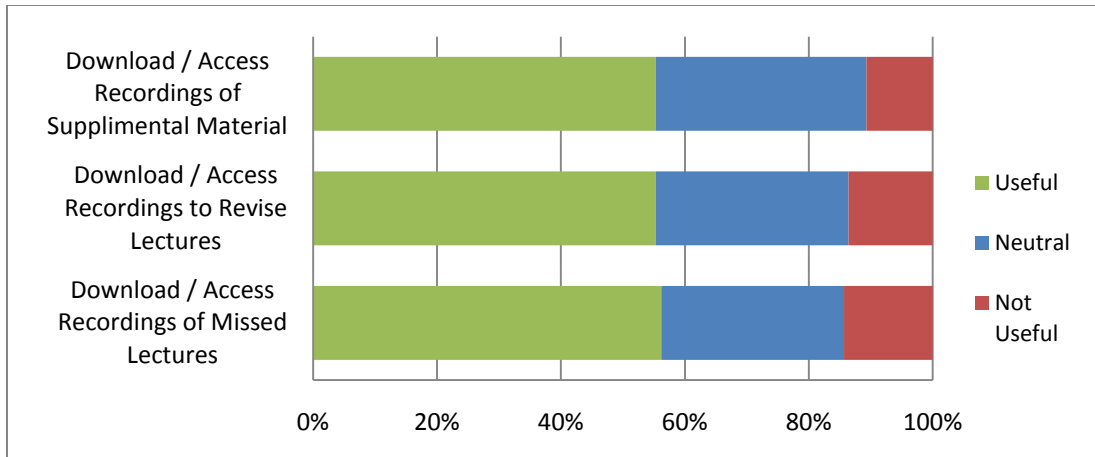
Some instructors noted in interviews that using blogs and wikis as learning tools at Lingnan have been used, or are in use. Certain departments on campus have already made students contribute to a blog or to the development of a local, Lingnan created, wiki page as part of a course requirement. These technologies allowed students to give and receive criticism not only from their instructor, but also their classmates. This type of open feedback was said to often result in higher quality work as students were more conscious of their writing and could revise their work often. Both student surveys showed that students are hesitant about using blogs and wikis in their courses, however (Figure 4.2.4.d). This may possibly be explained by a perceived workload increase or previous non-academic use of blogs and wikis. Many students have only used blogs and wikis for personal enjoyment. In-class blogs and wikis are academically oriented rather than the diary-like approach with which most students are familiar. When creating wiki entries, all claims need to be supported by factual evidence and referenced within the entry.

Instructors who have used blogs and wikis in their courses have noted during interviews that students enjoy using them, and students found them to be beneficial to their learning. The results from the student survey, however, indicate luke-warm feelings

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toward blog and wiki usage. While initially contradictory, this result can be explained by

student inexperience. Most students have never used blogs and wikis in an academic

setting, if they have used them at all. Understandably, students may be hesitant to accept

the benefits having never produced an academic paper in that fashion. Nevertheless, there

were never more than 50% who thought these technologies were "not useful."
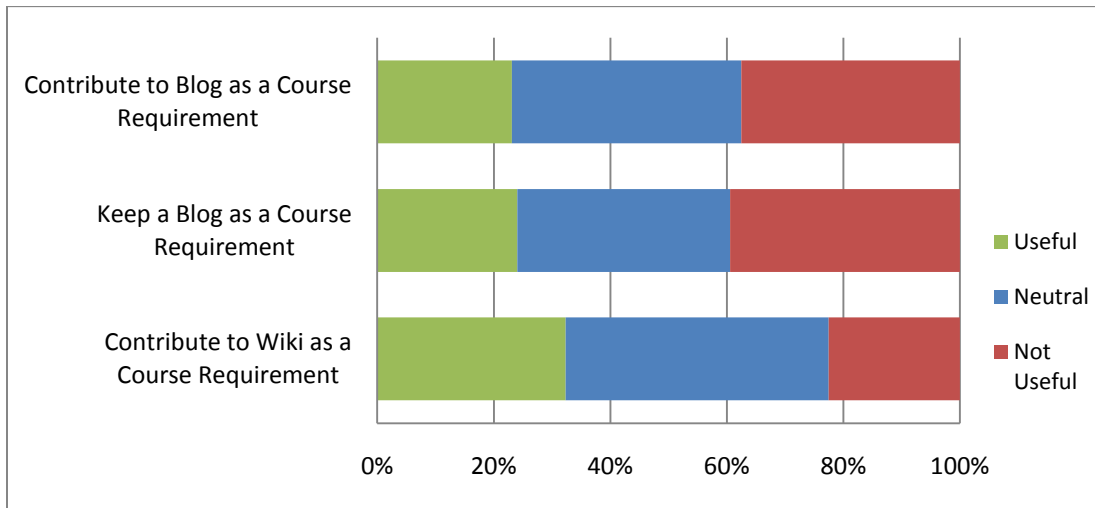
Figure 4.2.4.d   Student perceptions on using blogs and wikis for course work (n=108)

     Student surveys and interviews showed that students believe a benefit exists from

having easy communication with their peers. Figure 4.2.4.e shows that students find

instant messaging with their colleagues, talking via social networking software and file

sharing to be the most useful communication tools. These channels of communication,

although not strictly education-based, are what faculty hope to utilize in order to improve

student contributions, as noted during interviews. Also, during classroom observations, we

noticed that the students were hesitant to volunteer answers whenever the instructor

asked questions that required critical thinking. During interviews, students said

communicating with faculty informally through messaging services such as Facebook or

MSN Messenger are "a safer way to communicate with professors than in face-to-face

[situations] because you have more time to think about what you want to say." The reluctance to communicate face-to-face with faculty demonstrates some of the aspects of Chinese culture that make it difficult for students to express their critical thoughts. This issue is compounded by the in-class language barrier.

Informal modes of communication, such as instant messaging, are where students feel the most comfortable in terms of expressing themselves. Any method of communication, though, that allows students to convey their ideas was thought to be useful, with at most only 20% of students saying a video chat was not useful.
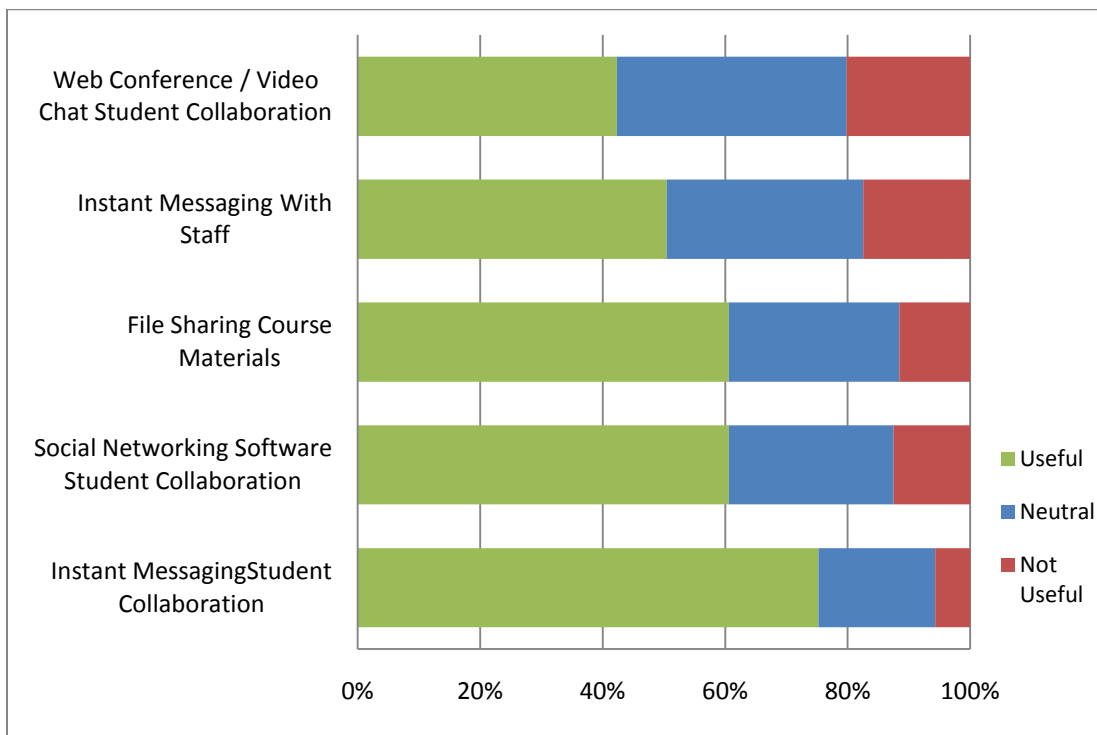
Figure 4.2.4.e   Student perceptions on collaboration technologies (n=108)

4.2.5. Social Networking

Interviews with ITSC staff and Lingnan instructors showed that they believe social networking technologies and resources will be incorporated into education in the near future. However, some instructors have concerns regarding privacy and security when it

comes to implementing social networks into the curriculum. Many do not wish to reveal personal information to their students, and, therefore, some instructors have created professional accounts separate from their personal ones. For some instructors, this helps mitigate privacy issues.

In a faculty interview, an instructor mentioned that the entire department was currently using Facebook in order to increase out-of-class communication with students and to form informal relationships with them. They felt it was useful for tracking the well being of their students and determining their workload from other classes. Most instructors, however, are hesitant to use social networking as a component of their classes. They feel that blogs and wikis could be used more effectively than social networking sites because they believe social networking sites can be distracting. Instructors also felt that social networking sites, like Facebook, did not offer enough control over data access to become a viable academic platform.

Additionally, one class at Lingnan currently uses Second Life as a means for demonstrating learned material. This trial began in spring term of 2010. Since the use of Second Life is very new at Lingnan, more testing is needed before large-scale adoption might occur. Initial reactions from faculty, however, have been positive. It has allowed design students to apply their learned skills and showcase their landscaping abilities. Without Second Life, this would not be possible.

4.2.6. Mobile Phone Text Messaging

Students, faculty, and staff believe many opportunities exist for the utilization of mobile technologies in education. Survey data show high usage levels of mobile technologies, especially mobile phones. For instance, 77% of students surveyed during the

Quality Assurance Council (QAC) audit and 61% of first-year students surveyed in 2009

said they text message people from their cell phone daily. Those numbers jump to 93%

and 85%, respectively, when you include those students who send text messages on a

weekly basis. When asked how often they text in a later group interview, one student

replied, "Every minute." All nine of the other students present agreed with that statement.

This could indicate that the survey data represent lower than actual usage rates.

When students were asked if they would like to receive text messages as part of

their classes, a much smaller number of respondents thought the idea was useful, as seen in

Figure 4.2.6.a. When interviewed, however, all twenty students liked the idea. They felt it

would improve communication with their instructors. During that same interview, no

student admitted to checking his/her Lingnan e-mail account more than three times per

day. With a text messaging system in place, instructors would be able to disseminate

information quicker and with more certainty.
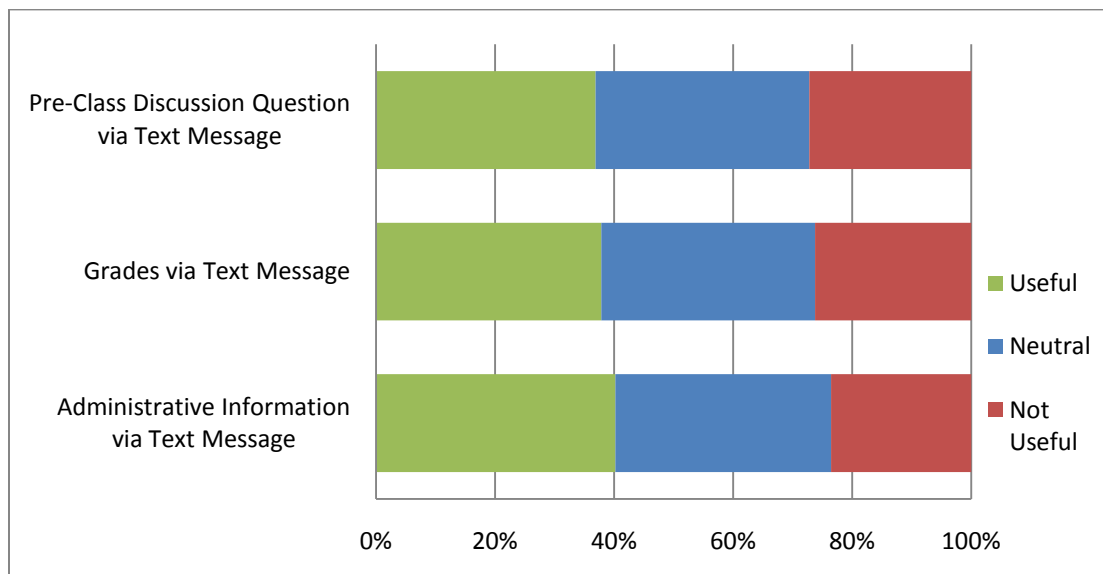
Figure 4.2.6.a   Student perceptions of using text messages for faculty-student communication (n=108)

All eight interviewed instructors were in favor of using text messages to communicate with their students. They felt it would allow them to send time-sensitive information or last minute updates more reliably than through e-mail. Half of the interviewed instructors were highly interested in the creation of a web based mass student texting system. Such a system would simplify the process of sending multiple text messages and protect the privacy of the instructors.

4.3. Summary

Based on our research, we discovered that the most common problems in teaching and learning at Lingnan University are the language barrier, passive learning style, and Internet speed. These issues pose a difficulty to students and faculty alike. Faculty members attempt to solve some of these teaching and learning problems by utilizing the current technological resources available at Lingnan University. However, they are restrained by the inherent limitations of these systems, lack of time, or lack of training. By addressing these limitations and through the careful introduction of new teaching and learning technologies, we believe Lingnan University will be well equipped to efficiently meet present and future academic issues related to its students and faculty. The following chapter explains the recommendations and opportunities that address the main issues we found during our analysis of the gathered data.

5. RECOMMENDATIONS AND OPPORTUNITIES

The goal of our project was to identify ways to improve the use of technologies for teaching and learning at Lingnan University. This chapter presents recommendations to enhance the offerings of Lingnan University and opportunities that Lingnan may benefit from with future research and exploration. These recommendations and opportunities are meant to highlight areas of improvement that would further Lingnan's mission of being a world class and innovative educational institution.

5.1. Recommendations

The following recommendations are based on information gathered in surveys and interviews of students, faculty and staff. They represent ideas and solutions from all parties that would either alleviate current problems or positively enhance teaching and learning.

5.1.1. Change Classroom Configuration

As classroom design can significantly impact an instructor's teaching style, there should be a wide array of classroom configurations at Lingnan to encompass all styles of teaching appropriate for a liberal arts curriculum. As mentioned in Chapter 4, some instructors teach smaller classes solely in tutorial classrooms. Therefore, we recommend that Lingnan convert more of its tutorial classrooms into discussion classrooms. A discussion classroom would be arranged such that both the instructor and students sit around a single, centrally located table. This style of classroom promotes multi-directional communication between the instructor and students, which better facilitates a discussion

than forward facing desks. Also, this arrangement will encourage student/student and student/instructor discussions.

Furthermore, if the central table were comprised of many smaller tables, instructors could more easily separate the class into smaller discussion groups. In effect, these new discussion-based tutorial rooms would better facilitate both small and large group activities.

5.1.2. Increase Bandwidth

We recommend that Lingnan increase its overall Internet bandwidth to a level that no longer inhibits academic growth. A class of students should be able to simultaneously stream a video or audio file without constantly waiting for the media to buffer. This will enable instructors to involve more media in their teaching without having to worry that their students are unable to access the content.

Furthermore, the Internet bandwidth in the hostels should also be increased to provide a better learning environment. Since faculty and students find the hostel Internet inadequate for media-rich homework assignments, the Internet connection should be improved.

5.1.3. Use Learning Management Systems

We recommend that Lingnan encourage the consistent use of online learning managers such as WebCT or Moodle. Students should have a dependable course resource they can reference, no matter the course subject. This will help ease the language barrier that exists for most students in the classroom. This should also reduce miscommunications by having twenty-four hour accessible assignment postings and other course materials outside of the classroom.

Additionally, students and faculty should have complete access to their learning manager profiles. Engaged students and faculty are interested in their online presence. To prevent stifling enthusiasm, students and faculty should be granted write access to their personal profiles, especially their preferred contact information.

5.1.4. Use Classroom Polling

We recommend that Lingnan support the use of classroom polling devices for large classrooms. This would give an opportunity for all students to respond to an instructor's questions. This is intended to increase classroom participation of students by anonymously tallying the classroom's response, thereby bypassing the inhibitions of shy or passive learners. A question can be posed to the class, and the students can choose from pre-set answers displayed. This also helps reduce the language barrier that exists for most students. Finally, this will also give the instructor an idea of which topics the class generally grasps or struggles to understand.

5.1.5. Use Mobile Phone Text Messaging

One of the common themes throughout each of our interviews was communication. Faculty felt students did not check their Lingnan email accounts often enough or were too slow to respond to inquiries; students, often plagued with poor Internet connections, were unable to diligently check their email. At times, that made communicating lesson plan adjustments or venue changes difficult. This resulted in wasted class time.

As students use their mobile phones constantly and instructors desire a more reliable means of communication, we recommend Lingnan University implement a mass text messaging system. Ideally, this system would integrate directly into Banner or WebCT to protect the privacy of faculty mobile phone numbers. Considering that lecturers are

already privy to student mobile phone numbers, such a system could be constructed in a similar fashion to the course mass-email system already in place. A web interface, like the one currently used to send class-wide emails, would have the benefit of being both familiar and simple. As a result, lecturers would be able to communicate class objectives, venue changes, or other short messages quickly.

5.1.6. Use Blogs and Wikis

Faculty members continually seek new ways to engage students academically, making the Internet a prime arena for expansion. In the increasingly connected world, students use the Internet to seek information, collaborate, and create. They are incredibly adept at finding, compiling and commenting on online information. Blogs and wikis provide a platform for students to showcase those skills in an academic setting.

When used in conjunction with a detailed grading rubric, blogs and wikis offer lecturers a convenient way of evaluating critical thinking. The public nature of the work often compels students to produce higher quality, more in-depth work than traditional essays. Blogs and wikis also allow students to easily revise work after receiving feedback while tracking each revision. In addition, blog and wiki entries can be evaluated virtually, reducing paper and ink usage and preventing evaluators from losing hard copies. Classes evaluating student critical thinking at Lingnan University should explore the use of blogs and wikis in place of traditional essays.

5.1.7. Capture Lectures

Many professors use PowerPoint presentations as a backdrop for students to follow along, and as a means to lower the language barrier that exists in class. Often times, though, lectures contain more in-depth information than the PowerPoint slides, in the form

of instructor emphasis, inflections, or responses to students questions. Therefore, students would benefit from reviewing audio and video recordings of the lectures themselves.

Many systems exist to capture the content of a lecture. Simple solutions, such as video recording the lecture, are easy enough to convert into reviewable video clips which can be posted online via WebCT or a similar system. More complicated solutions could involve capturing notes written on the whiteboard or syncing audio with a PowerPoint presentation. No matter the method, students are willing and would find it useful to review entire lectures.

5.2. Opportunities

The following opportunities identify areas that would benefit from additional research and may enhance teaching and learning at Lingnan University, or they address issues that were inferred, rather than explicitly identified from our data.

5.2.1. Online Social Networking

As seen in Figure 4.2.4.e, a majority of students agree that using social networking for student collaboration would be useful. Tools such as Facebook and Mahara are currently being used as an informal mode of communication between faculty and students at Lingnan, and instructors may find it useful in terms of tracking the well being of their students. Select departments are on these social networking sites for this reason, and other departments should consider implementing social networking into their classes. An increase in communication, online class groups, media file functionality, peer review and the ability to post links to external websites, are some of the features that professors at Lingnan could find beneficial should they choose to incorporate online social networking into their classes.

5.2.2. *YouTube*

We believe that YouTube can be used to provide students with a greater variety in the ways they are shown information. The Lingnan University Library uses YouTube to give instructional videos on how to use the resources available at the library, and we believe that this concept can be brought into the classrooms and should be explored. Each student could upload his/her own videos and receive feedback and comments from other faculty and students. The ability to make videos private eases privacy concerns as well. Another added benefit of YouTube is cost; unlike hosting a private video server, YouTube is completely free.

5.2.3. *Online Collaboration Tools*

The communication and collaboration tools, like those offered by Google Apps, can provide instructors at Lingnan University a dynamic teaching and learning environment. Many of the features in Google Apps allow for collaborative editing tools such as Google Docs, which allows multiple students to work on assignments at the same time from separate locations. Google Apps also provides e-mail, calendars, and video hosting services. As all these tools are contained within a single software suite, the ability to move information from one service to another is hassle-free. Microsoft also offers a set of collaboration tools, which include Office and SharePoint.

5.2.4. *Virtual Reality Software*

We recommend additional research be done on the use of virtual reality software as an educational tool at Lingnan University, in addition to those classes currently piloting it as a course component. There exists an opportunity to use virtual worlds, such as Second Life, to enable students to demonstrate or experience activities that would be impossible to

do in real life. Art classes would benefit by allowing students to create three-dimensional virtual works; virtual reality software would offer a new channel of networking for business students by allowing students to network with people outside of the university and around the world.

5.2.5. Synchronous Distance Education

Classes taught via live video conferences are an opportunity for Lingnan University to strengthen curriculum by virtually sharing strong instructors with universities around the world. For example, an instructor at Lingnan could synchronously hold lectures both at Lingnan and in Taiwan by using a live video feed and vice-versa. Previous trials of such video conferences proved successful at Lingnan and, therefore, more inter-university courses should be created.

5.2.6. Google Earth Resource Map

As new students can be disoriented during their first few days after enrolling at a university, any materials that help them acclimate to the campus environment would be appreciated. An opportunity exists to help reduce that stress by exposing all new students to an interactive resource map of the Lingnan University campus. Since this map has already been created in Google Earth, as presented in Chapter 4 and Appendix B, new students need only be instructed on how to access it. Additionally, the map can be further expanded to include other helpful student resources.

5.3. Conclusion

Lingnan University sports a technologically rich campus with an abundant range of teaching and learning resources. Nevertheless, like most universities world-wide, Lingnan

stands to benefit from many online- and mobile-based technologies. Simple classroom

modifications and Internet bandwidth upgrades would improve the educational potential

tremendously. Adoption of course management systems, blogs, and classroom polling

devices could strengthen the quality of teaching, help reduce language barrier limitations,

and promote more active learning. Additionally, Lingnan may benefit by diversifying its

classroom environment or curriculum by utilizing online social networking sites, virtual

reality software, and video conference-based courses. Further research is needed in those

areas, however.

Through a continued dialogue among students, faculty, and staff, Lingnan stands to

continue its pattern of innovative teaching and learning, while ensuring a quality liberal

arts education.

ANNOTATED BIBLIOGRAPHY

Abe, D., Dilsizian, A. H., Strowe, Z. J., & Zhang, M. (2007). *A case study in software tools for language learning*. Unpublished IQP Report. Worcester, MA: Worcester Polytechnic Institute.

Summary:

"This project evaluated the effectiveness of the Check My Words software in improving students' English writing skills. Professor John Milton from the Hong Kong University of Science and Technology developed this discovery-based learning software. The team concluded that the software improved students' English writing skills in a blended learning environment."

Relevance:

This is a past WPI IQP project. Please refer to the chosen IQP section for an in depth analysis of this project in relation to the Lingnan project.

Angilly, R. R., Polidore, B. H., & Reidel, J. L. (2003). *Development of technological learning activities for CSIRO SEC*. Unpublished IQP Report. Worcester, MA: WPI.

Summary:

"This project, performed in Australia with the Commonwealth Scientific and Industrial Research Organisation's Science Education Centres (CSIRO SEC), was a study of science education in secondary schools. Its goal was to create hands-on activities and cutting-edge demonstrations to expose students to emerging technologies. CSIRO SEC develops interactive learning activities that are meant to pique student interest in the sciences. It will use the outcomes of this project to strengthen its existing programs and develop new programs relating to emerging technologies."

Relevance:

Though this IQP was done in Australia, it dealt with an important aspect of what we plan to do in Hong Kong. That is it was about educating students about technology, with technology. This IQP can be mined for methods of how they delivered this information to the students.

Barone, C. A., & Hagner, P. R. (2001). *Technology-enhanced teaching and learning: Leading and*

   supporting the transformation on your campus (1st ed.). San Francisco, Calif.: Jossey-Bass.

   Summary:

   This source is a guide to implementing technological learning tools in an educational
   environment. It is both a technical and leadership guide book, discussing topics such as
   "transforming faculty roles" and "establishing the necessary infrastructure."

   Relevance:

   This book gives specific information on how to deal with both the technical and personal
   aspects of managing a technological overhaul, which could possibly be a key portion of our
   project in Hong Kong. If we are to create a road map for the university on how it should
   implement or use technology, it would be wise to investigate on how others have done it in the
   past.

BlackBoard. (2005). *Blackboard and WebCT Announce Agreement to Merge.* Retrieved 1/29/2010

   from http://investor.blackboard.com/phoenix.zhtml?c=177018&p=irol-

   newsArticle&ID=767025

   Summary:

   This press release details the merger between BlackBoard Inc. (NASDAQ: BBBB) and WebCT
   Inc. The merger completed in early 2006.

   Relevance:

   As two of the biggest CMS tools, this merger is a significant milestone in higher education CMS
   technology. Merged into one company, the clients of Blackboard and WebCT are merged
   locking in a large portion of the market share to BlackBoard.

Boettcher, J. V. (1994). *101 success stories of information technology in higher education: The Joe*

   Wyatt challenge. New York: McGraw-Hill.

   Summary:

   Anecdotes may be helpful when trying to relate future stopgaps and issues with similar typed
   projects.

Relevance:

One-hundred one examples of technology in education; a great place to find situations similar to Lingnan.

CITE. (2009). Centre for Information Technology in Education. Retrieved 11/5/2009, from

http://www.cite.hku.hk/

Summary:

The Centre for Information of Technology in Education (CITE) is an organization with the mission to "...provide support for the education community in Hong Kong in promoting the use of information technology for quality education."

Relevance:

This organization may have helpful resources or commentary on what we are trying to accomplish at Lingnan being as its mission statement is similar to our own, but on a regional scale. We plan to get in touch with this organization for that purpose.

Do, N. H., Fredricks, G. D., Ratcheva, E. V., & Terry-Welsh, E. R. (2009). *Learning styles at Hong Kong*

University of Science and Technology. Unpublished IQP Report. Worcester, MA: WPI.

Summary:

"This research attempted to gain additional perspective on assessing the effects of learning English in a predominately Chinese-speaking country. Using surveys and focus groups, we conducted two studies at Hong Kong University of Science and Technology investigating learning styles and classroom preferences. We examined differences in learning styles between Eastern and Western cultures, and investigated whether the learning styles differed based on academic major in our Eastern population. The results suggest that only slight differences exist in learning styles based on academic major. We also verified the cultural differences found in past research. Putting all this together, learning styles play an important role in how students view and use information presented in the classroom."

Relevance:

This is a past WPI IQP project. Please refer to the chosen IQP section for an in depth analysis of this project in relation to the Lingnan project.

Drop.io. (2009). *Simple private real-time sharing and collaboration by drop.io* Retrieved

11/15/2009, from http://drop.io/

Summary:

This site offers people the ability to share documents, music, pictures and more with colleagues. It also allows people to call and leave "voicemails" in the box that everyone can access.

Relevance:

This is one example of an Internet connected site that can interface with Small Mobile Devices and be used to assist student learning and professor teaching.

Felder, R. M., & Soloman, B. A. (2009). *Learning styles and strategies.* Retrieved 11/14/2009, from

http://www4.ncsu.edu/unity/lockers/users/f/felder/public/ILSdir/styles.htm

Summary:

This webpage, published by two North Carolina Professors, outlines the details of each area of learning found in the Felder-Silverman Learning Styles. It also provides tips for how students with a certain type of learning style can help themselves succeed.

Relevance:

Information on learning styles is important to the success of our project as the final goal of the project is to find technologies that help students learn. If we can identify learning styles that will benefit from using technology, we can better focus our project.

Felder, R. M., & Spurlin, J. E. (2005). Applications, reliability, and validity of the index of learning

styles. *Intl. Journal of Engineering Education, 21*(1), 103-112.

Summary:

This journal describes the Felder-Silverman Model of learning styles. It breaks down the scoring of students in several categories and provides a detailed analysis of each learning preference. It also outlines the reliability of the test.

Relevance:

Information on learning styles is important to the success of our project as the final goal of the project is to find technologies that help students learn. If we can identify learning styles that will benefit from using technology, we can better focus our project.

Goettner, P. (2000). Effective E-learning for healthcare. *Health Management Technology,* p. 64.

Summary:

1. Benefits of E-Learning (electronic Learning)
   a. Easy access to required education through self-paced courses,
   b. Capability for easily updating the courses
   c. Usefulness to better attract and retain qualified nurses.
2. E-learning, like any type of advanced training, should lead to gains in customer satisfaction, productivity and eventually, increased revenues.
3. E-learning guarantees consistency of the message--everyone in your organization gets the same information in the same way at the same time, which is crucial for compliance courses.
4. Future of E-Learning

Relevance:
The web site advocates the positives of e-learning and how e-learning can further the education of people not only in the medical field, but it all fields of study.

Google Apps. (2010). *Google Apps for Business.* Retrieved 02/04/2010 from

http://www.google.com/apps/intl/en/business/index.html

Summary:

This is the official business website for Google Apps. They outline the products included in the Google Apps bundle and detail the pricing scheme.

Relevance:

Since Lingnan is looking at services provided by Google, it is important to understand what products Google offers to universities. While Google Apps contains the same products for businesses and schools, the underlying details (including space and pricing) differ by organization type.

Hung, Humphry, & Cho, Vincent. (2008). Continued usage of e-learning communication tools: A

study from the learners' perspective in Hong Kong. *International Journal of Training and

Development, 12*(3), 171.

Summary:

"In line with the mainstream research on e-learning, we propose a model of the continued usage of e-learning communication tools by learners. We observe in particular that there are two less studied but potentially very important factors, learning self-efficacy and compatibility of values and beliefs with learning tools, which may contribute significantly to the continued usage of e-learning communication tools. We carried out a study of 682 e-learners and the results support our propositions."

Relevance:

This source focuses on a unique aspect of technology in learning. It attempts to draw connections between learning styles and values, to an ability to effectively use "e-learning" tools. This information may be helpful to us when trying to outline our own approach to this problem.

Jennings, N., & Collins, C. (2007). Virtual or virtually U: Educational institutions in second life.

International Journal of Social Sciences, 2(3), 180.

Summary:

This article investigates how universities are using Second Life in their curriculum.

Relevance:

Since Second Life has become a popular tool for educational purposes, it is important for us to evaluate its potential at Lingnan University. Current pilot classes using Second Life are already underway and, therefore, it is crucial for our group to become familiar with its usage.

Keppell, M. (2004). *Response to: "Information technology in education: Way forward"*. Hong Kong:

Hong Kong University. Retrieved 11/23/2009 from

http://www.ied.edu.hk/lttc/downloads/Final%20doc_13_05_IEd_EMB.pdf

Summary:

1. This report reaffirms the vision that the effective use of IT can improve learning outcomes for students
2. The educational value of the digital education resources needs to be determined through a comprehensive evaluation
3. Empowering learners with IT
4. Empowering teachers with IT
5. Digital resources will be continually enriched to meet school needs

Relevance:

Empowering students with IT and empowering teachers with IT are two of the main things we would like to address in this project. Without a constant flow from both sides (teachers and students), the implementation of our technology renovations will not last over time.

Krach, N. J., Mulready, S. E., & Van der Kloot, M. H. (2006). *Open air pedagogical tools -- an inquiry*

into the use of technology and historical fiction in the transmission of intangible cultural

heritage. Unpublished IQP Report. Worcester, MA: WPI.

Summary:

"This project describes how to best use GPS mobile phones at Frilandsmuseet located in Lyngby, Denmark in order to interest the museum's unreceptive young adult audience. After applying participant observation techniques and interviewing museum curators and staff to assess the potential of using historical fiction to reach their young adult audience, the project team concludes that Frilandsmuseet should incorporate the use of a self guided tour implemented on their mobile phone platform in order to transmit intangible cultural heritage."

Relevance:

This is a past WPI IQP project. Please refer to the chosen IQP section for an in depth analysis of this project in relation to the Lingnan project.

Kukulska-Hulme, A., & Traxler, J. (Eds.). (2005). *Mobile learning: A handbook for educators and*

trainers. Abingdon, UK: Routledge.

Summary:

"This book is a timely introduction to the emerging field of mobile learning, explaining the technologies involved, their applications, and the multiple effects on pedagogical and social practice. Mobile devices include handheld computers, smart phones and PDAs, and this book will emphasize the issues of usability, accessibility, evaluation and effectiveness, drawing from case studies written by researchers and practitioners."

Relevance:

As this project will investigate the uses of mobile technology in education, it is important to define and understand mobile learning. This handbook details some of the uses of mobile technology for learning and the reasons behind them. This information becomes relevant as we investigate the relationship between Lingnan students and mobile technologies.

Lee, K. T. (2008). IT integration in teacher Education–supporting the paradigm shift in Hong Kong.

Asia-Pacific Journal for Teacher Education and Development, 4(1), 157.

Summary:

"Integration of IT across the curriculum of teacher education programmes, though in a relatively early stage in Hong Kong, has been a top agenda item for action at the Hong Kong Institute of Education over the last few years. Acknowledging the importance of preparing IT competent students, the Institute has committed resources for the immediate integration of IT across its programmes. In 2000 an IT Competency in Education policy was adopted to ensure that students would be adequately prepared to become competent users of IT as productivity tools, and act as facilitators of learning in order to enhance the learning of their students. This paper details the progress of the IT integration work at the Institute from the beginning. It blends research findings generated in other countries to shed light on the formulation and implementation of the policy for IT competency in education and takes stock of some of the issues that have arisen within a very short period of sixteen months. Information contained in this paper provides a basis for discussion by those who are currently involved in designing programmes for pre-service students and may well serve as a case study that can be used to guide the design of future programmes. It also recognizes that such developments need to be continually refined and developed if teachers are to be fully prepared to use IT meaningfully in their professional practice."

Relevance:

The Hong Kong Institute of Education conducted a study similar to our project several years ago to investigate the most efficient way of integrating technology into the curriculum. While this project will not entail introducing new technologies, this study's findings will help determine the most effective ways to use technology at a university, giving our team a basis on which to compare the current technology usage at Lingnan.

Leung, E. W. C., & Li, Q. (2006). Distance learning in Hong Kong. *International Journal of Distance Education Technologies, 4*(3), 1-5.

Summary:

"In response to the government's push toward a "knowledge-based economy society", the development and applications of e-learning technologies have become more and more popular in Hong Kong. E-learning provides a student-centered learning environment and delivers knowledge on-demand with up-to-the-minute information. However, a high student-dropout rate and low satisfaction with the learning processes remain to be the drawbacks currently. In this paper, we review several universities' initiatives in launching e-learning programs and/or conducting projects in this direction. We also look at some of the trendy directions in addressing the current problems of existing e-learning systems."

Relevance:

This paper discusses attempts by other universities in Hong Kong to launch e-learning programs. Their findings can help guide our project by showing examples of both good and bad uses of technology for education in Hong Kong. By learning from these trials, we can help Lingnan employ only effective solutions.

Lingnan University. (2009a). *Lingnan University.* Retrieved 11/23/2009 from

http://ln.edu.hk/

Summary:

This is the Sponsor's website. It contains information about Lingnan University, its courses, faculty, students and staff.

Relevance:

It is important to understand how the sponsor operates. The organizational structure of Lingnan is also important as our team will need to write and deliver proposals to the administration.

Lingnan University. (2009b). *Lingnan University library user satisfaction survey May 2009.*

Retrieved November 20, 2009, from http://www.library.ln.edu.hk/usr_survey/2009/

Summary:

This is a user satisfaction survey conducted at the Lingnan University Library. It provides information regarding how students view the resources available and where they feel the Library is lacking.

Relevance:

Often university libraries are responsible for large portions of technical resources that students use to research. This survey can help our team understand how Lingnan students view those resources.

Littlejohn, A., & Pegler, C. (2007). *Preparing for blended e-learning*. Oxon: Routledge.

Summary:

"Blended and online learning skills are rapidly becoming essential for effective teaching and learning in universities and colleges. Covering theory where useful but maintaining an emphasis on practice, this book provides teachers and lecturers with an accessible introduction to e-learning. Beginning by exploring the meaning of 'e-learning', it supports tutors in identifying how they plan to use technology to support courses that blend online and face-to-face interactions. Illustrated by a range of case of studies, the book covers: designing quality, appropriate effective and online learning efficient and sustainable e-learning activity providing appropriate feedback to learners devising student activities and sourcing learning resources managing online and offline interactions."

Relevance:

When using online instruction to replace or enhance traditional, in-class learning, it is important to structure the online material appropriately. Through the case studies outlined in this book, we can establish the best practices for using technology effectively to improve learning and ensure Lingnan University employs them.

Lohr, S., & Helft, M. (2007, December 16). Google gets ready to rumble with Microsoft. *The New York Times,* p. 31.

Summary:

This article describes the apparent rivalry between Google and Microsoft. It describes how Google is attacking Microsoft's core business model by duplicating their popular office and communication products on the web. It also shows the fast-paced growth of Google.

Relevance:

As we investigate Google products and evaluate their effectiveness in the classroom, it is important to understand the business aspect of the tools. Google and Microsoft compete for market share within the realm of higher education institutions. Comparing their products, their futures and development strategies, we can provide a more solid foundation for our recommendations.

Lundy, M. P. (2006). *An analysis of the effectiveness of an interactive, educational game.* Unpublished IQP Report. Worcester, MA: WPI.

Summary:

"Previous studies have shown that an interactive tool tends to educate users better than a pure textual source. I wished to test whether these results hold for state budgeting, since this is generally regarded as uninteresting. If users could be motivated to learn about budgeting, they could be motivated to learn about many topics. A large user study with the previously-developed MassBalance game showed the interaction motivated students to spend more time learning, irrespective of their lack of interest in the topic."

Relevance:

This is a primary example of how technology can be utilized to foster education, and approaches it in a manner that doesn't limit it to the classroom. This approach may possibly be utilized to validate the creation of educational games relevant to university students in Hong Kong for small mobile devices.

Mark Bray, R. K. (Ed.). (2005). Education and society in Hong Kong and Macao: Comparative

perspectives on continuity and change (2nd ed.). 3300 AA Dordrecht, The Netherlands:

Springer.

Summary:

This book talks about the history of the education system in Hong Kong and Macau and the
recent reform to the system.

Relevance:

This book deals with the history of education in Hong Kong and neighboring Macau.

Metcalf, D. S. (2006). *MLearning mobile learning and performance in the palm of your hand*. Boston,

MA: HRD Press.

Summary:

This book contains information about how to train employees with computer assisted
instruction and interactive media.

Relevance:

This book directly relates to our sponsor's desire for our group to investigate small mobile
devices. Being as the head of the school is seen as a CEO, it follows that the pupils may be seen
as employees, which may mean that many of the methods discussed in this book may carry
over to institutional instruction.

Moodle. (2009). *About Moodle.* Retrieved 1/29/2010 from

http://docs.moodle.org/en/About_Moodle

Summary:

This wiki describes the functionality of Moodle, the open source CMS designed for higher
education use.

Relevance:

Moodle is an open source alternative to BlackBoard and WebCT. It is gaining popularity
among universities and is poised to become major competition to the proprietary commercial
CMS solutions. Lingnan is also considering switching to Moodle.

PollEverywhere. (2009). *Text Message (SMS) Polls and Voting, Audience Response System.* Retrieved

11/15/2009 from http://www.polleverywhere.com/

Summary:

This site allows people to poll an audience via text messages sent from a cell phone and graph the results real-time.

Relevance:

This is one example of an Internet connected site that can interface with Small Mobile Devices and be used to assist student learning and professor teaching.

Powel, W., & Gill, C. (2003). Web content management systems in higher education. *The EDUCAUSE Quarterly, 26*(2), 43.

Summary:

This article outlines the importance of Content Management Systems in higher educations. It explores a few popular CMS tools that are commonly used by universities.

Relevance:

Beside the evaluation of specific CMS's, this article details the importance of CMS's. It discusses their many uses and mentions their growing popularity.

Sanders, V. A., Valliere, D. G., Wong, A., & Wong, S. (2000). *The role of information technology in

student learning assessment*. Unpublished IQP Report. Worcester, MA: Worcester Polytechnic

Institute.

Summary:

"This report, prepared for the National Science Foundation (NSF) Division of Undergraduate Education (DUE), contains details from our investigation and evaluation of Information Technology (IT)-based learning assessment tools in undergraduate education. Twenty-two tools were identified and evaluated to determine their most effective functional use. Recommendations for further studies are included."

Relevance:

This is a past WPI IQP project. Please refer to the chosen IQP section for an in depth analysis of this project in relation to the Lingnan project.

Seidel, L. E., & England, E. M. (1997). *Gregorc's cognitive styles: Preferences for instructional and assessment techniques in college students.* Washington, D.C.: American Psychological Society.

Summary:

"This study investigated liberal arts college students' preferences for various teaching methods and testing techniques in relation to their measured cognitive style. A total of 100 students completed the Gregorc Style Delineator and a questionnaire on instructional methods commonly used in college classes. The results indicated that the sequential-random dimension of Gregorc's model was the stronger predictor of learning style. High sequential scorers preferred teaching methods such as structured lecture and independent lab experiments, and tests comprised of problems with concrete answers. These students tended to be science majors rather than social science or humanities majors. High random scorers preferred group discussion and group projects, and assessment by projects or class discussion. These students tended to be humanities majors. It is concluded that Gregorc's cognitive styles appear to be related to the instructional preference of liberal arts college students."

Relevance:

Information on learning styles is important to the success of our project as the final goal of the project is to find technologies that help students learn. If we can identify learning styles that will benefit from using technology, we can better focus our project.

Siu, M. (1999). *Improving design & technology education in Hong Kong*. Hong Kong: NSEAD.

Summary:

1. Obtaining a balance between theory and practice is the most difficult part in planning and reconstructing the curriculum.
2. Teachers should receive training in design criticism and theory in order to help students develop sensibility.
3. As we introduce high technological knowledge and techniques to our students, we need to keep asking ourselves what is the role of theory and practice.

Relevance:

Knowing the relevance of the technology you are learning will begin to merge the lines of theory and practice.

SMS 411. (2009). *SMS 411.* Retrieved 11/15/2009, from http://www.sms411.net/

Summary:

This site offers people the ability to send text messages via email. It will automatically convert an email into one or more text messages and deliver them to the appropriate people.

Relevance:

This is one example of an Internet connected site that can interface with Small Mobile Devices and be used to assist student learning and professor teaching.

SunGard Higher Education. (2010). *Banner Unified Digital Campus.* Retrieved 1/29/2010, from

http://www.sungardhe.com/Products/Product.aspx?id=832&LangType=1033

Summary:

This site details the high education software offerings of SunGard. The SunGard Higher education unit is the designer of the popular Banner Suite used by universities worldwide.

Relevance:

This is an example of a Web Information System commonly used by universities to manage student enrollment, financial aid, human resources and course offerings. It is the system used by Lingnan University for administration management.

Traxler, J. (2007). Defining, discussing and evaluating mobile learning: The moving finger writes

and having writ.... *International Review of Research in Open and Distance Learning, 8*(2), 1-12.

Summary:

"Looking at mobile learning in a wider context, we have to recognize that mobile, personal, and wireless devices are now radically transforming societal notions of discourse and knowledge, and are responsible for new forms of art, employment, language, commerce, deprivation, and crime, as well as learning. With increased popular access to information and knowledge anywhere, anytime, the role of education, perhaps especially formal education, is challenged and the relationships between education, society, and technology are now more dynamic than ever. The paper explores and articulates these issues and the connections between them specifically in the context of the wider and sustained development of mobile learning."

Relevance:

While defining and citing examples of mobile learning is important, so is understanding the relationship between technology, education and society. As the context in which society accepts technology is revealed, so, too, is the place of mobile learning discovered.

Tsang, P., Kwan, R., & Fox, R. (Eds.). (2007). *Enhancing learning through technology*. Hackensack, NJ:

World Scientific.

Summary:

"This volume provides an up-to-date study of theory and practice on the importance of technology in teaching and learning. The contributions are carefully peer-reviewed from over 100 submissions to the International Conference on Teaching and Learning 2006, held in Hong Kong"

Relevance:

This conference held in Hong Kong reinforces parts of several other references that deal with technology in learning. This particular resource deals with "theory and practice," which contrasts with many other sources, in that they either deal with one or the other.

Vess, D. (2004). History in the digital age: A study of the impact of interactive resources on student

learning. *History Teacher, 37*(3), 385.

Summary:

1. One student says "I like the online debates because I feel like my voice has a chance to be heard. In a typical classroom, I rarely speak up. It's easier to talk online than in a classroom."(pg 392)
2. Another student says "online debates are better than an in class debate because you have the chance to thoroughly research something and state your opinion without interruption".(pg 393)
3. One problem in this online course was that the online ungraded self-test, did not encourage students to master geographic locations, so students did poorly on this, because although the information was there to use, since there was no grading on this particular aspect of it, students just didn't do it.
4. Students tend to respond primarily to those aspect of the course that require them to demonstrate mastery for grades(p397)
5. Students need to know what the payoff is if ever we are to convince them that our most elaborate uses of educational technology represent anything more than optional playtime

Relevance:

When students are taking an online course as opposed to a course on campus, a lot more pressure is put on the students to do the work themselves. This situation could make it very difficult for students to maximize the resources available. Since we want to know the best ways to implement technology, it is important for us to know what works and what doesn't work. After reading this article, we know most students will not use resources that they do not feel are necessary to complete assignments. Teachers must incorporate the technology available into their class structure.

Vogel, D., Kennedy, D., Kuan, K., Kwok, R., & Lai, J. (2007). *Do mobile device applications affect*

learning? Hong Kong SAR: City University of Hong Kong.

Summary:

1. Institutions recognize that the learning environment extends beyond the classroom and are thus exploring a variety of technological support options
2. City university of Hong Kong provided Wireless PDAs to all incoming business students in the last 2 years (1600 total) page 1
3. We can enhance learning motivation by emphasizing the importance and applicability of the material and by trying to connect the material to the student's intrinsic motives. Page 2
4. The goal is to lower the barriers of participation
5. Without constructive alignment, mobile-induced motivation, will not yield a higher level of performance Page 4
6. Mobile learning applications that align with student learning interests will positively moderate performance.
7. There is no special way to discern from these results that the pool of students who chose to use the mobile applications is not just simply better performing students.

Relevance:

Implementation of technology deals greatly with the students that are using it, but it also crucial that the faculty implements the technology into the infrastructure of their classroom.

Worcester, T. (2009). Hello? Cell Phones as Teaching Tools? Video presentation at NECC conference,

Washington, DC, on June 29, 2009. Retrieved 11/13/09 from

http://istevision.org/watch.php?vid=48eefefb69e50677fda3c12b3514b37e8d6daa24

Summary:

"Instead of confiscating students' cell phones, how about taking advantage of their connective power as tools for teaching and learning?" This keynote presented at a NECC conference outlines numerous ways that cell phones can be used in the classroom to enhance learning.

Relevance:

If we are to investigate the use of mobile devices in the classroom, we should know some ways SMDs can be used effectively. This presentation outlines some interesting online services that are accessible via cell phones. These services could be implemented at Lingnan University.

APPENDIX A: SPONSOR DESCRIPTION

Lingnan University is one of eight universities located in Hong Kong, China. As the smallest of the Hong Kong universities, "Lingnan University is committed to the provision of quality education distinguished by the best liberal arts traditions. It adopts a whole-person approach to education; which enables its students to think, judge, care, and ultimately, acts responsibly in the changing circumstances of Hong Kong, the region and the world. The vision of Lingnan University is to excel as an internationally recognized liberal arts university distinguished by outstanding teaching and the highest standards of scholarship" (Lingnan University, 2009a, Vision and Mission Statement). Lingnan University is a public organization that is predominantly funded by public means through the Council of Lingnan University. The Office of the President of Lingnan University states that the Council of Lingnan University's responsibilities include, but are not limited to: handling council and court business, administration, donations, liaison with government and statutory bodies, legal matters, and disciplinary procedures. The university is also funded by various loans, grants, enrollment fees, and by gifts.

As an educational institution, Lingnan University (2009a) is structured as a typical university. It currently employs 384 people, of which 172 hold academic positions (professors, directors, etc). See Table A.1 for a breakdown of the academic staff by department.

Table A.1   Statistics of Full-time Academic Staff, December 2009
(Lingnan University, 2009a, Facts and Figures)

Academic/Teaching Staff	Number of Staff
Arts Programs	90
Business Programs	50
Social Sciences Programs	32
Total	172

Furthermore, the Lingnan University Ordinance (2009a) states that the university is led by the Chancellor of the University, who acts as the Chief Executive of the university. Currently, Sir Donald Tsang Yam-Kuen serves as Chancellor of the University, a role automatically granted to the Chief Executive of Hong Kong. He works closely with Lingnan's three major governing bodies which control the direction of the university: the Council of Lingnan University, the Court of Lingnan University and the Senate.

The Council is the executive body which is granted all powers vested in the University by the Lingnan University Ordinance governing document (Lingnan University, 2009a, Governing Bodies). This Council is similar to Worcester Polytechnic Institute's Board of Trustees. The Council is responsible for issuing or investing funds, setting University tuition and compensation, buying or leasing land and expanding the university among other duties. They also appoint, in collaboration with the Court, the President and Vice President of the University. The President "shall be the principal academic and administrative officer of the University" (Lingnan University, 2009a, Ordinance, p. 6). The Chancellor appoints 18 members of the council, including the Chairman, Deputy Chairman and Treasurer of the Council. Other members are appointed by the Lingnan Education Organization Limited or elected by the faculty. The Students' Union President is also a member of the Council.

The Court is primarily responsible for reviewing the financial livelihood of the University and issuing recommendations to the Council as well as discussing and creating university policy (Lingnan University, 2009a, Ordinance). The Council is also consulted when appointing a President or Vice President of the University. The members of the Court are appointed by the Chancellor, Council, Lingnan Education Organization Limited and elected by the faculty. The Chancellor appointed the Chairman and Deputy Chairman of the Court. The Students' Union President is also a member of the Court.

Finally, the Senate shall be "the supreme academic body of the University" (Lingnan University, 2009a, Ordinance, p. 7). It is granted the power to control academic programs, determine admissions criteria, set evaluation standards and decide the eligibility of students to graduate. Membership of the Senate is determined by statues enacted by the Council.

These three bodies determine the regulations by which the University conducts business (Lingnan University, 2009a, Ordinance). However, the Office of the President is in charge of day-to-day operations. The Administrative department of Lingnan contains Associate Vice Presidents and Academic Deans in addition to the University President and Vice President. Each Academic Dean presides over an individual Academic Unit of the University. There is also a Dean of Students.

Each Academic Unit at Lingnan contains many Academic Departments. An Academic Unit can be related to the individual schools or colleges found at large universities in the United States. Lingnan's Academic Units are Arts, Social Science and Business (Lingnan University, 2009a, Ordinance). Contained within each Unit are specific Departments, like English or History, each lead by a Department Head. Each of these

Academic Departments is counseled by an Advisory Board comprised of subject experts employed externally from the campus. Table A.2 shows the current and previous year's student enrollment by Academic Unit.

Table A.2   Statistics of Students at Lingnan University, December 2009
(Lingnan University, 2009a, Facts and Figures)

Student Type	Year	Arts	Business	Social Science	Total
Undergraduates (UGC-funded)	2008-09	988	812	536	2,336
	2009-10	997	818	538	2,353
Research Postgraduates (UGC-funded)	2008-09	22	12	19	53
	2009-10	26	14	19	59
Taught Postgraduates (UGC-funded)	2008-09	267	69	75	411
	2009-10	216	131	73	420
Non-local Incoming Students	2008-09	29	110	40	179
	2009-10	36	124	47	207

In addition to these structured entities, the Council and President have the ability to create committees charged with a particular task (Lingnan University, 2009a, Ordinance). Currently there are 11 committees under the purview of the Council and 12 committees that report directly to the Office of the President. These committees manage everything from staffing issues to financial matters to academic issues. Once such committee that is of importance to this project is the Teaching, Learning and Information Services Management Board under the authority of the University President. Since this committee is charged with investigating and promoting educational services as well as controlling the IT department budget, they will be a useful source of information. This committee also has tremendous influence over the educational policies of the institution and, therefore, will be instrumental in the implementation of the group's recommendations.

Please refer to the Lingnan University Organizational Chart (Figure A.1), located at the end of this appendix, for a graphical depiction of Lingnan University's organizational hierarchy.

Lingnan University is affiliated with two other institutions, The Community College at Lingnan University (CCLU), and Lingnan Institute of Further Education (LIFE). Both are located on the Lingnan University campus grounds (Lingnan University, 2009a).

Dr. David M. Kennedy, the recently appointed Director of Teaching and Learning Centre at Lingnan University, is our direct project sponsor liaison (Lingnan University, 2009a, Staff). As an associate professor, he works in the department of Computing and Decision Sciences at the university. Dr. Kennedy has written many reports on the impact of mobile technology and is currently writing the "Learning Technologies" strategy document for the university.
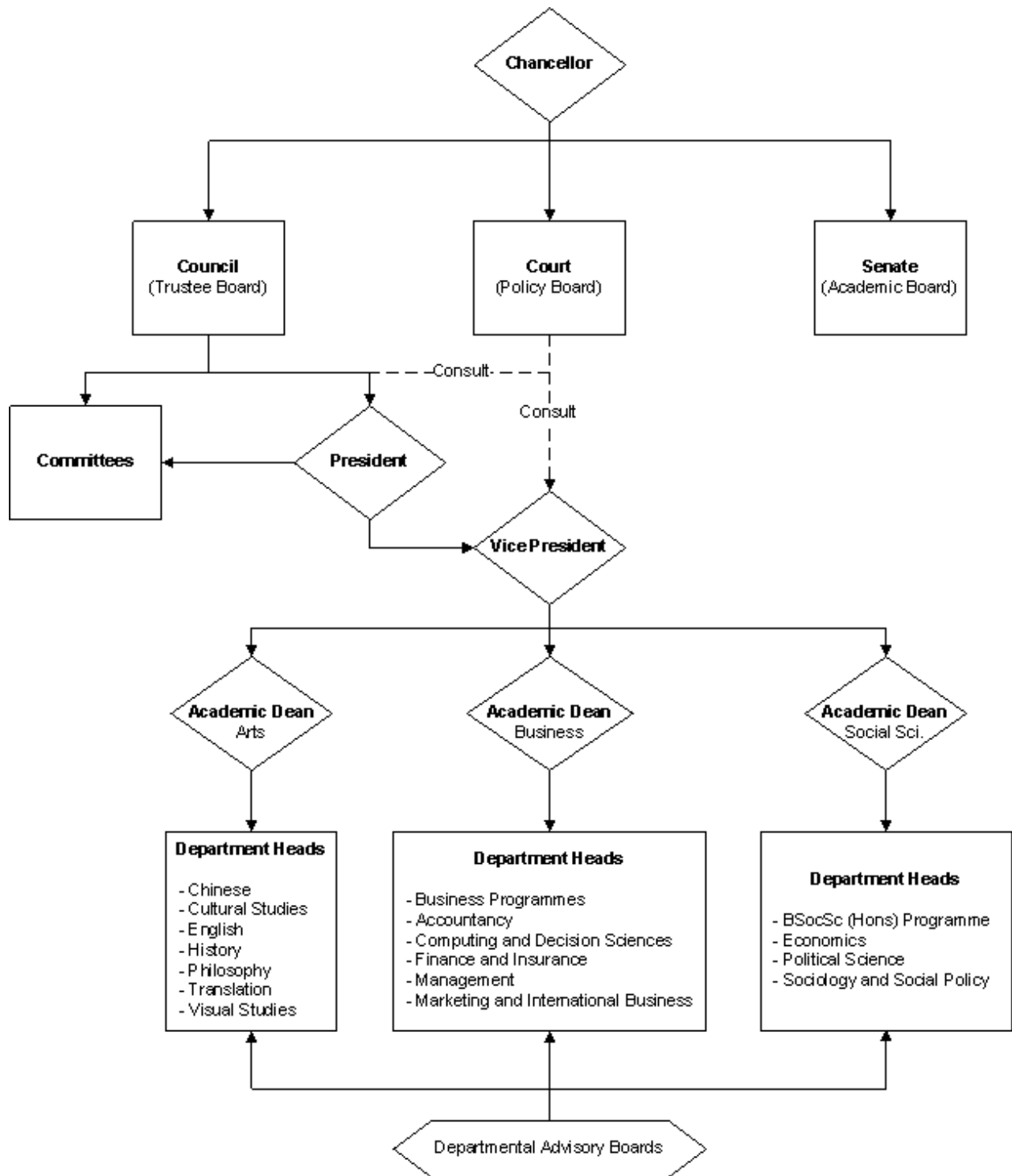
**Figure A.1 Lingnan University Internal Organizational Hierarchy
(Created from information in: Lingnan University, 2009, Ordinance)**

APPENDIX B: GOOGLE EARTH CAMPUS RESOURCE MAP

In an effort to document campus teaching and learning technologies, we created an interactive Google Earth map of the Lingnan University campus. This map clearly outlines campus buildings, marks classroom and computer lab locations and displays relevant information about the campus and classrooms. By default, the program shows an overview of the entire campus, with all information layers activated, as seen in Figure B.1:
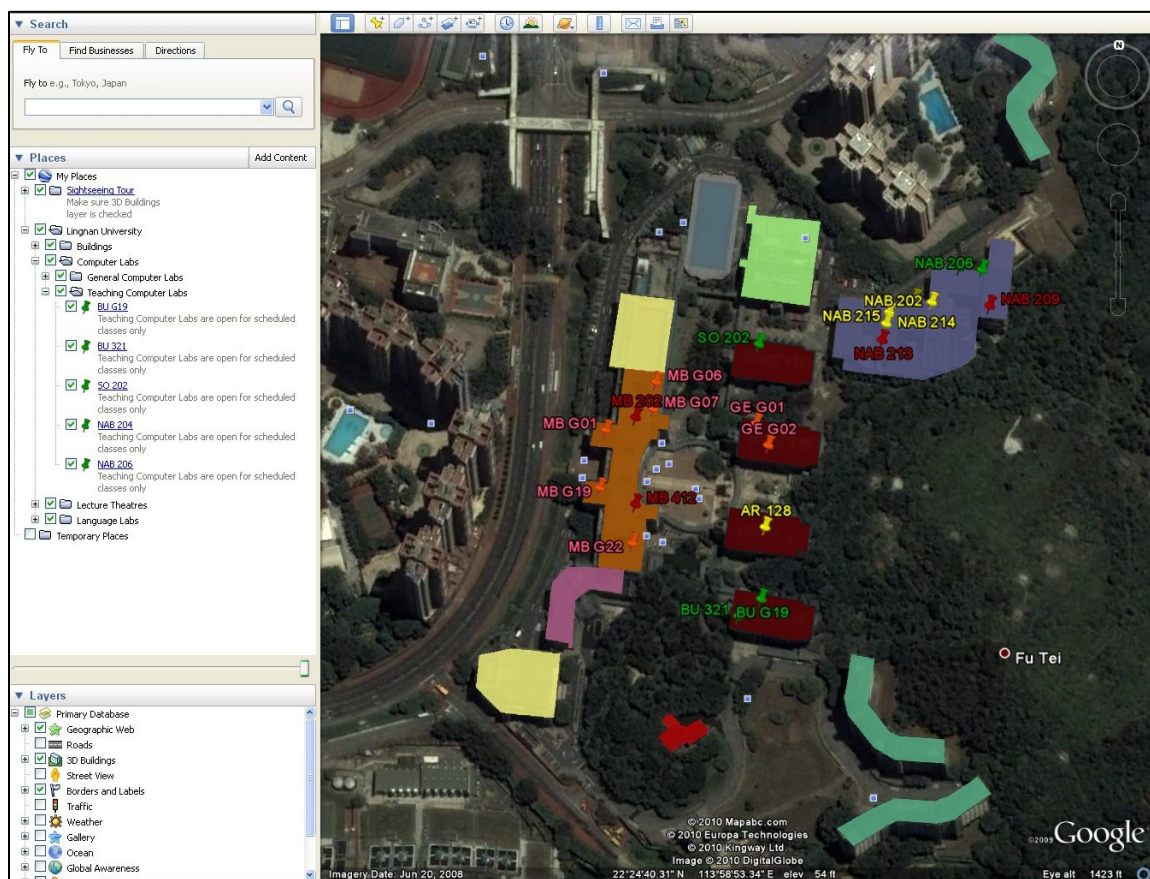
Figure B.2 Default Google Earth view with all layers active

Each resource is contained within a separate layer to allow users the ability to show and hide information at will. For example, if a particular user was interested in finding a

lecture theater style classroom, he or she could simply activate that layer of information, thereby hiding all extraneous data. Figure B.2 demonstrates this.

Figure B.3 A close-up view of the B. Y. Lam Building

Each building, classroom and computer lab is linked to images and information about itself. Simply clicking on any building will launch a popup window that contains an image of the structure from outside and general information about the building (see Figure B.3). Classrooms and computer lab place markers operate in a similar fashion; clicking will reveal information about the room and links to the Lingnan website (see Figure B.4).
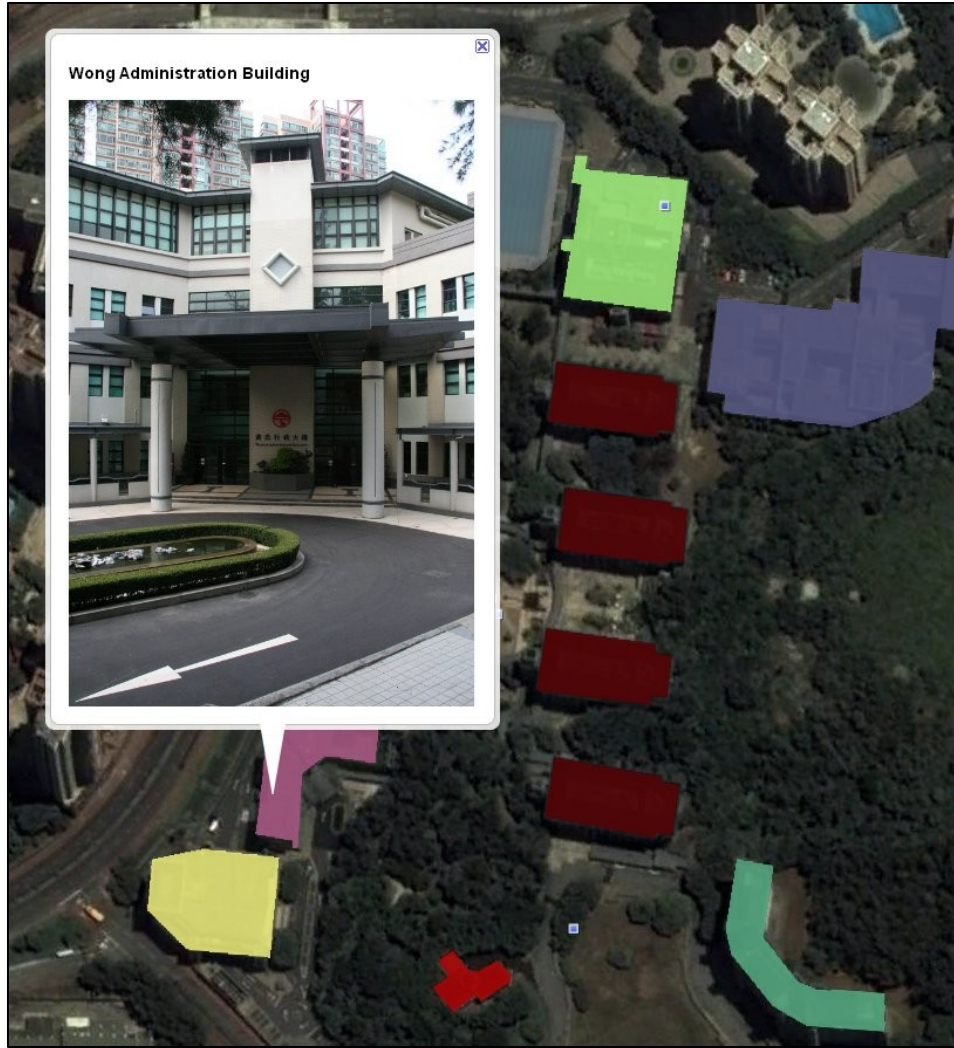
Figure B.4 The information window for the Wong Administration Building
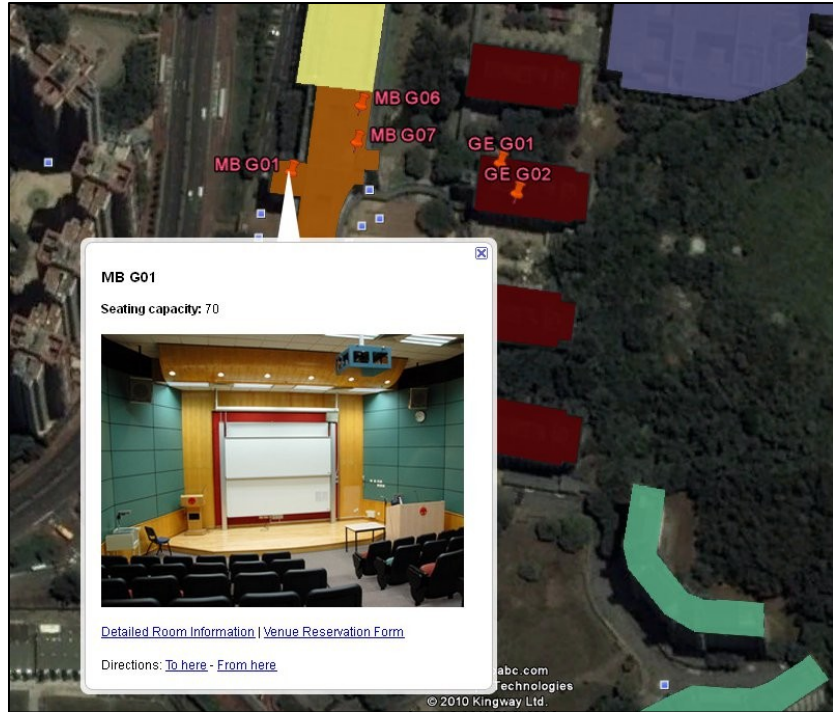
Figure B.5 The information window for Lecture Theater MBG01

For reference, Figure B.5 shows the Lingnan University campus with all layers

deactivated. This is how users see Lingnan University without the resource map. Without

knowing the campus beforehand, the information displayed is superficial at best. The

interactive resource map layer will provide added information to users unfamiliar with the

Lingnan University campus. It could be especially helpful to incoming students.

Figure B.6 Lingnan University satellite view

A live version of this interactive resource map can be found online. The Lingnan University TLC server hosts a website where any user may view the map in a web browser. The Google Earth plug-in must be installed on the user's computer, though many modern browsers come pre-installed with it. Additionally, users may download the Google Earth Keyhole Markup Language (KML) file, which allows users to interact with the map more fully through the Google Earth desktop client. The site and KML file can be found here: http://tlcserver.ln.edu.hk/gmap/.

APPENDIX C: ITSC USAGE INTERVIEW PROTOCOL

Questions

- How long have you held your position?
- In your opinion, what role should technology play in education?
- What role do you think it will play in the future?
- What learning and teaching technologies are currently supported by ITSC for students and faculty?
- How are resources accessed off campus?
- Which services are frequently accessed from off campus?
- Top 3?
- Least used?
- Which services are frequently accessed from on campus?
- Top 3?
- Least used?
- Where do the requests come from for implementing new learning and teaching technologies at Lingnan University?
- If a faculty member wants to implement a new teaching technology in their classes, how are they supported by ITSC?
- Have you seen an increase in support requests from students regarding newer technologies like netbooks and smart phones?
- If so, how is the ITSC handling those requests?
- What do you feel is the most commonly used learning technology employed by the students?
- By the faculty?
- Do you monitor the use of WebCT?
- What kind of data is captured?
- How does the ITSC gather usage data on WebCT?
- Polls?
- Surveys?
- What is done with the WebCT data in terms of feedback to academic staff and administrators for planning?
- Any additional comments?

APPENDIX D: ITSC DIRECTOR INTERVIEW PROTOCOL

Questions

- What are your job responsibilities?
- How long have you held your position?
- In your opinion…
- What roles does technology play in teaching and learning at Lingnan now?
- Are current resources being used to their full potential in teaching and learning?
- If not, what do you think is preventing more wide spread adoption?
- Has the ITSC developed/used any strategy to enhance the adoption of the technology?
- What role should technology play in education?
- What role do you think it will play in the future?
- What are the policies for using learning and teaching technologies at Lingnan?
- What is the reasoning behind these policies?
- Have faculty, now or in the past, expressed interest in implementing new technologies in the curriculum?
- If a faculty member wants to implement a new technology into the curriculum, how would he/she go about it?
- With more and more students using mobile devices such as smart phones and netbooks, do you see a place for these devices in Lingnan's future?
- If so, how? When?
- Any plans for expanding technological infrastructure on campus that relates to teaching or learning?
- Specifically, are there such plans for the student hostels?
- What is your perception on the potential for using "Web 2.0" (Google Docs, Twitter, YouTube) technologies for teaching and learning?
- What is your perception on the potential for the university to use the Internet "cloud" (Server/Internet based applications that users access from their personal computers) for supporting teaching and learning?
- Do you monitor the use of WebCT?
- What kind of data is captured?
- How does the ITSC gather usage data on WebCT?
- Polls?
- Surveys?
- What is done with the WebCT data in terms of feedback to academic staff and administrators for planning?
- Any additional comments?

APPENDIX E: FACULTY INTERVIEW PROTOCOL

Questions

- Which classroom tools have helped you the most with teaching?
- What has been your greatest challenge in helping students learn?
- Have you considered recording your lectures?
- Do you make course material available online via WebCT or departmental website? If so, what materials?
- Do you think using mobile devices in teaching and learning would be beneficial (such as having students bring laptops to class)? If so, why?
- Have you considered using or heard of the use of mobile devices (cell phones, PDAs, netbooks) in teaching?
- What kinds of learning technologies would you most like to see at Lingnan University? (e.g. electronic whiteboards)
- Do you use WebCT? Why or why not? What aspects of WebCT do you think need improvement?
- In your opinion, what technological improvements at Lingnan could enhance the learning experience of students?
- Do you think blogs and wikis can contribute to students learning?
- What would be a good incentive for you to want to participate in technology training offered by the TLC? (scheduling, courses offered, etc?)
- Do you incorporate Web 2.0 applications into your teaching (e.g. Google Docs, wikis)?
- Do you think social networks such as Facebook or Twitter will play a role in education in the future? If so, what role?
- Are you comfortable interacting with your students online via social networking websites?
- Have you heard of in class polling devices being used to increase student participation?
- How does a classroom's design affect your teaching style? Do you have a preference for a particular type of classroom?

APPENDIX F: STUDENT INTERVIEW PROTOCOL

Questions

- What is your major?
- When you use a computer, what tasks do you use it for?
- Social purposes? Learning?
- What kinds of computer programs do you use most frequently?
- Are you a part of any online social site? (Facebook, MySpace, Twitter, etc)
- In an average day, about how much time do you spend accessing the Internet (via computer or mobile device)?
- What learning technologies, available at or from Lingnan, do you use most (WebCT, Moodle, etc)?
- What do you use them for?
- In what ways do you think technologies such as Facebook, wikis, blogs, or forums, could be used to help you learn?
- Would you be comfortable interacting with Lecturers and other course staff through social networking sites like Facebook and Twitter?
- Do you use "Web 2.0" sites, like Google Docs?
- In your opinion, in what ways does Lingnan University use technology effectively in the context of teaching and learning?
- What could be improved?
- What do you think about keeping a Blog as an assignment for class?
- Have any of your professors used technology cleverly to help them teach? (Video lectures, unique assignments, etc)
- What is your primary method for seeking credible information on the Internet?
- What tools do you use?
- How do you verify a source is credible?
- Do you use the advanced search feature of search engines such as Google?
- Do you use academic search engines such as Google Scholar or Lexis Nexus?
- Do you think it would be helpful to use your mobile phone to access Lingnan resources or receive course information?
- What kinds of information would you like to receive?
- Which services would you like to access?

APPENDIX G: RESEARCH PROFESSOR INTERVIEW PROTOCOL

Questions

- What has been your most successful class?
- What teaching and learning technologies did you use?
- In your opinion, what teaching and learning technology…
- Is most underutilized
- Has the most potential
- Is not used well
- Is used well
- Is your least favorite
- Is your favorite
- What new teaching and learning tools do you think will be popular in the future?
- Do you believe that technology's current level of integration into education in Hong Kong is satisfactory?
- Do you see this changing now or in the future?
- What is has been the most difficult obstacle for you when trying to implement a new teaching and learning technology for a class?
- Have you used mobile devices as a teaching and learning tool for a class?
- How?
- Was this successful?
- What teaching and learning technologies do you plan on using in your future classes?
- What previous research efforts have you conducted in the realm of teaching and learning technologies?
- What research are you currently performing in the area of teaching and learning technologies?
- Any additional comments?

A Study on Students' Experience with Technology

Hong Kong Region

Dear student

Welcome to Lingnan University! Technology is part of daily life in the 21st century. LU wishes to ensure that your learning experiences during your university studies are supported by appropriate technology services. We are therefore keen to find out about the experience you already have with using technology in your daily life.

We have joined with the six other UGC-funded universities in Hong Kong in a project to survey first year students about their use of technology. Students overseas are also being surveyed.

We would like you to complete an online questionnaire (hyperlinked) or a paper survey which will take no more than 15 minutes to complete. Your participation in this study is absolutely voluntary and confidential. The survey results will directly inform ITSC and curriculum planning for the University.

Questions related to this questionnaire can be addressed to me at davidmkennedy@LN.edu.hk or 2616 7578

Thank you very much for your participation!

Dr David M Kennedy

Director (Designate) of the Teaching and Learning Centre

1.0 Background Information

What Faculty/School are you enrolled in?	_____
What Programme are you enrolled in? (e.g. BA, BBA, ect)	_____
How are you enrolled in this course?	❒ Full Time ❒ Part Time
In what year did you first enroll in this Programme?	_____
Year of Birth:	_____
Gender:	❒ Male ❒ Female
Are you an International, Mainland or a Local student?	❒ Int'l ❒ Mainland ❒ Local

Where did you receive your secondary education?

❒ Hong Kong (General School)   ❒ Hong Kong (Int'l School)   ❒ China, Mainland

❒ China, Taiwan   ❒ China, Macao (Macau)   ❒ Overseas

2.0 Access to Technology

Please use the table to indicate your level of access to different types of technologies (**not including your access on campus**) and include things you will buy in the next few weeks via the university's Notebook purchase programme.

Types of Technology	Access exclusively for my own use	Access any time I need it, shared with other people	Limited or inconvenient access	No access	Not sure
Desktop computer	❒	❒	❒	❒	❒
Portable computer (i.e. laptop, netbook or notebook)	❒	❒	❒	❒	❒
Electronic organiser (e.g. PDA,	❒	❒	❒	❒	❒

Palm, PocketPC)					
Dedicated MP3 player (e.g. iPod, iTouch)	❏	❏	❏	❏	❏
MP3/4 player with video capabilities	❏	❏	❏	❏	❏
Dedicated digital camera	❏	❏	❏	❏	❏
Memory stick (e.g. flash drive, USB stick)	❏	❏	❏	❏	❏
Dedicated video games console (e.g. Xbox, Playstation)	❏	❏	❏	❏	❏
Web cam (could be in the notebook)	❏	❏	❏	❏	❏
Dial-up internet access	❏	❏	❏	❏	❏
Broadband internet access (ADSL or cable)	❏	❏	❏	❏	❏
Wireless internet access (WiFi/HSDPA)	❏	❏	❏	❏	❏
Mobile phone	❏	❏	❏	❏	❏

Does the phone you currently use have the following features?:

PDA functions (e.g. diary, calendar)	Yes ❏	No ❏	Not sure ❏
3G Network	Yes ❏	No ❏	Not sure ❏
Video camera	Yes ❏	No ❏	Not sure ❏
MP3/Audio Player	Yes ❏	No ❏	Not sure ❏
Wireless (WiFi)	Yes ❏	No ❏	Not sure ❏
Blue-tooth	Yes ❏	No ❏	Not sure ❏
Global positioning system (GPS)	Yes ❏	No ❏	Not sure ❏
Instant Messenger (e.g. Mobile MSN)	Yes ❏	No ❏	Not sure ❏
Push email (Blackberry)	Yes ❏	No ❏	Not sure ❏
Internet access	Yes ❏	No ❏	Not sure ❏

3.0 Use of Technology

Below is a list of different ways in which information and communication technologies can be used.

Please indicate:

1. How OFTEN, on average, you have used technology in each way over the past year.

2. How SKILLED you are at using technology in each way.

If you have never used a particular technology please tick NU (Not Used) and do not provide a skill rating.

Ways in which technology can be used	HOW OFTEN							HOW SKILLED					NU
	Several times	Once a day	Several times	Once a week	Once /twice a month	Every few months	Once /twice a year	Not very Skilled				very skilled	Not Used
Use a computer to manage or manipulate digital photos (e.g. using Flickr, Dig. Image, Picasa)	❑	❑	❑	❑	❑	❑	❑	1 2 3 4 5					❑
Use a computer to create or manipulate digital images (e.g. using Photoshop)	❑	❑	❑	❑	❑	❑	❑	1 2 3 4 5					❑
Use a computer for creating presentations (e.g. PowerPoint)	❑	❑	❑	❑	❑	❑	❑	1 2 3 4 5					❑
Use a computer for creating or editing audio and video (e.g., Movie Maker, iMovie)	❑	❑	❑	❑	❑	❑	❑	1 2 3 4 5					❑
Use a computer to play games	❑	❑	❑	❑	❑	❑	❑	1 2 3 4 5					❑
Use a games console to play games	❑	❑	❑	❑	❑	❑	❑	1 2 3 4 5					❑
Use the internet/web or a LAN to play networked games	❑	❑	❑	❑	❑	❑	❑	1 2 3 4 5					❑
Use a PDA or handheld computer as a personal organiser (e.g. diary,	❑	❑	❑	❑	❑	❑	❑	1 2 3 4 5					❑

Ways in which technology can be used	a day	Once a day		a week	Once a week	Once /twice a month	Every few months	year	HOW SKILLED						Not Used
address book)															
Use a smart phone which includes a PDA, wireless and internet functions	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use a handheld games console (e.g. NDS, PSP) to play games	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web to access a learning portal or university intranet	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web to look up reference information for study purposes (e.g. search engines, online dictionaries, e-Journal)	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web to browse for general information (e.g. news, holidaying, event timetables)	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web to listen to sound recordings (e.g. via streaming audio or iTunes)	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web for other pastimes (i.e. for leisure activities)	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web to buy or sell things (e.g. eBay, Amazon, air tickets.)	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web for other services (e.g. banking, paying bills)	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web/internet to send or receive email (e.g. Hotmail, Yahoo, Google)	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
Use the web/internet for instant messaging / chat (e.g. MSN, QQ, ICQ)	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑
	HOW OFTEN								HOW SKILLED						NU
Ways in which technology can be used	a day	Once a day		a week	Once a week	Once /twice a month	Every few months	year	Not very skilled				very skilled		Not Used
Use the web to build and maintain a website	❑	❑		❑	❑	❑	❑	❑	1	2	3	4	5		❑

Use social networking software on the web (e.g. Facebook, Myspace, Trendster, Yahoo! Groups)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use social bookmarking software on the web (e.g. del.icio.us)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to download podcasts (e.g. using Juice, iTunes)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to publish podcasts (e.g. using Podifier, Podcaster, PodProducer)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to download and/or share music/video files (e.g. MP3, WMV)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to share photographs, videos, or other digital material (e.g. using blinklist, Flickr, YouTube)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to make phone calls (e.g. VoIP using Skype)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web for webconferencing (e.g. using a webcam with Skype or MSN Messenger)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to read RSS feeds (e.g. news feeds)	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to keep your own blog or vlog	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to read other people's blogs or vlogs	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to comment on blogs or vlogs	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use the web to contribute to the development of a wiki	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use a mobile phone to call people	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use a mobile phone to text / SMS people	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use a mobile phone to take digital photos or movies	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑
Use a mobile phone to send pictures	❑	❑	❑	❑	❑	❑	❑		1	2	3	4	5		❑

or movies to other people													
Use a mobile phone to make video calls	❐	❐	❐	❐	❐	❐	❐	1	2	3	4	5	❐
Use a mobile phone as an MP3 player	❐	❐	❐	❐	❐	❐	❐	1	2	3	4	5	❐
Use a mobile phone as a personal organiser (e.g. diary, address book)	❐	❐	❐	❐	❐	❐	❐	1	2	3	4	5	❐
Use a mobile phone to access information / services on the web	❐	❐	❐	❐	❐	❐	❐	1	2	3	4	5	❐
Use a mobile phone to send or receive email	❐	❐	❐	❐	❐	❐	❐	1	2	3	4	5	❐
Use a mobile phone or GPS to navigate	❐	❐	❐	❐	❐	❐	❐	1	2	3	4	5	❐
Use a mobile phone to access to instant messaging services (e.g. MSN, QQ)	❐	❐	❐	❐	❐	❐	❐	1	2	3	4	5	❐
Use a mobile phone to post entries in blog	❐	❐	❐	❐	❐	❐	❐	1	2	3	4	5	❐

4.0 Technologies to Assist Your University Studies

4.1 I want to use technology in my studies because it:	Strongly Agree		Neutral		Strongly Disagree
Will help me get better results in my subjects	1	2	3	4	5
Will help me understand the subject material more deeply	1	2	3	4	5
Makes it more convenient to complete work in my subjects	1	2	3	4	5
Will improve my IT / information management skills in general	1	2	3	4	5
Will improve my career or employment prospects in the long term	1	2	3	4	5

Below is a list of different ways in which technology may be used to help you with your studies at University.

4.2 Please rate how useful each of the following technologies currently is or would be in your studies (regardless of whether or not you have used each technology in the past). In your studies how useful do you think it would be to …	Not at all Useful		Neutral		Extremely Useful	Don't Know
Design and build web pages as part of your courses (e.g. using Dreamweaver, Frontpage, Flash or Fireworks)?	1	2	3	4	5	❑
Create and present multimedia shows as part of your course requirements (e.g. PowerPoint)?	1	2	3	4	5	❑
Create or edit and present audio/video as part of your course requirements (e.g. iMovie, Movie Maker, Premiere, Ulead Video, Studio)?	1	2	3	4	5	❑
Download or access online audio/video recordings of lectures you did not attend?	1	2	3	4	5	❑

Download or access online audio/video recordings to revise the content of lectures you have already been to?	1	2	3	4	5		❐
Download or access online audio/video recordings of supplementary content material?	1	2	3	4	5		❐
Use the web to access University based services (e.g. enrolment, sign up for tutorials and activities, pay fees)?	1	2	3	4	5		❐
Use your mobile phone to access web-based University services information or services (e.g. enrolment, sign up for tutorials and activities, paying fees)?	1	2	3	4	5		❐
Use instant messaging / chat (e.g. MSN, Yahoo, ICQ) on the web to communicate/collaborate with other students in the course?	1	2	3	4	5		❐
Use instant messaging / chat (e.g. MSN, Yahoo, ICQ) on the web to communicate with lecturing and administrative staff from the course?	1	2	3	4	5		❐
Use social networking software (e.g. Facebook, Myspace, Trendster) on the web to communicate/collaborate with other students in the course?	1	2	3	4	5		❐
Use the web to share digital files related to your course (e.g. sharing photos, audio files, movies, digital documents, websites, etc)?	1	2	3	4	5		❐
Use webconferencing or video chat to communicate/collaborate with other students in the course?	1	2	3	4	5		❐
Receive alerts about course information (e.g. timetable changes, the release of new learning resources, changes in assessment) via RSS feeds on the web?	1	2	3	4	5		❐
Keep your own blog as part of your course requirements?	1	2	3	4	5		❐
Contribute to another blog as part of your course requirements?	1	2	3	4	5		❐
Contribute with other students to the development of a wiki as part of your course requirements?	1	2	3	4	5		❐
Receive grades/marks from your Lecturer via text message on your mobile phone?	1	2	3	4	5		❐
Receive pre-class discussion questions from your Lecturer via text message on your mobile phone?	1	2	3	4	5		❐
Receive administrative information about the course via text message on your mobile phone (e.g. timetable or assessment changes, info on new learning resources)?	1	2	3	4	5		❐
Use social bookmarking (e.g. del.icio.us) as part of your studies?	1	2	3	4	5		❐
Use YouTube videos, either as part of your studies or uploading content from your studies?	1	2	3	4	5		❐

Use web conferencing, VOIP or Video chat to communicate/collaborate with students around the world (outside Hong Kong)?	1 2 3 4 5	☐

Please list three ways in which you think the technologies that you use in your everyday life could be useful in your studies.

1.

_____

_____

2.

_____

_____

3.

_____

_____

If you are happy to participate in a focus group so we can better understand student needs, please fill in the following details.

Name

_____
—

Email address

_____

Phone number

_____

-end-

THANK YOU

Experience with Technology Questionnaire

Dear student,

Technology is part of daily life in the 21st century. LU wishes to ensure that your learning experiences during your university studies are supported by appropriate technology services. We are therefore keen to find out about the experience you already have with **using technology in your daily life AND for your studies**.

Your participation in this study is voluntary and confidential.

Questions related to this questionnaire can be addressed to davidmkennedy@LN.edu.hk or 2616 7578

Thank you very much for your participation!

Dr David M Kennedy

Director, Teaching and Learning Centre

1.0 Background Information

What Department are you enrolled in?	_____
What Program are you enrolled in? (e.g. BA, BBA, etc)	_____
How are you enrolled in this course?	❒ Full Time ❒ Part Time
In what year did you first enroll in this Program?	_____
Year of Birth:	_____
Gender:	❒ Male ❒ Female
Are you an International, Mainland or a Local student?	❒ Int'l ❒ Mainland ❒ Local
Where did you receive your secondary education?	❒ Hong Kong (General School) ❒ Hong Kong (Int'l School) ❒ China, Mainland ❒ China, Taiwan ❒ China, Macao (Macau) ❒ Overseas

2.0 Access to Technology

Does the phone you currently use have the following features?: *(Skip section if you have no access to a mobile phone)*

	YES	NO	UNSURE
PDA functions (e.g. diary, calendar)	❒	❒	❒
3G Network	❒	❒	❒
Video camera	❒	❒	❒
MP3/ Audio Player	❒	❒	❒
Wireless (WiFi)	❒	❒	❒
Blue-tooth	❒	❒	❒
Global positioning system (GPS)	❒	❒	❒
Instant Messenger (e.g. Mobile MSN)	❒	❒	❒
Push email (Blackberry)	❒	❒	❒
Internet access	❒	❒	❒

How often do you use the following features of your phone?: (Skip section if you have no access to a mobile phone)

	Daily	Weekly	Monthly	Rarely / Never
Access internet	❒	❒	❒	❒
Text message	❒	❒	❒	❒
GPS / Navigation	❒	❒	❒	❒
Take photos	❒	❒	❒	❒
Record video	❒	❒	❒	❒
Play music	❒	❒	❒	❒
E-Mail	❒	❒	❒	❒

What kind of access do you have to the following technologies?			
	Access exclusively for my own use	**Limited or university-owned access**	**No access**
Desktop computer	❏	❏	❏
Laptop, netbook or notebook	❏	❏	❏
Electronic organiser (e.g. PDA, Palm, PocketPC)	❏	❏	❏
Dedicated MP3 player (e.g. iPod Nano, iTouch)	❏	❏	❏
MP3/ 4 player with video capabilities (e.g., iTouch, Creative Zen)	❏	❏	❏
Dedicated digital camera	❏	❏	❏
Memory stick (e.g. flash drive, USB stick)	❏	❏	❏
Dedicated video games console (e.g. Xbox, Playstation)	❏	❏	❏
Web cam (could be in the notebook)	❏	❏	❏
Dial-up internet access	❏	❏	❏
Broadband internet access (ADSL or cable)	❏	❏	❏
Wireless internet access (WiFi/ HSDPA)	❏	❏	❏

3.0 Technology Usefulness

Please rate how useful each of the following technologies currently is or would be in your studies *(regardless of whether or not you have used each technology in the past)* **In your studies how useful do you think it would be to …**	Not at all Useful		Neutral		Extremely Useful
Design and build web pages as part of your courses (e.g. using Dreamweaver, FrontPage, Flash or Fireworks)?	❑	❑	❑	❑	❑
Create and present multimedia shows as part of your course requirements (e.g. PowerPoint)?	❑	❑	❑	❑	❑
Create or edit and present audio/ video as part of your course requirements (e.g. iMovie, Movie Maker, Premiere, Ulead Video, Studio)?	❑	❑	❑	❑	❑
Download or access online audio/ video recordings of lectures you did not attend?	❑	❑	❑	❑	❑
Download or access online audio/ video recordings to revise the content of lectures you have already been to?	❑	❑	❑	❑	❑
Download or access online audio/ video recordings of supplementary content material?	❑	❑	❑	❑	❑
Use the web to access University based services (e.g. enrolment, sign up for tutorials and activities, pay fees)?	❑	❑	❑	❑	❑
Use your mobile phone to access web-based University services information or services (e.g. enrolment, sign up for tutorials and activities, paying fees)?	❑	❑	❑	❑	❑
Use instant messaging / chat (e.g. MSN, Yahoo, ICQ) on the web to communicate/ collaborate with other students in the course?	❑	❑	❑	❑	❑
Use instant messaging / chat (e.g. MSN, Yahoo, ICQ) on the web to communicate with lecturing and administrative staff from the course?	❑	❑	❑	❑	❑
Use social networking software (e.g. Facebook, Myspace, Friendster) on the web to communicate/ collaborate with other students in the course?	❑	❑	❑	❑	❑
Use the web to share digital files related to your course (e.g. sharing photos, audio files, movies, digital documents, websites, etc)?	❑	❑	❑	❑	❑
Use web-conferencing or video chat to communicate/ collaborate with other students in the course?	❑	❑	❑	❑	❑
Receive alerts about course information (e.g. timetable changes, the release of new learning resources, changes in assessment) via RSS feeds on the web?	❑	❑	❑	❑	❑
Keep your own blog as part of your course requirements?	❑	❑	❑	❑	❑
Contribute to another blog as part of your course requirements?	❑	❑	❑	❑	❑

Contribute with other students to the development of a wiki as part of your course requirements?	☐	☐	☐	☐	☐
Receive grades/ marks from your Lecturer via text message on your mobile phone?	☐	☐	☐	☐	☐
Receive pre-class discussion questions from your Lecturer via text message on your mobile phone?	☐	☐	☐	☐	☐
Receive administrative information about the course via text message on your mobile phone (e.g. timetable or assessment changes, info on new learning resources)?	☐	☐	☐	☐	☐
Use social bookmarking (e.g. del.icio.us) as part of your studies?	☐	☐	☐	☐	☐
Use YouTube videos, either as part of your studies or uploading content from your studies?	☐	☐	☐	☐	☐
Use web conferencing, VOIP or Video chat to communicate/ collaborate with students around the world (outside Hong Kong)?	☐	☐	☐	☐	☐
Use a Virtual Learning Environment (e.g., WebCT, Moodle) to access course content, discussions etc.	☐	☐	☐	☐	☐
Use Google documents for collaboration and sharing content.					

Thank you for your valuable contribution

APPENDIX J: STAFF SURVEY

IT Usage Survey for Lingnan University Teaching Staff

This survey aims to collect feedback and opinions from staff members about the use of information technology for teaching and research at Lingnan University. Your input will help us better understand your needs and expectations and will provide useful information for future planning of services and support in IT teaching and research. Therefore it is essential that we hear from you!

Your responses will be treated in a strictly confidential manner and the data from the survey will only be released in aggregate form only. Please take a few minutes to complete the survey and return it to the Teaching and Learning Centre on or before 31 May 2009.

This survey is the same as its counterpart that is sent to you via email. **To avoid double counting, please do NOT fill in this questionnaire if you have already filled in the online version.**

If you have any questions about the survey, please contact the Teaching and Learning Centre at TLC@LN.edu.hk or 2616-7581. Thank you!

The use of WebCT

Directions: Indicate your response by selecting the appropriate button ☐ under each question.

Q1.   How many course sections have you taught in the 2008-09 academic year (1st and 2nd terms)?

☐   None (go to Q.7)
☐   1-2
☐   3-4
☐   5-6
☐   7-8
☐   9 or more

Q2.   For how many course sections have you used WebCT as a component during the 2008-09 academic year (1st and 2nd terms)?

☐   None (go to Q.4)
☐   1-2
☐   3-4
☐   5-6
☐   7-8
☐   9 or more

Q3.   To what extent do you utilise the following functions/features in WebCT for your course(s)?

	Very Frequently	Frequently	Occasionally	Seldom	Never	Not familiar with this tool
a. Organise page tool (in additional to the Homepage)	☐	☐	☐	☐	☐	☐
b. Single page tool (HTML or text file within WebCT)	☐	☐	☐	☐	☐	☐
c. URL tool to view a website outside of WebCT	☐	☐	☐	☐	☐	☐
d. Course content	☐	☐	☐	☐	☐	☐
e. Announcement	☐	☐	☐	☐	☐	☐
f. Image database tool	☐	☐	☐	☐	☐	☐
g. Discussions	☐	☐	☐	☐	☐	☐
h. Mail	☐	☐	☐	☐	☐	☐
i. Chat	☐	☐	☐	☐	☐	☐
j. Assessment (Quizzes/Survey)	☐	☐	☐	☐	☐	☐
k. Self Test	☐	☐	☐	☐	☐	☐
l. Assignment	☐	☐	☐	☐	☐	☐
m. Global Calendar	☐	☐	☐	☐	☐	☐
n. Manage Students (Gradebook)	☐	☐	☐	☐	☐	☐
o. Track Students	☐	☐	☐	☐	☐	☐
p. SafeAssign (Anti-plagiarism software)	☐	☐	☐	☐	☐	☐
q. Other (please specify)	_____					

[Please go to Q5]
Q4.   Reasons for NOT using WebCT

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Sure
a. not suitable for the subject matter	☐	☐	☐	☐	☐	☐
b. not user-friendly	☐	☐	☐	☐	☐	☐
c. too time consuming to create a WebCT course	☐	☐	☐	☐	☐	☐
d. insufficient general computer knowledge	☐	☐	☐	☐	☐	☐
e. insufficient knowledge of using WebCT	☐	☐	☐	☐	☐	☐
f. lack of technical support	☐	☐	☐	☐	☐	☐
g. lack of knowledge about the instructional use of WebCT in teaching	☐	☐	☐	☐	☐	☐
h. such work is not recognised by the department and the University	☐	☐	☐	☐	☐	☐
i. not interested in web-based teaching	☐	☐	☐	☐	☐	☐
j. I use other Web tools for teaching, e.g. self-made websites or other software or online platforms	☐	☐	☐	☐	☐	☐
k. Other (please specify)	_____					

The use of IT in teaching and research

Q5. To what extent did you use the following information technologies in your TEACHING during the 2008-09 academic year?

	Very Frequently	Frequently	Occasionally	Seldom	Never	Not familiar with this tool
a. Presentation technology (e.g. PowerPoint)	☐	☐	☐	☐	☐	☐
b. Video show (DVD, VCD)	☐	☐	☐	☐	☐	☐
c. Video sharing applications (e.g. YouTube)	☐	☐	☐	☐	☐	☐
d. Library electronic databases	☐	☐	☐	☐	☐	☐
e. Course Management System (e.g. WebCT)	☐	☐	☐	☐	☐	☐
f. Online CTLE (Course Teaching and Learning Evaluation)	☐	☐	☐	☐	☐	☐
g. e-Portfolio	☐	☐	☐	☐	☐	☐
h. Online plagiarism checking (e.g. TurnItin or SafeAssign)	☐	☐	☐	☐	☐	☐
i. World Wide Web	☐	☐	☐	☐	☐	☐
j. Videoconferencing / Virtual meetings	☐	☐	☐	☐	☐	☐
k. IT courseware tailor-made by TLC	☐	☐	☐	☐	☐	☐
l. RSS feeds	☐	☐	☐	☐	☐	☐
m. Instant messaging (e.g. MSN, ICQ)	☐	☐	☐	☐	☐	☐
n. Digital image collections	☐	☐	☐	☐	☐	☐
o. Web development tools (e.g. Dreamweaver, HTML)	☐	☐	☐	☐	☐	☐
p. Wikis	☐	☐	☐	☐	☐	☐
q. Blogs	☐	☐	☐	☐	☐	☐
r. Social networking sites (e.g. MySpace, Facebook, Twitter)	☐	☐	☐	☐	☐	☐
s. Other (please specify)	_____					

Q6. Which of the following information technology skills/tools/programmes do your students need to use for your course(s)? (Select all that apply)

☐ Internet search
☐ Excel
☐ PowerPoint
☐ Word
☐ Microsoft Project
☐ SPSS
☐ SAS
☐ STATA
☐ NUD*IST

- ☐ Database (e.g. Access, SQL)
- ☐ Concept-mapping (e.g. Mind Mapping software)
- ☐ Desktop publishing (e.g. InDesign, Quark Xpress, PageMaker)
- ☐ Graphics/Animation (e.g. Photoshop, Freehand, Flash, Illustrator)
- ☐ Video shooting
- ☐ Audio and video production (e.g. ACID, Sound Booth, Sound Track Pro, Premiere, Ulead VideoStudio, Final Cut Pro)
- ☐ Scanning
- ☐ Web page development (e.g. CSS, Dreamweaver, FrontPage, HTML)
- ☐ Web programming (e.g. JavaScript, PHP)
- ☐ None
- ☐ Other (please specify)

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Q7. How much has each of the following factors influenced your use of technology in your teaching?

	Very much	Much	Some	Little	Not at all
a. Lack of technical skills	☐	☐	☐	☐	☐
b. Lack of instructional design skills	☐	☐	☐	☐	☐
c. Lack of technical support	☐	☐	☐	☐	☐
d. Lack of classroom equipment	☐	☐	☐	☐	☐
e. Lack of time	☐	☐	☐	☐	☐
f. Lack of money	☐	☐	☐	☐	☐
g. Extra work with little payoff	☐	☐	☐	☐	☐
h. Instructional technology does not fit my teaching style	☐	☐	☐	☐	☐
i. Little impact on tenure/promotion	☐	☐	☐	☐	☐
j. Lack of incentives/rewards	☐	☐	☐	☐	☐
k. Students do not know how to use it well	☐	☐	☐	☐	☐
l. Technologies change too quickly	☐	☐	☐	☐	☐
m. Copyright/intellectual property issues	☐	☐	☐	☐	☐
n. Other (please specify) _____
_____
_____
_____

Q8. In your opinion, how useful are/would be the following technology support services to help you effectively incorporate technology into your course?

	Extremely useful	Quite useful	Somewhat useful	A little useful	Not at all useful
a. Individual consultants	☐	☐	☐	☐	☐
b. Your departmental support staff	☐	☐	☐	☐	☐
c. Delegated student helper	☐	☐	☐	☐	☐
d. Technology training sessions offered by TLC or ITSC	☐	☐	☐	☐	☐
e. Department customised training (i.e. training offered for your department)	☐	☐	☐	☐	☐
f. Web-based or online training	☐	☐	☐	☐	☐
g. Seminars or sharing sessions showing how other faculties are using IT in teaching	☐	☐	☐	☐	☐
h. Tailor-made courseware produced by TLC	☐	☐	☐	☐	☐
i. Printed resources (e.g. user manuals and short papers)	☐	☐	☐	☐	☐
j. Other (please specify)					

_____

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_____

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Q9. To what extent have you used the following information technologies in your RESEARCH in the 2008-09 academic year?

	Very Frequently	Frequently	Occasionally	Seldom	Never	Not familiar with this tool
a. Internet search	☐	☐	☐	☐	☐	☐
b. Presentation technology (e.g. PowerPoint)	☐	☐	☐	☐	☐	☐
c. Online library licensed journals, electronic databases	☐	☐	☐	☐	☐	☐
d. Data analysis software (e.g. SPSS, SAS, STAT, NUD*IST)	☐	☐	☐	☐	☐	☐
e. Online survey tools	☐	☐	☐	☐	☐	☐
f. Videoconferencing / Virtual meetings	☐	☐	☐	☐	☐	☐
g. Video sharing applications (e.g. YouTube)	☐	☐	☐	☐	☐	☐
h. RSS feeds	☐	☐	☐	☐	☐	☐
i. Instant messaging (e.g. MSN, ICQ)	☐	☐	☐	☐	☐	☐
j. Database applications (e.g. Access, MySQL)	☐	☐	☐	☐	☐	☐
k. Other (please specify)						

_____

_____

Q10. Please rate the extent of your agreement/disagreement on each of the following statements.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Sure
a. I think IT can enhance my teaching.	☐	☐	☐	☐	☐	☐
b. I think I can teach my existing courses sufficiently well without using IT at all.	☐	☐	☐	☐	☐	☐
c. My IT knowledge is already good enough for the technology that I use in my teaching and research.	☐	☐	☐	☐	☐	☐
d. I would like to have more IT related knowledge and skills for use in my teaching.	☐	☐	☐	☐	☐	☐
e. I already get enough IT support for my teaching and research.	☐	☐	☐	☐	☐	☐

Q11. Please provide any additional comments on IT teaching and research at Lingnan University:

_____

_____

Demographics

Q12. Gender

☐ Male
☐ Female

Q13.   Number of years of teaching experience

☐ less than 12 months
☐ 1-2 years
☐ 3-4 years
☐ 5-6 years
☐ 7-8 years
☐ 9 or more years

Q14. Your affiliation

☐ Lingnan University (go to Q15)
☐ Community College
☐ LIFE

Q15. Your department (for Lingnan University staff only)

☐ BSocSc (Hons) Programme Office
☐ Business Programmes Office
☐ Chinese Language Education and Assessment Centre (CLEAC)
☐ Department of Accountancy

- ☐ Department of Chinese
- ☐ Department of Computing and Decision Sciences
- ☐ Department of Cultural Studies
- ☐ Department of Economics
- ☐ Department of English
- ☐ Department of Finance and Insurance
- ☐ Department of History
- ☐ Department of Management
- ☐ Department of Marketing and International Business
- ☐ Department of Philosophy (Philosophy & Visual Studies)
- ☐ Department of Political Science
- ☐ Department of Sociology and Social Policy
- ☐ Department of Translation
- ☐ English Language Education and Assessment Centre (ELEAC)
- ☐ General Education and Core Curriculum Office
- ☐ Other (please specify)

_____

*** Thank you for your time and input. ***

Teaching and Learning Centre

APPENDIX K: CLASSROOM OBSERVATIONS

BUS 301 - Strategic Management

- Venue
    - Crossroads Foundation, 2 Castle Peak Road, Tuen Mun
    - Off-campus
- Class Style
    - Service based learning
- Student Notes
    - Shy
- Miscellaneous Notes
    - Orientation class
    - Crossroads representative outlined organization
    - Students bussed to and from location

SOC 108 / GEA 108 - Reading Great Social Thinkers

- Venue
    - Lecture Classroom
- Class Style
    - Professor led, round table discussion
- Student Notes
    - Students not as shy as in other classroom observations
- Miscellaneous Notes
    - Debate centric
    - Discussion based
    - Entire class sits around one table
    - Cell phones used during breaks only

VIS 105 - Introduction to Film Studies

- Venue
    - Lecture Theater
- Class Style
    - Professor lecture with PowerPoint
- Student Notes
    - Sit primarily in back
    - Shy
- Miscellaneous Notes
    - No laptops used by students
    - Cell phones used during breaks only

APPENDIX L: FIRST YEAR STUDENT SURVEY RESULTS

What Faculty are you enrolled in?		Frequency	Percent	Valid Percent
Valid	Arts	301	38.44%	38.54%
	Business	272	34.74%	34.83%
	Social Sciences	179	22.86%	22.92%
	Blank	29	3.70%	3.71%
	Total	**781**	**99.74%**	**100.00%**
Invalid	System	2	0.26%	
Total		**783**	**100.00%**	

GENDER		Frequency	Percent	Valid Percent
Valid	Male	249	31.80%	31.84%
	Female	475	60.66%	60.74%
	Blank	58	7.41%	7.42%
	Total	**782**	**99.87%**	**100.00%**
Invalid	System	1	0.13%	
Total		**783**	**100.00%**	

Are you an International, Mainland, or a Local Student?		Frequency	Percent	Valid Percent
Valid	International	54	6.90%	6.91%
	Mainland	84	10.73%	10.76%
	Local	556	71.01%	71.19%
	Blank	87	11.11%	11.14%
	Total	**781**	**99.74%**	**100.00%**
Invalid	System	2	0.26%	
Total		**783**	**100.00%**	

Year of Birth		Frequency	Percent	Valid Percent
Valid	1991-1993	20	2.55%	2.57%
	1988-1990	642	81.99%	82.63%
	1985-1987	73	9.32%	9.40%
	1982-1984	8	1.02%	1.03%
	1981 or before	4	0.51%	0.51%
	Blank	30	3.83%	3.86%
	Total	**777**	**99.23%**	**100.00%**
Invalid	System	6	0.77%	
Total		**783**	**100.00%**	

Are you an International, Mainland, or Local Student?		Frequency	Percent	Valid Percent
Valid	Hong Kong (General)	602	76.88%	77.38%
	Hong Kong (International)	1	0.13%	0.13%
	China, Mainland	87	11.11%	11.18%
	China, Taiwan	0	0.00%	0.00%
	China, Macao	0	0.00%	0.00%
	Overseas	55	7.02%	7.07%
	Blank	33	4.21%	4.24%
	Total	**778**	**99.36%**	**100.00%**
Invalid	System	5	0.64%	
Total		**783**	**100.00%**	

Level of Access to Desktop Computer		Frequency	Percent	Valid Percent
Valid	Not Sure	62	7.92%	8.20%
	No Access	98	12.52%	12.96%
	Limited or Inconvenient Access	103	13.15%	13.62%
	Access any time I need it, shared with other people	220	28.10%	29.10%
	Access exclusively for my own use	259	33.08%	34.26%
	Blank	14	1.79%	1.85%
	Total	**756**	**96.55%**	**100.00%**
Invalid	System	27	3.45%	
Total		**783**	**100.00%**	

Level of Access to Portable Computer		Frequency	Percent	Valid Percent
Valid	Not Sure	64	8.17%	8.34%
	No Access	76	9.71%	9.91%
	Limited or Inconvenient Access	92	11.75%	11.99%
	Access any time I need it, shared with other people	158	20.18%	20.60%
	Access exclusively for my own use	362	46.23%	47.20%
	Blank	15	1.92%	1.96%
	Total	**767**	**97.96%**	**100.00%**
Invalid	System	16	2.04%	
Total		**783**	**100.00%**	

Level of Access to Dedicated MP3 Player		Frequency	Percent	Valid Percent
Valid	Not Sure	103	13.15%	13.27%
	No Access	341	43.55%	43.94%
	Limited or Inconvenient Access	119	15.20%	15.34%
	Access any time I need it, shared with other people	91	11.62%	11.73%
	Access exclusively for my own use	99	12.64%	12.76%
	Blank	23	2.94%	2.96%
	Total	**776**	**99.11%**	**100.00%**
Invalid	System	7	0.89%	
Total		**783**	**100.00%**	

Level of Access to Dedicated MP3 Player		Frequency	Percent	Valid Percent
Valid	Not Sure	67	8.56%	8.65%
	No Access	159	20.31%	20.52%
	Limited or Inconvenient Access	117	14.94%	15.10%
	Access any time I need it, shared with other people	129	16.48%	16.65%
	Access exclusively for my own use	288	36.78%	37.16%
	Blank	15	1.92%	1.94%
	Total	**775**	**98.98%**	**100.00%**
Invalid	System	8	1.02%	
Total		**783**	**100.00%**	

Level of Access to MP3/4 player with video capabilities				
		Frequency	Percent	Valid Percent
Valid	Not Sure	78	9.96%	9.99%
	No Access	236	30.14%	30.22%
	Limited or Inconvenient Access	130	16.60%	16.65%
	Access any time I need it, shared with other people	139	17.75%	17.80%
	Access exclusively for my own use	180	22.99%	23.05%
	Blank	18	2.30%	2.30%
	Total	**781**	**99.74%**	**100.00%**
Invalid	System	2	0.26%	
Total		*783*	*100.00%*	

Level of Access to Dedicated Digital Camera				
		Frequency	Percent	Valid Percent
Valid	Not Sure	61	7.79%	7.82%
	No Access	90	11.49%	11.54%
	Limited or Inconvenient Access	105	13.41%	13.46%
	Access any time I need it, shared with other people	249	31.80%	31.92%
	Access exclusively for my own use	255	32.57%	32.69%
	Blank	20	2.55%	2.56%
	Total	**780**	**99.62%**	**100.00%**
Invalid	System	3	0.38%	
Total		*783*	*100.00%*	

Level of Access to Memory Stick (e.g. flash drive, USB stick)				
		Frequency	Percent	Valid Percent
Valid	Not Sure	47	6.00%	6.06%
	No Access	32	4.09%	4.12%
	Limited or Inconvenient Access	87	11.11%	11.21%
	Access any time I need it, shared with other people	180	22.99%	23.20%
	Access exclusively for my own use	415	53.00%	53.48%
	Blank	15	1.92%	1.93%
	Total	**776**	**99.11%**	**100.00%**
Invalid	System	7	0.89%	
Total		*783*	*100.00%*	

Level of Access to Dedicated Video Games Console (e.g. Xbox, Playstation, Wii)		Frequency	Percent	Valid Percent
Valid	Not Sure	92	11.75%	11.90%
	No Access	306	39.08%	39.59%
	Limited or Inconvenient Access	133	16.99%	17.21%
	Access any time I need it, shared with other people	141	18.01%	18.24%
	Access exclusively for my own use	80	10.22%	10.35%
	Blank	21	2.68%	2.72%
	Total	**773**	**98.72%**	**100.00%**
Invalid	System	10	1.28%	
Total		**783**	**100.00%**	

Level of Access to Web Cam (could be in the notebook)		Frequency	Percent	Valid Percent
Valid	Not Sure	81	10.34%	10.41%
	No Access	172	21.97%	22.11%
	Limited or Inconvenient Access	111	14.18%	14.27%
	Access any time I need it, shared with other people	162	20.69%	20.82%
	Access exclusively for my own use	234	29.89%	30.08%
	Blank	18	2.30%	2.31%
	Total	**778**	**99.36%**	**100.00%**
Invalid	System	5	0.64%	
Total		**783**	**100.00%**	

Level of Access to Dial-up Internet Access		Frequency	Percent	Valid Percent
Valid	Not Sure	117	14.94%	15.14%
	No Access	192	24.52%	24.84%
	Limited or Inconvenient Access	123	15.71%	15.91%
	Access any time I need it, shared with other people	171	21.84%	22.12%
	Access exclusively for my own use	145	18.52%	18.76%
	Blank	25	3.19%	3.23%
	Total	**773**	**98.72%**	**100.00%**
Invalid	System	10	1.28%	
Total		**783**	**100.00%**	

Level of Access to Broadband Internet Access (ADSL or Cable)			Frequency	Percent	Valid Percent
Valid	Not Sure		92	11.75%	11.87%
	No Access		110	14.05%	14.19%
	Limited or Inconvenient Access		105	13.41%	13.55%
	Access any time I need it, shared with other people		201	25.67%	25.94%
	Access exclusively for my own use		244	31.16%	31.48%
	Blank		23	2.94%	2.97%
	Total		**775**	**98.98%**	**100.00%**
Invalid	System		8	1.02%	
Total			*783*	*100.00%*	

Level of Access to Wireless Internet Access (WiFi/HSDPA)			Frequency	Percent	Valid Percent
Valid	Not Sure		90	11.49%	11.52%
	No Access		129	16.48%	16.52%
	Limited or Inconvenient Access		123	15.71%	15.75%
	Access any time I need it, shared with other people		170	21.71%	21.77%
	Access exclusively for my own use		244	31.16%	31.24%
	Blank		25	3.19%	3.20%
	Total		**781**	**99.74%**	**100.00%**
Invalid	System		2	0.26%	
Total			*783*	*100.00%*	

Level of Access to Mobile Phone			Frequency	Percent	Valid Percent
Valid	Not Sure		35	4.47%	4.53%
	No Access		46	5.87%	5.96%
	Limited or Inconvenient Access		60	7.66%	7.77%
	Access any time I need it, shared with other people		84	10.73%	10.88%
	Access exclusively for my own use		526	67.18%	68.13%
	Blank		21	2.68%	2.72%
	Total		**772**	**98.60%**	**100.00%**
Invalid	System		11	1.40%	
Total			*783*	*100.00%*	

Does your phone have PDA functions (e.g. diary, calendar)		Frequency	Percent	Valid Percent
Valid	Yes	381	48.66%	49.42%
	No	300	38.31%	38.91%
	Not Sure	74	9.45%	9.60%
	Blank	16	2.04%	2.08%
	Total	**771**	**98.47%**	**100.00%**
Invalid	System	12	1.53%	
Total		*783*	*100.00%*	

Does your phone have 3G Network?		Frequency	Percent	Valid Percent
Valid	Yes	274	34.99%	35.45%
	No	400	51.09%	51.75%
	Not Sure	82	10.47%	10.61%
	Blank	17	2.17%	2.20%
	Total	**773**	**98.72%**	**100.00%**
Invalid	System	10	1.28%	
Total		*783*	*100.00%*	

Does your phone have a Video camera?		Frequency	Percent	Valid Percent
Valid	Yes	545	69.60%	70.23%
	No	168	21.46%	21.65%
	Not Sure	47	6.00%	6.06%
	Blank	16	2.04%	2.06%
	Total	**776**	**99.11%**	**100.00%**
Invalid	System	7	0.89%	
Total		*783*	*100.00%*	

Does your phone have a MP3/Audio Player?		Frequency	Percent	Valid Percent
Valid	Yes	626	79.95%	80.46%
	No	95	12.13%	12.21%
	Not Sure	37	4.73%	4.76%
	Blank	20	2.55%	2.57%
	Total	**778**	**99.36%**	**100.00%**
Invalid	System	5	0.64%	
Total		*783*	*100.00%*	

Does your phone have Wireless (WiFi)?

		Frequency	Percent	Valid Percent
Valid	Yes	264	33.72%	34.11%
	No	405	51.72%	52.33%
	Not Sure	86	10.98%	11.11%
	Blank	19	2.43%	2.45%
	Total	**774**	**98.85%**	**100.00%**
Invalid	System	9	1.15%	
Total		**783**	**100.00%**	

Does your phone have Blue-tooth?

		Frequency	Percent	Valid Percent
Valid	Yes	608	77.65%	78.05%
	No	120	15.33%	15.40%
	Not Sure	34	4.34%	4.36%
	Blank	17	2.17%	2.18%
	Total	**779**	**99.49%**	**100.00%**
Invalid	System	4	0.51%	
Total		**783**	**100.00%**	

Does your phone have Global Positioning System (GPS)?

		Frequency	Percent	Valid Percent
Valid	Yes	160	20.43%	20.54%
	No	498	63.60%	63.93%
	Not Sure	105	13.41%	13.48%
	Blank	16	2.04%	2.05%
	Total	**779**	**99.49%**	**100.00%**
Invalid	System	4	0.51%	
Total		**783**	**100.00%**	

Does your phone have Instant Messaging (e.g. Mobile MSN)?

		Frequency	Percent	Valid Percent
Valid	Yes	267	34.10%	34.32%
	No	413	52.75%	53.08%
	Not Sure	77	9.83%	9.90%
	Blank	21	2.68%	2.70%
	Total	**778**	**99.36%**	**100.00%**
Invalid	System	5	0.64%	
Total		**783**	**100.00%**	

Does your phone have Push e-mail (Blackberry)?		Frequency	Percent	Valid Percent
Valid	Yes	106	13.54%	13.59%
	No	554	70.75%	71.03%
	Not Sure	100	12.77%	12.82%
	Blank	20	2.55%	2.56%
	Total	**780**	**99.62%**	**100.00%**
Invalid	System	3	0.38%	
Total		**783**	**100.00%**	

Does your phone have Internet access?		Frequency	Percent	Valid Percent
Valid	Yes	427	54.53%	55.03%
	No	262	33.46%	33.76%
	Not Sure	68	8.68%	8.76%
	Blank	19	2.43%	2.45%
	Total	**776**	**99.11%**	**100.00%**
Invalid	System	7	0.89%	
Total		**783**	**100.00%**	

Does your phone have a Camera?		Frequency	Percent	Valid Percent
Valid	Yes	641	81.86%	82.07%
	No	85	10.86%	10.88%
	Not Sure	41	5.24%	5.25%
	Blank	14	1.79%	1.79%
	Total	**781**	**99.74%**	**100.00%**
Invalid	System	2	0.26%	
Total		**783**	**100.00%**	

Use a computer to manage or manipulate digital photos (e.g. using Flickr, Dig. Image, Picasa)		Frequency	Percent	Valid Percent
Valid	Not Used	47	6.00%	6.18%
	Once/twice a year	67	8.56%	8.82%
	Every few months	111	14.18%	14.61%
	Once/twice a month	132	16.86%	17.37%
	Once a week	93	11.88%	12.24%
	Several times a week	145	18.52%	19.08%
	Once a day	52	6.64%	6.84%
	Several times a day	98	12.52%	12.89%
	Blank	15	1.92%	1.97%
	Total	**760**	**97.06%**	**100.00%**
Invalid	System	23	2.94%	
Total		*783*	*100.00%*	

How often do you use a computer to create or manipulate digital images? (e.g. using PhotoShop)		Frequency	Percent	Valid Percent
Valid	Not Used	122	15.58%	16%
	Once/twice a year	117	14.94%	15%
	Every few months	140	17.88%	19%
	Once/twice a month	103	13.15%	14%
	Once a week	81	10.34%	11%
	Several times a week	100	12.77%	13%
	Once a day	37	4.73%	5%
	Several times a day	39	4.98%	5%
	Blank	17	2.17%	2%
	Total	**756**	**96.55%**	**100%**
Invalid	System	27	3.45%	
Total		*783*	*100.00%*	

How often do you use a computer for creating presentations (e.g. PowerPoint)			
		Frequency	Percent	Valid Percent
Valid	Not Used	35	4.47%	4.53%
	Once/twice a year	65	8.30%	8.42%
	Every few months	157	20.05%	20.34%
	Once/twice a month	172	21.97%	22.28%
	Once a week	105	13.41%	13.60%
	Several times a week	141	18.01%	18.26%
	Once a day	35	4.47%	4.53%
	Several times a day	40	5.11%	5.18%
	Blank	22	2.81%	2.85%
	Total	**772**	**98.60%**	**100.00%**
Invalid	System	11	1.40%	
Total		**783**	**100.00%**	

How often do you use a computer for creating or editing audio and video (e.g., Movie Maker, iMovie)			
		Frequency	Percent	Valid Percent
Valid	Not Used	179	22.86%	24.19%
	Once/twice a year	139	17.75%	18.78%
	Every few months	117	14.94%	15.81%
	Once/twice a month	75	9.58%	10.14%
	Once a week	78	9.96%	10.54%
	Several times a week	77	9.83%	10.41%
	Once a day	25	3.19%	3.38%
	Several times a day	28	3.58%	3.78%
	Blank	22	2.81%	2.97%
	Total	**740**	**94.51%**	**100.00%**
Invalid	System	43	5.49%	
Total		**783**	**100.00%**	

How often do you use a computer to play games?				
		Frequency	Percent	Valid Percent
Valid	Not Used	60	7.66%	7.84%
	Once/twice a year	53	6.77%	6.93%
	Every few months	66	8.43%	8.63%
	Once/twice a month	103	13.15%	13.46%
	Once a week	104	13.28%	13.59%
	Several times a week	149	19.03%	19.48%
	Once a day	96	12.26%	12.55%
	Several times a day	118	15.07%	15.42%
	Blank	16	2.04%	2.09%
	Total	**765**	**97.70%**	**100.00%**
Invalid	System	18	2.30%	
Total		*783*	*100.00%*	

How often do you use the internet/web or a LAN to play networked games?				
		Frequency	Percent	Valid Percent
Valid	Not Used	134	17.11%	17.56%
	Once/twice a year	78	9.96%	10.22%
	Every few months	72	9.20%	9.44%
	Once/twice a month	69	8.81%	9.04%
	Once a week	100	12.77%	13.11%
	Several times a week	132	16.86%	17.30%
	Once a day	65	8.30%	8.52%
	Several times a day	90	11.49%	11.80%
	Blank	23	2.94%	3.01%
	Total	**763**	**97.45%**	**100.00%**
Invalid	System	20	2.55%	
Total		*783*	*100.00%*	

How often do you use a PDA or handheld computer as a personal organiser (e.g. diary, address book)?		Frequency	Percent	Valid Percent
Valid	Not Used	275	35.12%	36.33%
	Once/twice a year	86	10.98%	11.36%
	Every few months	59	7.54%	7.79%
	Once/twice a month	50	6.39%	6.61%
	Once a week	84	10.73%	11.10%
	Several times a week	69	8.81%	9.11%
	Once a day	60	7.66%	7.93%
	Several times a day	53	6.77%	7.00%
	Blank	21	2.68%	2.77%
	Total	**757**	**96.68%**	**100.00%**
Invalid	System	26	3.32%	
Total		**783**	**100.00%**	

How often do you use a smart phone which includes a PDA, wireless and internet functions?		Frequency	Percent	Valid Percent
Valid	Not Used	286	36.53%	38.65%
	Once/twice a year	87	11.11%	11.76%
	Every few months	52	6.64%	7.03%
	Once/twice a month	47	6.00%	6.35%
	Once a week	62	7.92%	8.38%
	Several times a week	65	8.30%	8.78%
	Once a day	49	6.26%	6.62%
	Several times a day	70	8.94%	9.46%
	Blank	22	2.81%	2.97%
	Total	**740**	**94.51%**	**100.00%**
Invalid	System	43	5.49%	
Total		**783**	**100.00%**	

How often do you use a handheld games console (e.g. NDS, PSP) to play games?		Frequency	Percent	Valid Percent
Valid	Not Used	204	26.05%	26.95%
	Once/twice a year	77	9.83%	10.17%
	Every few months	85	10.86%	11.23%
	Once/twice a month	97	12.39%	12.81%
	Once a week	75	9.58%	9.91%
	Several times a week	104	13.28%	13.74%
	Once a day	50	6.39%	6.61%
	Several times a day	44	5.62%	5.81%
	Blank	21	2.68%	2.77%
	Total	**757**	**96.68%**	**100.00%**
Invalid	System	26	3.32%	
Total		***783***	***100.00%***	

How often do you use the web to access a learning portal or university intranet?		Frequency	Percent	Valid Percent
Valid	Not Used	64	8.17%	8.38%
	Once/twice a year	23	2.94%	3.01%
	Every few months	45	5.75%	5.89%
	Once/twice a month	66	8.43%	8.64%
	Once a week	125	15.96%	16.36%
	Several times a week	196	25.03%	25.65%
	Once a day	134	17.11%	17.54%
	Several times a day	91	11.62%	11.91%
	Blank	20	2.55%	2.62%
	Total	**764**	**97.57%**	**100.00%**
Invalid	System	19	2.43%	
Total		***783***	***100.00%***	

How often do you use the web to look up reference information for study purposes (e.g. search engines, online dictionaries, e-Journal)?		Frequency	Percent	Valid Percent
Valid	Not Used	44	5.62%	5.71%
	Once/twice a year	16	2.04%	2.08%
	Every few months	35	4.47%	4.54%
	Once/twice a month	68	8.68%	8.82%
	Once a week	113	14.43%	14.66%
	Several times a week	189	24.14%	24.51%
	Once a day	136	17.37%	17.64%
	Several times a day	152	19.41%	19.71%
	Blank	18	2.30%	2.33%
	Total	**771**	**98.47%**	**100.00%**
Invalid	System	12	1.53%	
Total		**783**	**100.00%**	

How often do you use the web to browse for general information (e.g. news, holidaying, event timetables)?		Frequency	Percent	Valid Percent
Valid	Not Used	39	4.98%	5.06%
	Once/twice a year	10	1.28%	1.30%
	Every few months	22	2.81%	2.86%
	Once/twice a month	44	5.62%	5.71%
	Once a week	106	13.54%	13.77%
	Several times a week	156	19.92%	20.26%
	Once a day	177	22.61%	22.99%
	Several times a day	201	25.67%	26.10%
	Blank	15	1.92%	1.95%
	Total	**770**	**98.34%**	**100.00%**
Invalid	System	13	1.66%	
Total		**783**	**100.00%**	

How often do you use the web to listen to sound recordings (e.g. via streaming audio or iTunes)				
		Frequency	Percent	Valid Percent
Valid	Not Used	65	8.30%	8.40%
	Once/twice a year	21	2.68%	2.71%
	Every few months	46	5.87%	5.94%
	Once/twice a month	58	7.41%	7.49%
	Once a week	106	13.54%	13.70%
	Several times a week	150	19.16%	19.38%
	Once a day	120	15.33%	15.50%
	Several times a day	189	24.14%	24.42%
	Blank	19	2.43%	2.45%
	Total	**774**	**98.85%**	**100.00%**
Invalid	System	9	1.15%	
Total		*783*	*100.00%*	

How often do you use the web for other pastimes (i.e. for leisure activities)?				
		Frequency	Percent	Valid Percent
Valid	Not Used	59	7.54%	7.63%
	Once/twice a year	15	1.92%	1.94%
	Every few months	27	3.45%	3.49%
	Once/twice a month	47	6.00%	6.08%
	Once a week	105	13.41%	13.58%
	Several times a week	135	17.24%	17.46%
	Once a day	125	15.96%	16.17%
	Several times a day	234	29.89%	30.27%
	Blank	26	3.32%	3.36%
	Total	**773**	**98.72%**	**100%**
Invalid	System	10	1.28%	
Total		*783*	*100.00%*	

How often do you use the web to buy or sell things (e.g. eBay, Amazon, Taoboa, air tickets)?		Frequency	Percent	Valid Percent
Valid	Several times a day	31	3.96%	4.06%
	Once a day	25	3.19%	3.28%
	Several times a week	75	9.58%	9.83%
	Once a week	80	10.22%	10.48%
	Once/twice a month	92	11.75%	12.06%
	Every few months	104	13.28%	13.63%
	Once/twice a year	96	12.26%	12.58%
	Not used	227	28.99%	29.75%
	Blank	33	4.21%	4.33%
	Sub-Total	763	97.45%	100.00%
Invalid	System	19	2.43%	
	Total System	783		

How skilled are you at using the web to buy or sell things (e.g. eBay, Amazon, Taoboa, air tickets)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	55	7.02%	7.04%
	Somewhat Skilled	74	9.45%	9.48%
	Neutral	183	23.37%	23.43%
	Skilled	121	15.45%	15.49%
	Very Skilled	50	6.39%	6.40%
	Blank	298	38.06%	38.16%
	Sub-Total	781	99.74%	100.00%
Invalid	System	2	0.26%	
	Total System	783		

How often do you use the web for other services (e.g. banking, paying bills)		Frequency	Percent	Valid Percent
Valid	Several times a day	21	2.68%	2.76%
	Once a day	29	3.70%	3.81%
	Several times a week	70	8.94%	9.19%
	Once a week	85	10.86%	11.15%
	Once/twice a month	77	9.83%	10.10%
	Every few months	74	9.45%	9.71%
	Once/twice a year	87	11.11%	11.42%
	Not used	281	35.89%	36.88%
	Blank	38	4.85%	4.99%
	Sub-Total	762	97.32%	100.00%
Invalid	System	21	2.68%	
	Total System	783		

How skilled are you at using the web for other services (e.g. banking, paying bills)		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	52	6.64%	6.66%
	Somewhat Skilled	75	9.58%	9.60%
	Neutral	171	21.84%	21.90%
	Skilled	89	11.37%	11.40%
	Very Skilled	35	4.47%	4.48%
	Blank	359	45.85%	45.97%
	Sub-Total	781	99.74%	99.74%
Invalid	System	2	0.26%	
	Total System	783		

How often do you use the web/internet to send or receive email (e.g. Hotmail, Yahoo, Google)?		Frequency	Percent	Valid Percent
Valid	Several times a day	275	35.12%	35.39%
	Once a day	169	21.58%	21.75%
	Several times a week	133	16.99%	17.12%
	Once a week	73	9.32%	9.40%
	Once/twice a month	39	4.98%	5.02%
	Every few months	17	2.17%	2.19%
	Once/twice a year	5	0.64%	0.64%
	Blank	32	4.09%	4.12%
	Not used	34	4.34%	4.38%
	Sub-Total	777	99.23%	100.00%
Invalid	System	6	0.77%	
	Total System	783		

How skilled are you at using the web/internet to send or receive email (e.g. Hotmail, Yahoo, Google)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	15	1.92%	1.92%
	Somewhat Skilled	32	4.09%	4.09%
	Neutral	170	21.71%	21.74%
	Skilled	197	25.16%	25.19%
	Very Skilled	247	31.55%	31.59%
	Blank	121	15.45%	15.47%
	Sub-Total	782	99.87%	100.00%
Invalid	System	1	0.13%	
	Total System	783		

How often do you use the web/internet for instant messaging/chat (e.g. MSN, QQ, ICQ)?		Frequency	Percent	Valid Percent
Valid	Several times a day	339	43.30%	43.91%
	Once a day	146	18.65%	18.91%
	Several times a week	85	10.86%	11.01%
	Once a week	78	9.96%	10.10%
	Once/twice a month	40	5.11%	5.18%
	Every few months	18	2.30%	2.33%
	Once/twice a year	0	0.00%	0.00%
	Not used	35	4.47%	4.53%
	Blank	31	3.96%	4.02%
	Sub-Total	772	98.60%	100.00%
Invalid	System	11	1.40%	
	Total System	783		

How skilled are you at using the web/internet for instant messaging/chat (e.g. MSN, QQ, ICQ)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	17	2.17%	2.19%
	Somewhat Skilled	35	4.47%	4.50%
	Neutral	150	19.16%	19.28%
	Skilled	196	25.03%	25.19%
	Very Skilled	247	31.55%	31.75%
	Blank	133	16.99%	17.10%
	Sub-Total	778	99.36%	100.00%
Invalid	System	5	0.64%	
	Total System	783		

How often do you use the web to build and maintain a website?		Frequency	Percent	Valid Percent
Valid	Several times a day	40	5.11%	5.29%
	Once a day	35	4.47%	4.63%
	Several times a week	58	7.41%	7.67%
	Once a week	83	10.60%	10.98%
	Once/twice a month	47	6.00%	6.22%
	Every few months	50	6.39%	6.61%
	Once/twice a year	83	10.60%	10.98%
	Not used	326	41.63%	43.12%
	Blank	34	4.34%	4.50%
	Sub-Total	756	96.55%	100.00%
Invalid	System	27	3.45%	
	Total System	783		

How skilled are you at using the web to build and maintain a website?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	55	7.02%	7.06%
	Somewhat Skilled	64	8.17%	8.22%
	Neutral	146	18.65%	18.74%
	Skilled	93	11.88%	11.94%
	Very Skilled	30	3.83%	3.85%
	Blank	391	49.94%	50.19%
	Sub-Total	779	99.49%	100.00%
Invalid	System	4	0.51%	
	Total System	783		

How often do you use social networking software on the web (e.g. Facebook, MySpace, Trendster, Yahoo! Groups)?		Frequency	Percent	Valid Percent
Valid	Several times a day	263	33.59%	33.94%
	Once a day	148	18.90%	19.10%
	Several times a week	122	15.58%	15.74%
	Once a week	77	9.83%	9.94%
	Once/twice a month	33	4.21%	4.26%
	Every few months	25	3.19%	3.23%
	Once/twice a year	14	1.79%	1.81%
	Not used	58	7.41%	7.48%
	Blank	35	4.47%	4.52%
	Total	775	98.98%	100.00%
Invalid	System	8	1.02%	
	Total System	783		

How skilled are you at using social networking software on the web (e.g. Facebook, MySpace, Trendster, Yahoo! Groups)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	19	2.43%	2.43%
	Somewhat Skilled	59	7.54%	7.54%
	Neutral	211	26.95%	26.98%
	Skilled	204	26.05%	26.09%
	Very Skilled	135	17.24%	17.26%
	Blank	154	19.67%	19.69%
	Sub-Total	782	99.87%	100.00%
Invalid	System	1	0.13%	
	Total System	783		

How often do you use social bookmarking software on the web?		Frequency	Percent	Valid Percent
Valid	Several times a day	38	4.85%	5.01%
	Once a day	31	3.96%	4.09%
	Several times a week	66	8.43%	8.71%
	Once a week	79	10.09%	10.42%
	Once/twice a month	46	5.87%	6.07%
	Every few months	33	4.21%	4.35%
	Once/twice a year	54	6.90%	7.12%
	Not used	378	48.28%	49.87%
	Blank	33	4.21%	4.35%
	Sub-Total	758	96.81%	100.00%
Invalid	System	25	3.19%	
	Total System	783		

How skilled are you at using social bookmarking software on the web?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	59	7.54%	7.54%
	Somewhat Skilled	45	5.75%	5.75%
	Neutral	141	18.01%	18.03%
	Skilled	65	8.30%	8.31%
	Very Skilled	26	3.32%	3.32%
	Blank	446	56.96%	57.03%
	Sub-Total	782	99.87%	100.00%
Invalid	System	1	0.13%	
	Total System	783		

How often do you use the web to download podcasts (e.g. using Juice, iTunes)?		Frequency	Percent	Valid Percent
Valid	Several times a day	47	6.00%	6.14%
	Once a day	54	6.90%	7.06%
	Several times a week	85	10.86%	11.11%
	Once a week	96	12.26%	12.55%
	Once/twice a month	57	7.28%	7.45%
	Every few months	52	6.64%	6.80%
	Once/twice a year	38	4.85%	4.97%
	Not used	305	38.95%	39.87%
	Blank	31	3.96%	4.05%
	Sub-Total	765	97.70%	100.00%
Invalid	System	18	2.30%	
	Total System	783		

How skilled are you at using the web to download podcasts (e.g. using Juice, iTunes)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	44	56.19%	5.63%
	Somewhat Skilled	61	77.91%	7.81%
	Neutral	158	20.18%	20.23%
	Skilled	88	11.29%	11.27%
	Very Skilled	45	57.47%	5.76%
	Blank	385	49.17%	49.30%
	Sub-Total	781	99.74%	100%
Invalid	System	2	0.255%	
	Total System	783		

How often do you use the web to publish podcasts (e.g. using Podifier, Podcaster, PodProducer)?		Frequency	Percent	Valid Percent
Valid	Several times a day	29	3.70%	3.84%
	Once a day	19	2.43%	2.51%
	Several times a week	43	5.49%	5.69%
	Once a week	71	9.07%	9.39%
	Once/twice a month	50	6.39%	6.61%
	Every few months	42	5.36%	5.56%
	Once/twice a year	55	7.02%	7.28%
	Not used	415	53.00%	54.89%
	Blank	32	4.09%	4.23%
	Sub-Total	756	96.55%	100.00%
Invalid	System	27	3.45%	
	Total System	783		

How skilled are you at using the web to publish podcasts (e.g. using Podifier, Podcaster, PodProducer)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	59	7.54%	7.55%
	Somewhat Skilled	50	6.39%	6.40%
	Neutral	116	14.81%	14.85%
	Skilled	54	6.90%	6.91%
	Very Skilled	18	2.30%	2.30%
	Blank	484	61.81%	61.97%
	Sub-Total	781	99.74%	100.00%
Invalid	System	2	0.26%	
	Total System	783		

How often do you use the web to download and/or share music/video files (e.g. MP3, WMV)?		Frequency	Percent	Valid Percent
Valid	Several times a day	119	15.20%	15.51%
	Once a day	96	12.26%	12.52%
	Several times a week	168	21.46%	21.90%
	Once a week	116	14.81%	15.12%
	Once/twice a month	77	9.83%	10.04%
	Every few months	53	6.77%	6.91%
	Once/twice a year	18	2.30%	2.35%
	Not used	87	11.11%	11.34%
	Blank	33	4.21%	4.30%
	Sub-Total	767	97.96%	100.00%
Invalid	System	16	2.04%	
	Total System	783		

How skilled are you at using the web to download and/or share music/video files (e.g. MP3, WMV)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	18	2.30%	2.30%
	Somewhat Skilled	64	8.17%	8.19%
	Neutral	227	28.99%	29.07%
	Skilled	178	22.73%	22.79%
	Very Skilled	112	14.30%	14.34%
	Blank	182	23.24%	23.30%
	Sub-Total	781	99.74%	100.00%
Invalid	System	2	0.26%	
	Total System	783		

How often do you use the web to share photographs, videos, or other digital material (e.g. using blinklist, Flickr, YouTube)?		Frequency	Percent	Valid Percent
Valid	Several times a day	68	8.68%	8.92%
	Once a day	86	10.98%	11.29%
	Several times a week	128	16.35%	16.80%
	Once a week	110	14.05%	14.44%
	Once/twice a month	92	11.75%	12.07%
	Every few months	63	8.05%	8.27%
	Once/twice a year	29	3.70%	3.81%
	Not used	152	19.41%	19.95%
	Blank	34	4.34%	4.46%
	Sub-Total	762	97.32%	100.00%
Invalid	System	21	2.68%	
	Total System	783		

How skilled are you at using the web to share photographs, videos, or other digital material (e.g. using blinklist, Flickr, YouTube)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	26	3.32%	3.33%
	Somewhat Skilled	74	9.45%	9.48%
	Neutral	214	27.33%	27.40%
	Skilled	150	19.16%	19.21%
	Very Skilled	73	9.32%	9.35%
	Blank	244	31.16%	31.24%
	Sub-Total	781	99.74%	100.00%
Invalid	System	2	0.26%	
	Total System	783		

How often do you use the web to make phone calls (e.g. VoIP using Skype)?		Frequency	Percent	Valid Percent
Valid	Several times a day	30	3.83%	3.96%
	Once a day	27	3.45%	3.56%
	Several times a week	74	9.45%	9.76%
	Once a week	91	11.62%	12.01%
	Once/twice a month	55	7.02%	7.26%
	Every few months	49	6.26%	6.46%
	Once/twice a year	51	6.51%	6.73%
	Not used	346	44.19%	45.65%
	Blank	35	4.47%	4.62%
	Sub-Total	758	96.81%	100.00%
Invalid	System	25	3.19%	
	Total System	783		

How skilled are you at using the web to make phone calls (e.g. VoIP using Skype)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	41	5.24%	5.26%
	Somewhat Skilled	55	7.02%	7.05%
	Neutral	146	18.65%	18.72%
	Skilled	79	10.09%	10.13%
	Very Skilled	31	3.96%	3.97%
	Blank	428	54.66%	54.87%
	Sub-Total	780	99.62%	100.00%
Invalid	System	3	0.38%	
	Total System	783		

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How often do you use the web for web conferencing (e.g. using a webcam with Skype or MSN Messenger)?		Frequency	Percent	Valid Percent
Valid	Several times a day	72	9.20%	9.38%
	Once a day	52	6.64%	6.77%
	Several times a week	87	11.11%	11.33%
	Once a week	97	12.39%	12.63%
	Once/twice a month	61	7.79%	7.94%
	Every few months	62	7.92%	8.07%
	Once/twice a year	42	5.36%	5.47%
	Not used	261	33.33%	33.98%
	Blank	34	4.34%	4.43%
	Sub-Total	768	98.08%	100.00%
Invalid	System	15	1.92%	
	Total System	783		

How skilled are you at using the web for web conferencing (e.g. using a webcam with Skype or MSN Messenger)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	30	3.83%	3.85%
	Somewhat Skilled	62	7.92%	7.95%
	Neutral	173	22.09%	22.18%
	Skilled	121	15.45%	15.51%
	Very Skilled	54	6.90%	6.92%
	Blank	340	43.42%	43.59%
	Sub-Total	780	99.62%	100.00%
Invalid	System	3	0.38%	
	Total System	783		

How often do you use the web to read RSS feeds (e.g. news feeds)?		Frequency	Percent	Valid Percent
Valid	Several times a day	45	5.75%	5.89%
	Once a day	46	5.87%	6.02%
	Several times a week	68	8.68%	8.90%
	Once a week	100	12.77%	13.09%
	Once/twice a month	65	8.30%	8.51%
	Every few months	43	5.49%	5.63%
	Once/twice a year	30	3.83%	3.93%
	Not used	334	42.66%	43.72%
	Blank	33	4.21%	4.32%
	Sub-Total	764	97.57%	100.00%
Invalid	System	19	2.43%	
	Total System	783		

How skilled are you at using the web to read RSS feeds (e.g. news feeds)?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	38	4.85%	4.87%
	Somewhat Skilled	63	8.05%	8.07%
	Neutral	150	19.16%	19.21%
	Skilled	88	11.24%	11.27%
	Very Skilled	34	4.34%	4.35%
	Blank	408	52.11%	52.24%
	Sub-Total	781	99.74%	100.00%
Invalid	System	2	0.26%	
	Total System	783		

How often do you use the web to keep your own blog or vlog?		Frequency	Percent	Valid Percent
Valid	Several times a day	80	10.22%	10.39%
	Once a day	84	10.73%	10.91%
	Several times a week	136	17.37%	17.66%
	Once a week	0	0.00%	0.00%
	Once/twice a month	186	23.75%	24.16%
	Every few months	52	6.64%	6.75%
	Once/twice a year	33	4.21%	4.29%
	Not used	169	21.58%	21.95%
	Blank	30	3.83%	3.90%
	Sub-Total	770	98.34%	100.00%
Invalid	System	13	1.66%	
	Total System	783		

How skilled are you at using the web to keep your own blog or vlog?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	26	3.32%	3.33%
	Somewhat Skilled	59	7.54%	7.56%
	Neutral	188	24.01%	24.10%
	Skilled	167	21.33%	21.41%
	Very Skilled	80	10.22%	10.26%
	Blank	260	33.21%	33.33%
	Sub-Total	780	99.62%	100.00%
Invalid	System	3	0.38%	
	Total System	783		

How often do you use the web to read other people's blogs or vlogs?		Frequency	Percent	Valid Percent
Valid	Several times a day	120	15.33%	15.54%
	Once a day	130	16.60%	16.84%
	Several times a week	147	18.77%	19.04%
	Once a week	129	16.48%	16.71%
	Once/twice a month	56	7.15%	7.25%
	Every few months	33	4.21%	4.27%
	Once/twice a year	21	2.68%	2.72%
	Not used	96	12.26%	12.44%
	Blank	40	5.11%	5.18%
	Sub-Total	772	98.60%	100.00%
Invalid	System	11	1.40%	
	Total System	783		

How skilled are you at using the web to read other people's blogs or vlogs?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	23	2.94%	2.94%
	Somewhat Skilled	55	7.02%	7.03%
	Neutral	205	26.18%	26.21%
	Skilled	173	22.09%	22.12%
	Very Skilled	127	16.22%	16.24%
	Blank	199	25.42%	25.45%
	Sub-Total	782	99.87%	100.00%
Invalid	System	1	0.13%	
	Total System	783		

152

How often do you use the web comment on blogs or vlogs?		Frequency	Percent	Valid Percent
Valid	Several times a day	81	10.34%	10.51%
	Once a day	99	12.64%	12.84%
	Several times a week	142	18.14%	18.42%
	Once a week	118	15.07%	15.30%
	Once/twice a month	83	10.60%	10.77%
	Every few months	44	5.62%	5.71%
	Once/twice a year	29	3.70%	3.76%
	Not used	143	18.26%	18.55%
	Blank	32	4.09%	4.15%
	Sub-Total	771	98.47%	100.00%
Invalid	System	12	1.53%	
	Total System	783		

How skilled are you at using the web comment on blogs or vlogs?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	25	3.19%	3.20%
	Somewhat Skilled	57	7.28%	7.30%
	Neutral	190	24.27%	24.33%
	Skilled	172	21.97%	22.02%
	Very Skilled	101	12.90%	12.93%
	Blank	236	30.14%	30.22%
	Sub-Total	781	99.74%	100.00%
Invalid	System	2	0.26%	
	Total System	783		

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How often do you use the web to contribute to the development of a wiki?		Frequency	Percent	Valid Percent
Valid	Several times a day	39	4.98%	5.11%
	Once a day	31	3.96%	4.06%
	Several times a week	72	9.20%	9.44%
	Once a week	75	9.58%	9.83%
	Once/twice a month	54	6.90%	7.08%
	Every few months	58	7.41%	7.60%
	Once/twice a year	32	4.09%	4.19%
	Not used	353	45.08%	46.26%
	Blank	49	6.26%	6.42%
	Sub-Total	763	97.45%	100.00%
Invalid	System	20	2.55%	
	Total System	783		

How skilled are you at using the web to contribute to the development of a wiki?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	42	5.36%	5.37%
	Somewhat Skilled	55	7.02%	7.03%
	Neutral	140	17.88%	17.90%
	Skilled	78	9.96%	9.97%
	Very Skilled	32	4.09%	4.09%
	Blank	435	55.56%	55.63%
	Sub-Total	782	99.87%	100.00%
Invalid	System	1	0.13%	
	Total System	783		

How often do you use a mobile phone to call people?		Frequency	Percent	Valid Percent
Valid	Several times a day	427	54.53%	55.67%
	Once a day	71	9.07%	9.26%
	Several times a week	65	8.30%	8.47%
	Once a week	66	8.43%	8.60%
	Once/twice a month	38	4.85%	4.95%
	Every few months	9	1.15%	1.17%
	Once/twice a year	11	1.40%	1.43%
	Not used	48	6.13%	6.26%
	Blank	32	4.09%	4.17%
	Total	767	97.96%	100.00%
Invalid	System	16	2.04%	
	Total System	783		

How skilled are you at using a mobile phone to call people?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	17	2.17%	2.19%
	Somewhat Skilled	27	3.45%	3.47%
	Neutral	142	18.14%	18.25%
	Skilled	141	18.01%	18.12%
	Very Skilled	310	39.59%	39.85%
	Blank	141	18.01%	18.12%
	Total	778	99.36%	100.00%
Invalid	System	5	0.64%	
	Total System	783		

How often do you use a mobile phone to text/SMS people?		Frequency	Percent	Valid Percent
Valid	Several times a day	376	48.02%	48.64%
	Once a day	70	8.94%	9.06%
	Several times a week	75	9.58%	9.70%
	Once a week	83	10.60%	10.74%
	Once/twice a month	35	4.47%	4.53%
	Every few months	20	2.55%	2.59%
	Once/twice a year	9	1.15%	1.16%
	Not used	66	8.43%	8.54%
	Blank	39	4.98%	5.05%
	Total	773	98.72%	100.00%
Invalid	System	11	1.40%	
	Total System	783		

How skilled are you at using a mobile phone to text/SMS people?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	20	2.55%	2.56%
	Somewhat Skilled	36	4.60%	4.62%
	Neutral	137	17.50%	17.56%
	Skilled	140	17.88%	17.95%
	Very Skilled	284	36.27%	36.41%
	Blank	163	20.82%	20.90%
	Total	780	99.62%	100.00%
Invalid	System	3	0.38%	
	Total System	783		

How often do you use a mobile phone to take a digital photo or movie?		Frequency	Percent	Valid Percent
Valid	Several times a day	171	21.84%	22.12%
	Once a day	92	11.75%	11.90%
	Several times a week	147	18.77%	19.02%
	Once a week	121	15.45%	15.65%
	Once/twice a month	63	8.05%	8.15%
	Every few months	39	4.98%	5.05%
	Once/twice a year	12	1.53%	1.55%
	Not used	90	11.49%	11.64%
	Blank	38	4.85%	4.92%
	Total	773	98.72%	100.00%
Invalid	System	10	1.28%	
	Total System	783		

How skilled are you at using a mobile phone to take a digital photo or movie?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	20	2.55%	2.56%
	Somewhat Skilled	48	6.13%	6.15%
	Neutral	180	22.99%	23.08%
	Skilled	162	20.69%	20.77%
	Very Skilled	177	22.61%	22.69%
	Blank	193	24.65%	24.74%
	Total	780	99.62%	100.00%
Invalid	System	3	0.38%	
	Total System	783		

How often do you use a mobile phone to send pictures or movies to other people?		Frequency	Percent	Valid Percent
Valid	Several times a day	93	11.88%	12.02%
	Once a day	56	7.15%	7.24%
	Several times a week	120	15.33%	15.50%
	Once a week	120	15.33%	15.50%
	Once/twice a month	77	9.83%	9.95%
	Every few months	55	7.02%	7.11%
	Once/twice a year	33	4.21%	4.26%
	Not used	184	23.50%	23.77%
	Blank	36	4.60%	4.65%
	Total	774	98.85%	100.00%
Invalid	System	9	1.15%	
	Total System	783		

How skilled are you at using a mobile phone to send pictures or movies to other people?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	20	2.55%	2.56%
	Somewhat Skilled	52	6.64%	6.67%
	Neutral	175	22.35%	22.44%
	Skilled	141	18.01%	18.08%
	Very Skilled	126	16.09%	16.15%
	Blank	266	33.97%	34.10%
	Total	780	99.62%	100.00%
Invalid	System	3	0.38%	
	Total System	783		

How often do you a mobile phone to make video calls?		Frequency	Percent	Valid Percent
Valid	Several times a day	60	7.66%	7.98%
	Once a day	33	4.21%	4.39%
	Several times a week	79	10.09%	10.51%
	Once a week	96	12.26%	12.77%
	Once/twice a month	52	6.64%	6.91%
	Every few months	49	6.26%	6.52%
	Once/twice a year	38	4.85%	5.05%
	Not used	307	39.21%	40.82%
	Blank	38	4.85%	5.05%
	Total	752	96.04%	100.00%
Invalid	System	31	3.96%	
	Total System	783		

How skilled are you at using a mobile phone to make video calls?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	24	3.07%	3.07%
	Somewhat Skilled	48	6.13%	6.15%
	Neutral	152	19.41%	19.46%
	Skilled	91	11.62%	11.65%
	Very Skilled	72	9.20%	9.22%
	Blank	394	50.32%	50.45%
	Total	781	99.74%	100.00%
Invalid	System	2	0.26%	
	Total System	783		

How often do you use a mobile phone as an MP3 player?		Frequency	Percent	Valid Percent
Valid	Several times a day	183	23.37%	23.64%
	Once a day	94	12.01%	12.14%
	Several times a week	107	13.67%	13.82%
	Once a week	100	12.77%	12.92%
	Once/twice a month	48	6.13%	6.20%
	Every few months	39	4.98%	5.04%
	Once/twice a year	24	3.07%	3.10%
	Not used	142	18.14%	18.35%
	Blank	37	4.73%	4.78%
	Total	774	98.85%	100.00%
Invalid	System	9	1.15%	
	Total System	783		

How skilled are you at using a mobile phone as an MP3 player?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	21	2.68%	2.69%
	Somewhat Skilled	45	5.75%	5.76%
	Neutral	142	18.14%	18.18%
	Skilled	147	18.77%	18.82%
	Very Skilled	185	23.63%	23.69%
	Blank	241	30.78%	30.86%
	Total	781	99.74%	100.00%
Invalid	System	2	0.26%	
	Total System	783		

How often do you use a mobile phone as a personal organiser? (e.g. diary, address book)		Frequency	Percent	Valid Percent
Valid	Several times a day	92	11.75%	11.98%
	Once a day	61	7.79%	7.94%
	Several times a week	98	12.52%	12.76%
	Once a week	107	13.67%	13.93%
	Once/twice a month	62	7.92%	8.07%
	Every few months	30	3.83%	3.91%
	Once/twice a year	29	3.70%	3.78%
	Not used	252	32.18%	32.81%
	Blank	37	4.73%	4.82%
	Total	768	98.08%	100.00%
Invalid	System	15	1.92%	
	Total System	783		

How skilled are you at using a mobile phone as a personal organiser? (e.g. diary, address book)		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	26	3.32%	3.34%
	Somewhat Skilled	44	5.62%	5.66%
	Neutral	153	19.54%	19.67%
	Skilled	121	15.45%	15.55%
	Very Skilled	92	11.75%	11.83%
	Blank	342	43.68%	43.96%
	Sub-Total	778	99.36%	100.00%
Invalid	System	5	0.64%	
	Total System	783		

How often do you use a mobile phone to access information/services on the web?		Frequency	Percent	Valid Percent
Valid	Several times a day	60	7.66%	7.83%
	Once a day	56	7.15%	7.31%
	Several times a week	76	9.71%	9.92%
	Once a week	90	11.49%	11.75%
	Once/twice a month	42	5.36%	5.48%
	Every few months	35	4.47%	4.57%
	Once/twice a year	38	4.85%	4.96%
	Not used	332	42.40%	43.34%
	Blank	37	4.73%	4.83%
	Sub-Total	766	97.83%	100.00%
Invalid	System	17	2.17%	
	Total System	783		

How skilled are you at using a mobile phone to access information/services on the web?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	32	4.09%	4.09%
	Somewhat Skilled	46	5.87%	5.88%
	Neutral	144	18.39%	18.41%
	Skilled	91	11.62%	11.64%
	Very Skilled	57	7.28%	7.29%
	Blank	412	52.62%	52.69%
	Total	782	99.87%	100.00%
Invalid	System	1	0.13%	
	Total System	783		

How often do you use a mobile phone to send or receive e-mail?		Frequency	Percent	Valid Percent
Valid	Several times a day	58	7.41%	7.41%
	Once a day	31	3.96%	3.96%
	Several times a week	65	8.30%	8.30%
	Once a week	78	9.96%	9.96%
	Once/twice a month	49	6.26%	6.26%
	Every few months	24	3.07%	3.07%
	Once/twice a year	34	4.34%	4.34%
	Not used	383	48.91%	48.91%
	Blank	41	5.24%	5.24%
	Sub-Total	763	97.45%	97.45%
Invalid	System	20	2.55%	
	Total System	783		

How skilled are you at using a mobile phone to send or receive e-mail?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	36	4.60%	4.62%
	Somewhat Skilled	45	5.75%	5.77%
	Neutral	116	14.81%	14.87%
	Skilled	66	8.43%	8.46%
	Very Skilled	52	6.64%	6.67%
	Blank	465	59.39%	59.62%
	Total	780	99.62%	100.00%
Invalid	System	3	0.38%	
	Total System	783		

How skilled are you at using a mobile phone or GPS to navigate?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	50	6.37%	6.38%
	Little Skill	47	5.99%	5.99%
	Neutral	113	14.39%	14.41%
	Skilled	52	6.62%	6.63%
	Very Skilled	23	2.93%	2.93%
	Blank	499	63.57%	63.65%
	Sub-Total	784	99.87%	100.00%
Invalid	System	1	0.13%	

Total		785	100.00%	

How often do you use a mobile phone to instant message?

		Frequency	Percent	Valid Percent
Valid	Not Used	387	49.30%	50.33%
	Once/twice a year	34	4.33%	4.42%
	Every few months	33	4.20%	4.29%
	Once/twice a month	35	4.46%	4.55%
	Once a week	76	9.68%	9.88%
	Several times a week	67	8.54%	8.71%
	Once a day	46	5.86%	5.98%
	Several times a day	58	7.39%	7.54%
	Blank	33	4.20%	4.29%
	Sub-Total	769	97.96%	100.00%
Invalid	System	16	2.04%	
Total		785	100.00%	

How skilled are you at using a mobile phone to instant message?

		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	37	4.71%	4.71%
	Little Skill	46	5.86%	5.86%
	Neutral	119	15.16%	15.16%
	Skilled	77	9.81%	9.81%
	Very Skilled	43	5.48%	5.48%
	Blank	463	58.98%	58.98%
	Sub-Total	785	100.00%	100.00%
Invalid	System	0	0.00%	
Total		785	100.00%	

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How often do you use a mobile phone to post entries in a blog?		Frequency	Percent	Valid Percent
Valid	Not Used	442	56.31%	57.85%
	Once/twice a year	43	5.48%	5.63%
	Every few months	24	3.06%	3.14%
	Once/twice a month	36	4.59%	4.71%
	Once a week	63	8.03%	8.25%
	Several times a week	61	7.77%	7.98%
	Once a day	30	3.82%	3.93%
	Several times a day	28	3.57%	3.66%
	Blank	37	4.71%	4.84%
	Sub-Total	764	97.32%	100.00%
Invalid	System	21	2.68%	
Total		785	100.00%	

How skilled are you at using a mobile phone to post entries in a blog?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	36	4.59%	4.59%
	Little Skill	48	6.11%	6.11%
	Neutral	104	13.25%	13.25%
	Skilled	59	7.52%	7.52%
	Very Skilled	17	2.17%	2.17%
	Blank	521	66.37%	66.37%
	Sub-Total	785	100.00%	100.00%
Invalid	System	0	0.00%	
Total		785	100.00%	

How often do you use a mobile phone for twitter?		Frequency	Percent	Valid Percent
Valid	Not Used	470	59.87%	61.44%
	Once/twice a year	36	4.59%	4.71%
	Every few months	28	3.57%	3.66%
	Once/twice a month	33	4.20%	4.31%
	Once a week	71	9.04%	9.28%
	Several times a week	43	5.48%	5.62%
	Once a day	24	3.06%	3.14%
	Several times a day	19	2.42%	2.48%
	Blank	41	5.22%	5.36%
	Sub-Total	765	97.45%	100.00%
Invalid	System	20	2.55%	
Total		785	100.00%	

How skilled are you at using a mobile phone for twitter?		Frequency	Percent	Valid Percent
Valid	Not Very Skilled	45	5.73%	5.75%
	Little Skill	37	4.71%	4.73%
	Neutral	99	12.61%	12.64%
	Skilled	39	4.97%	4.98%
	Very Skilled	16	2.04%	2.04%
	Blank	547	69.68%	69.86%
	Sub-Total	783	99.75%	100.00%
Invalid	System	2	0.25%	
Total		785	100.00%	

I want to use technology in my studies because it will help me get better results in my subjects.		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	8	1.02%	1.02%
	Disagree	15	1.91%	1.92%
	Neutral	324	41.27%	41.43%
	Agree	236	30.06%	30.18%
	Strongly Agree	171	21.78%	21.87%
	Blank	28	3.57%	3.58%
	Sub-Total	782	99.62%	100.00%
Invalid	System	3	0.38%	

			Total			785	100.00%	

I want to use technology in my studies because it will help understand the subject matter more deeply.

		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	7	0.89%	0.89%
	Disagree	21	2.68%	2.68%
	Neutral	279	35.54%	35.59%
	Agree	286	36.43%	36.48%
	Strongly Agree	165	21.02%	21.05%
	Blank	26	3.31%	3.32%
	Sub-Total	784	99.87%	100.00%
Invalid	System	1	0.13%	
Total		785	100.00%	

I want to use technology in my studies because it makes it more convenient to complete work in my subjects.

		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	10	1.27%	1.28%
	Disagree	24	3.06%	3.08%
	Neutral	245	31.21%	31.41%
	Agree	236	30.06%	30.26%
	Strongly Agree	238	30.32%	30.51%
	Blank	27	3.44%	3.46%
	Sub-Total	780	99.36%	100.00%
Invalid	System	5	0.64%	
Total		785	100.00%	

I want to use technology in my studies because it will improve my IT/information management skills in general.

		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	10	1.27%	1.28%
	Disagree	37	4.71%	4.74%
	Neutral	304	38.73%	38.97%
	Agree	247	31.46%	31.67%
	Strongly Agree	152	19.36%	19.49%
	Blank	30	3.82%	3.85%
	Sub-Total	780	99.36%	100.00%
Invalid	System	5	0.64%	
Total		785	100.00%	

I want to use technology in my studies because it will improve my career or enployment prospects in the long term.

		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	11	1.40%	1.41%
	Disagree	29	3.69%	3.71%
	Neutral	301	38.34%	38.54%
	Agree	255	32.48%	32.65%
	Strongly Agree	154	19.62%	19.72%
	Blank	31	3.95%	3.97%
	Sub-Total	781	99.49%	100.00%
Invalid	System	4	0.51%	
Total		785	100.00%	

In your studies how useful do you think it would be to design and build web pages as part of your courses (e.g. using Dreamweaver, Frontpage, Flash or Fireworks)?

		Frequency	Percent	Valid Percent
Valid	Don't Know	156	19.87%	20.13%
	Not at all Useful	49	6.24%	6.32%
	Somewhat Useful	78	9.94%	10.06%
	Neutral	344	43.82%	44.39%
	Useful	92	11.72%	11.87%
	Extremely Useful	24	3.06%	3.10%
	Blank	32	4.08%	4.13%
	Sub-Total	775	98.73%	100.00%
Invalid	System	10	1.27%	
Total		785	100.00%	

In your studies how useful do you think it would be to create and present multimedia shows as part of your course requirements (e.g. PowerPoint)?

		Frequency	Percent	Valid Percent
Valid	Don't Know	99	12.61%	12.89%
	Not at all Useful	13	1.66%	1.69%
	Somewhat Useful	80	10.19%	10.42%
	Neutral	282	35.92%	36.72%
	Useful	149	18.98%	19.40%
	Extremely Useful	117	14.90%	15.23%
	Blank	28	3.57%	3.65%
	Sub-Total	768	97.83%	100.00%

		Frequency	Percent	Valid Percent
Invalid	System	17	2.17%	
Total		785	100.00%	

In your studies how useful do you think it would be to create or edit and present audio/video as part of your course requirements (e.g. iMovie, Movie Maker, Premiere, Ulead Video, Studio)?

		Frequency	Percent	Valid Percent
Valid	Don't Know	0	0.00%	0.00%
	Not at all Useful	28	3.57%	3.59%
	Somewhat Useful	87	11.08%	11.15%
	Neutral	326	41.53%	41.79%
	Useful	134	17.07%	17.18%
	Extremely Useful	40	5.10%	5.13%
	Blank	165	21.02%	21.15%
	Sub-Total	780	99.36%	100.00%
Invalid	System	5	0.64%	
Total		785	100.00%	

In your studies how useful do you think it would be to download or access online audio/video recordings of lectures you did not attend?

		Frequency	Percent	Valid Percent
Valid	Don't Know	109	13.89%	14.03%
	Not at all Useful	27	3.44%	3.47%
	Somewhat Useful	60	7.64%	7.72%
	Neutral	292	37.20%	37.58%
	Useful	152	19.36%	19.56%
	Extremely Useful	105	13.38%	13.51%
	Blank	32	4.08%	4.12%
	Sub-Total	777	98.98%	100.00%
Invalid	System	8	1.02%	
Total		785	100.00%	

In your studies how useful do you think it would be to download or access online audio/video recordings to revise the content of lectures you have already been to?		Frequency	Percent	Valid Percent
Valid	Don't Know	117	14.90%	15.04%
	Not at all Useful	19	2.42%	2.44%
	Somewhat Useful	61	7.77%	7.84%
	Neutral	289	36.82%	37.15%
	Useful	162	20.64%	20.82%
	Extremely Useful	101	12.87%	12.98%
	Blank	29	3.69%	3.73%
	Sub-Total	778	99.11%	100.00%
Invalid	System	7	0.89%	
Total		785	100.00%	

In your studies how useful do you think it would be to download or access online audio/video recordings of supplementary content material?		Frequency	Percent	Valid Percent
Valid	Don't Know	115	14.65%	14.76%
	Not at all Useful	21	2.68%	2.70%
	Somewhat Useful	67	8.54%	8.60%
	Neutral	280	35.67%	35.94%
	Useful	176	22.42%	22.59%
	Extremely Useful	92	11.72%	11.81%
	Blank	28	3.57%	3.59%
	Sub-Total	779	99.24%	100.00%
Invalid	System	6	0.76%	
Total		785	100.00%	

In your studies how useful do you think it would be to use instant messaging / chat (e.g. MSN, Yahoo, ICQ) on the web to communicate/collaborate with other students in the course?		Frequency	Percent	Valid Percent
Valid	Don't Know	86	10.96%	11.07%
	Not at all Useful	24	3.06%	3.09%
	Somewhat Useful	75	9.55%	9.65%
	Neutral	263	33.50%	33.85%
	Useful	177	22.55%	22.78%
	Extremely Useful	122	15.54%	15.70%
	Blank	30	3.82%	3.86%
	Sub-Total	777	98.98%	100.00%
Invalid	System	8	1.02%	
Total		785	100.00%	

In your studies how useful do you think it would be to use instant messaging / chat (e.g. MSN, Yahoo, ICQ) on the web to communicate with lecturing and administrative staff from the course?		Frequency	Percent	Valid Percent
Valid	Don't Know	96	12.23%	12.31%
	Not at all Useful	22	2.80%	2.82%
	Somewhat Useful	62	7.90%	7.95%
	Neutral	300	38.22%	38.46%
	Useful	165	21.02%	21.15%
	Extremely Useful	104	13.25%	13.33%
	Blank	31	3.95%	3.97%
	Sub-Total	780	99.36%	100.00%
Invalid	System	5	0.64%	
Total		785	100.00%	

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In your studies how useful do you think it would be to use webconferencing or video chat to communicate with other students in the course?		Frequency	Percent	Valid Percent
Valid	Don't Know	128	16.31%	16.39%
	Not at all Useful	23	2.93%	2.94%
	Somewhat Useful	66	8.41%	8.45%
	Neutral	323	41.15%	41.36%
	Useful	146	18.60%	18.69%
	Extremely Useful	60	7.64%	7.68%
	Blank	35	4.46%	4.48%
	Sub-Total	781	99.49%	100.00%
Invalid	System	4	0.51%	
Total		785	100.00%	

In your studies how useful do you think it would be to use web conferencing, VOIP or video chat to communicate with students around the world?		Frequency	Percent	Valid Percent
Valid	Don't Know	154	19.62%	19.69%
	Not at all Useful	31	3.95%	3.96%
	Somewhat Useful	76	9.68%	9.72%
	Neutral	307	39.11%	39.26%
	Useful	127	16.18%	16.24%
	Extremely Useful	55	7.01%	7.03%
	Blank	32	4.08%	4.09%
	Sub-Total	782	99.62%	100.00%
Invalid	System	3	0.38%	
Total		785	100.00%	

In your studies how useful do you think it would be to use the web to access University based services?		Frequency	Percent	Valid Percent
Valid	Don't Know	88	11.21%	11.35%
	Not at all Useful	19	2.42%	2.45%
	Somewhat Useful	63	8.03%	8.13%
	Neutral	279	35.54%	36.00%
	Useful	164	20.89%	21.16%
	Extremely Useful	130	16.56%	16.77%
	Blank	32	4.08%	4.13%
	Sub-Total	775	98.73%	100.00%
Invalid	System	10	1.27%	
Total		785	100.00%	

In your studies how useful do you think it would be to use the web to share digital files related to your course?		Frequency	Percent	Valid Percent
Valid	Don't Know	99	12.61%	12.68%
	Not at all Useful	15	1.91%	1.92%
	Somewhat Useful	60	7.64%	7.68%
	Neutral	302	38.47%	38.67%
	Useful	192	24.46%	24.58%
	Extremely Useful	84	10.70%	10.76%
	Blank	29	3.69%	3.71%
	Sub-Total	781	99.49%	100.00%
Invalid	System	4	0.51%	
Total		785	100.00%	

In your studies how useful do you think it would be to receive alerts about course information via RSS feeds on the web?		Frequency	Percent	Valid Percent
Valid	Don't Know	101	12.87%	13.00%
	Not at all Useful	22	2.80%	2.83%
	Somewhat Useful	68	8.66%	8.75%
	Neutral	298	37.96%	38.35%
	Useful	123	15.67%	15.83%
	Extremely Useful	134	17.07%	17.25%
	Blank	31	3.95%	3.99%
	Sub-Total	777	98.98%	100.00%
Invalid	System	8	1.02%	
Total		785	100.00%	

In your studies how useful do you think it would be to keep your own blog as part of a course?		Frequency	Percent	Valid Percent
Valid	Don't Know	127	16.18%	16.24%
	Not at all Useful	54	6.88%	6.91%
	Somewhat Useful	104	13.25%	13.30%
	Neutral	339	43.18%	43.35%
	Useful	98	12.48%	12.53%
	Extremely Useful	33	4.20%	4.22%
	Blank	27	3.44%	3.45%
	Sub-Total	782	99.62%	100.00%
Invalid	System	3	0.38%	
Total		785	100.00%	

In your studies how useful do you think it would be to contribute to another blog (not yours) as part of the course?		Frequency	Percent	Valid Percent
Valid	Don't Know	134	17.07%	17.18%
	Not at all Useful	44	5.61%	5.64%
	Somewhat Useful	96	12.23%	12.31%
	Neutral	353	44.97%	45.26%
	Useful	90	11.46%	11.54%
	Extremely Useful	30	3.82%	3.85%
	Blank	33	4.20%	4.23%
	Sub-Total	780	99.36%	100.00%
Invalid	System	5	0.64%	
Total		785	100.00%	

In your studies how useful do you think it would be to contribute with other students to the development of a wiki?		Frequency	Percent	Valid Percent
Valid	Don't Know	151	19.24%	19.36%
	Not at all Useful	44	5.61%	5.64%
	Somewhat Useful	93	11.85%	11.92%
	Neutral	335	42.68%	42.95%
	Useful	95	12.10%	12.18%
	Extremely Useful	32	4.08%	4.10%
	Blank	30	3.82%	3.85%
	Sub-Total	780	99.36%	100.00%
Invalid	System	5	0.64%	
Total		785	100.00%	

In your studies how useful do you think it would be to use your mobile phone to access web-based University information or services?		Frequency	Percent	Valid Percent
Valid	Don't Know	148	18.85%	19.10%
	Not at all Useful	29	3.69%	3.74%
	Somewhat Useful	79	10.06%	10.19%
	Neutral	324	41.27%	41.81%
	Useful	102	12.99%	13.16%
	Extremely Useful	64	8.15%	8.26%
	Blank	29	3.69%	3.74%
	Sub-Total	775	98.73%	100.00%
Invalid	System	10	1.27%	
Total		785	100.00%	

In your studies how useful do you think it would be to receive grades from your Lecturer via text message on your mobile phone?		Frequency	Percent	Valid Percent
Valid	Don't Know	103	13.12%	13.21%
	Not at all Useful	25	3.18%	3.21%
	Somewhat Useful	82	10.45%	10.51%
	Neutral	301	38.34%	38.59%
	Useful	143	18.22%	18.33%
	Extremely Useful	94	11.97%	12.05%
	Blank	32	4.08%	4.10%
	Sub-Total	780	99.36%	100.00%
Invalid	System	5	0.64%	
Total		785	100.00%	

In your studies how useful do you think it would be to receive pre-class discussion questions from your Lecturer via text message on your mobile phone?		Frequency	Percent	Valid Percent
Valid	Don't Know	100	12.74%	12.80%
	Not at all Useful	21	2.68%	2.69%
	Somewhat Useful	71	9.04%	9.09%
	Neutral	309	39.36%	39.56%
	Useful	163	20.76%	20.87%
	Extremely Useful	84	10.70%	10.76%
	Blank	33	4.20%	4.23%
	Sub-Total	781	99.49%	100.00%
Invalid	System	4	0.51%	
Total		785	100.00%	

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In your studies how useful do you think it would be to receive administrative information about the course via text message on your mobile phone?		Frequency	Percent	Valid Percent
Valid	Don't Know	96	12.23%	12.29%
	Not at all Useful	25	3.18%	3.20%
	Somewhat Useful	59	7.52%	7.55%
	Neutral	328	41.78%	42.00%
	Useful	145	18.47%	18.57%
	Extremely Useful	101	12.87%	12.93%
	Blank	27	3.44%	3.46%
	Sub-Total	781	99.49%	100.00%
Invalid	System	4	0.51%	
Total		785	100.00%	

In your studies how useful do you think it would be to use social bookmarking as part of your studies?		Frequency	Percent	Valid Percent
Valid	Don't Know	192	24.46%	24.65%
	Not at all Useful	36	4.59%	4.62%
	Somewhat Useful	78	9.94%	10.01%
	Neutral	311	39.62%	39.92%
	Useful	97	12.36%	12.45%
	Extremely Useful	39	4.97%	5.01%
	Blank	26	3.31%	3.34%
	Sub-Total	779	99.24%	100.00%
Invalid	System	6	0.76%	
Total		785	100.00%	

In your studies how useful do you think it would be to use YouTube videos, either as part of your studies or uploading from your studies?		Frequency	Percent	Valid Percent
Valid	Don't Know	119	15.16%	15.20%
	Not at all Useful	28	3.57%	3.58%
	Somewhat Useful	71	9.04%	9.07%
	Neutral	349	44.46%	44.57%
	Useful	116	14.78%	14.81%
	Extremely Useful	68	8.66%	8.68%
	Blank	32	4.08%	4.09%
	Sub-Total	783	99.75%	100.00%
Invalid	System	2	0.25%	
Total		785	100.00%	

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In your studies how useful do you think it would be to use social networking software (e.g. Facebook) on the web to communicate with other students in the course?		Frequency	Percent	Valid Percent
Valid	Don't Know	85	10.83%	10.90%
	Not at all Useful	32	4.08%	4.10%
	Somewhat Useful	60	7.64%	7.69%
	Neutral	298	37.96%	38.21%
	Useful	157	20.00%	20.13%
	Extremely Useful	116	14.78%	14.87%
	Blank	32	4.08%	4.10%
	Sub-Total	780	99.36%	100.00%
Invalid	System	5	0.64%	
Total		785	100.00%	

APPENDIX M: QAC SURVEY RESULTS

Background

Gender		Frequency	Percent	Valid Percent
Valid	Male	53	49.07%	50.00%
	Female	53	49.07%	50.00%
	Sub-Total	*106*	*98.15%*	
Invalid	System	2	1.85%	
Total		108	100.00%	

Student Status		Frequency	Percent	Valid Percent
Valid	International	4	3.70%	3.77%
	Mainland	26	24.07%	24.53%
	Local	76	70.37%	71.70%
	Sub-Total	*106*	*98.15%*	
Invalid	System	2	1.85%	
Total		108	100.00%	

Secondary School		Frequency	Percent	Valid Percent
Valid	Hong Kong (General)	74	68.52%	69.81%
	Hong Kong (Int'l)	2	1.85%	1.89%
	China, Mainland	22	20.37%	20.75%
	China, Taiwan	0	0.00%	0.00%
	China, Macau	0	0.00%	0.00%
	Overseas	8	7.41%	7.55%
	Sub-Total	*106*	*98.15%*	
Invalid	System	2	1.85%	
Total		108	100.00%	

Unit Breakdown		Frequency	Percent
Valid	Arts	32	28.83%
	Business	47	42.34%
	Social Science	32	28.83%
Total		111	100.00%

Access to Technology

Does the phone you currently use have the following features?

PDA functions (e.g. diary, calendar)

		Frequency	Percent	Valid Percent
Valid	Yes	65	60.19%	62.50%
	No	36	33.33%	34.62%
	Unsure	3	2.78%	2.88%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

3G Network

		Frequency	Percent	Valid Percent
Valid	*Yes*	54	50.00%	51.92%
	No	44	40.74%	42.31%
	Unsure	6	5.56%	5.77%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

Video camera

		Frequency	Percent	Valid Percent
Valid	Yes	89	82.41%	85.58%
	No	13	12.04%	12.50%
	Unsure	2	1.85%	1.92%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

MP3/Audio Player

		Frequency	Percent	Valid Percent
Valid	Yes	93	86.11%	89.42%
	No	10	9.26%	9.62%
	Unsure	1	0.93%	0.96%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

Wireless (WiFi)				
		Frequency	Percent	Valid Percent
Valid	Yes	54	50.00%	50.94%
	No	49	45.37%	46.23%
	Unsure	3	2.78%	2.83%
	Sub-Total	*106*	*98.15%*	
Invalid	System	2	1.85%	
Total		108	100.00%	

Blue-tooth				
		Frequency	Percent	Valid Percent
Valid	Yes	92	85.19%	87.62%
	No	11	10.19%	10.48%
	Unsure	2	1.85%	1.90%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Global positioning system (GPS)				
		Frequency	Percent	Valid Percent
Valid	Yes	33	30.56%	32.04%
	No	68	62.96%	66.02%
	Unsure	2	1.85%	1.94%
	Sub-Total	*103*	*95.37%*	
Invalid	System	5	4.63%	
Total		108	100.00%	

Instant Messenger (e.g. Mobile MSN)				
		Frequency	Percent	Valid Percent
Valid	Yes	59	54.63%	57.28%
	No	42	38.89%	40.78%
	Unsure	2	1.85%	1.94%
	Sub-Total	*103*	*95.37%*	
Invalid	System	5	4.63%	
Total		108	100.00%	

Push email (Blackberry)				
		Frequency	Percent	Valid Percent
Valid	Yes	14	12.96%	13.59%
	No	83	76.85%	80.58%
	Unsure	6	5.56%	5.83%
	Sub-Total	*103*	*95.37%*	
Invalid	System	5	4.63%	
	Total	108	100.00%	

Internet Access		Frequency	Percent	Valid Percent
Valid	Yes	78	72.22%	75.73%
	No	22	20.37%	21.36%
	Unsure	3	2.78%	2.91%
	Sub-Total	*103*	*95.37%*	
Invalid	System	5	4.63%	
Total		108	100.00%	

How often do you use the following features of your phone?

Access Internet		Frequency	Percent	Valid Percent
Valid	Daily	29	26.85%	28.43%
	Weekly	8	7.41%	7.84%
	Monthly	1	0.93%	0.98%
	Rarely / Never	64	59.26%	62.75%
	Sub-Total	*102*	*94.44%*	
Invalid	System	6	5.56%	
Total		108	100.00%	

Text message		Frequency	Percent	Valid Percent
Valid	Daily	80	74.07%	76.92%
	Weekly	17	15.74%	16.35%
	Monthly	2	1.85%	1.92%
	Rarely / Never	5	4.63%	4.81%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

GPS / Navigation		Frequency	Percent	Valid Percent
Valid	Daily	8	7.41%	7.92%
	Weekly	6	5.56%	5.94%
	Monthly	10	9.26%	9.90%
	Rarely / Never	77	71.30%	76.24%
	Sub-Total	*101*	*93.52%*	
Invalid	System	7	6.48%	
Total		108	100.00%	

Take photos		Frequency	Percent	Valid Percent
Valid	Daily	30	27.78%	28.85%
	Weekly	42	38.89%	40.38%
	Monthly	20	18.52%	19.23%
	Rarely / Never	12	11.11%	11.54%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

Record video		Frequency	Percent	Valid Percent
Valid	Daily	47	43.52%	45.19%
	Weekly	21	19.44%	20.19%
	Monthly	12	11.11%	11.54%
	Rarely / Never	24	22.22%	23.08%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

Play music		Frequency	Percent	Valid Percent
Valid	Daily	24	22.22%	23.53%
	Weekly	7	6.48%	6.86%
	Monthly	4	3.70%	3.92%
	Rarely / Never	67	62.04%	65.69%
	Sub-Total	*102*	*94.44%*	
Invalid	System	6	5.56%	
Total		108	100.00%	

E-mail		Frequency	Percent	Valid Percent
Valid	Daily	13	12.04%	12.75%
	Weekly	19	17.59%	18.63%
	Monthly	34	31.48%	33.33%
	Rarely / Never	36	33.33%	35.29%
	Sub-Total	*102*	*94.44%*	
Invalid	System	6	5.56%	
Total		108	100.00%	

What kind of access do you have to the following technologies?

Desktop computer

		Frequency	Percent	Valid Percent
Valid	Exclusive	75	69.44%	70.75%
	Limited or University	28	25.93%	26.42%
	None	3	2.78%	2.83%
	Sub-Total	*106*	*98.15%*	
Invalid	System	2	1.85%	
Total		108	100.00%	

Laptop, netbook or notebook

		Frequency	Percent	Valid Percent
Valid	Exclusive	91	84.26%	85.05%
	Limited or University	12	11.11%	11.21%
	None	4	3.70%	3.74%
	Sub-Total	*107*	*99.07%*	
Invalid	System	1	0.93%	
Total		108	100.00%	

Electronic organizer (e.g. PDA, Palm, PocketPC)

		Frequency	Percent	Valid Percent
Valid	Exclusive	25	23.15%	23.81%
	Limited or University	15	13.89%	14.29%
	None	65	60.19%	61.90%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Dedicated MP3 player (e.g. iPod Nano, iTouch)

		Frequency	Percent	Valid Percent
Valid	Exclusive	71	65.74%	67.62%
	Limited or University	13	12.04%	12.38%
	None	21	19.44%	20.00%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

MP3/4 player with video capabilities (e.g. iTouch, Creative Zen)

		Frequency	Percent	Valid Percent
Valid	Exclusive	55	50.93%	51.40%
	Limited or University	14	12.96%	13.08%
	None	38	35.19%	35.51%
	Sub-Total	*107*	*99.07%*	
Invalid	System	1	0.93%	
Total		108	100.00%	

Dedicated digital camera

		Frequency	Percent	Valid Percent
Valid	Exclusive	80	74.07%	76.19%
	Limited or University	17	15.74%	16.19%
	None	8	7.41%	7.62%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Memory stick (e.g. flash drive, USB stick)

		Frequency	Percent	Valid Percent
Valid	Exclusive	92	85.19%	86.79%
	Limited or University	10	9.26%	9.43%
	None	4	3.70%	3.77%
	Sub-Total	*106*	*98.15%*	
Invalid	System	2	1.85%	
Total		108	100.00%	

Dedicated video game console (e.g. Xbox, Playstation)

		Frequency	Percent	Valid Percent
Valid	Exclusive	33	30.56%	31.43%
	Limited or University	21	19.44%	20.00%
	None	51	47.22%	48.57%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Web cam (could be in the notebook)

		Frequency	Percent	Valid Percent
Valid	Exclusive	64	59.26%	59.81%
	Limited or University	18	16.67%	16.82%
	None	25	23.15%	23.36%
	Sub-Total	*107*	*99.07%*	
Invalid	System	1	0.93%	
Total		108	100.00%	

Dial-up internet access		Frequency	Percent	Valid Percent
Valid	Exclusive	36	33.33%	34.29%
	Limited or University	15	13.89%	14.29%
	None	54	50.00%	51.43%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Broadband internet access (ADSL or cable)		Frequency	Percent	Valid Percent
Valid	Exclusive	79	73.15%	75.24%
	Limited or University	14	12.96%	13.33%
	None	12	11.11%	11.43%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Wireless internet access (WiFi/ HSDPA)		Frequency	Percent	Valid Percent
Valid	Exclusive	69	63.89%	65.71%
	Limited or University	26	24.07%	24.76%
	None	10	9.26%	9.52%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Technology Usefulness

In your studies how useful do you think it would be to …

Design and build web pages as part of your courses		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	15	13.89%	14.29%
	2	14	12.96%	13.33%
	(Neutral) 3	54	50.00%	51.43%
	4	12	11.11%	11.43%
	(Extremely Useful) 5	10	9.26%	9.52%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Create and present multimedia shows as part of your course requirements		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	2	1.85%	1.89%
	2	7	6.48%	6.60%
	(Neutral) 3	30	27.78%	28.30%
	4	25	23.15%	23.58%
	(Extremely Useful) 5	42	38.89%	39.62%
	Sub-Total	*106*	*98.15%*	
Invalid	System	2	1.85%	
Total		108	100.00%	

Create or edit and present audio/video as part of your course requirements		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	7	6.48%	6.73%
	2	17	15.74%	16.35%
	(Neutral) 3	47	43.52%	45.19%
	4	19	17.59%	18.27%
	(Extremely Useful) 5	14	12.96%	13.46%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

Download or access online audio/video recordings of lectures you did not attend		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	6	5.56%	5.71%
	2	9	8.33%	8.57%
	(Neutral) 3	31	28.70%	29.52%
	4	29	26.85%	27.62%
	(Extremely Useful) 5	30	27.78%	28.57%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Download or access online audio/video recordings to revise the content of lectures you have already been to		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	3	2.78%	2.91%
	2	11	10.19%	10.68%
	(Neutral) 3	32	29.63%	31.07%
	4	32	29.63%	31.07%
	(Extremely Useful) 5	25	23.15%	24.27%
	Sub-Total	103	95.37%	
Invalid	System	5	4.63%	
Total		108	100.00%	

Download or access online audio/video recordings of supplementary content material		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	1	0.93%	0.97%
	2	10	9.26%	9.71%
	(Neutral) 3	35	32.41%	33.98%
	4	26	24.07%	25.24%
	(Extremely Useful) 5	31	28.70%	30.10%
	Sub-Total	103	95.37%	
Invalid	System	5	4.63%	
Total		108	100.00%	

Use the web to access University based services		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	3	2.78%	2.91%
	2	3	2.78%	2.91%
	(Neutral) 3	22	20.37%	21.36%
	4	33	30.56%	32.04%
	(Extremely Useful) 5	42	38.89%	40.78%
	Sub-Total	103	95.37%	
Invalid	System	5	4.63%	
Total		108	100.00%	

Use your mobile phone to access web-based University services information or services		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	7	6.48%	6.80%
	2	17	15.74%	16.50%
	(Neutral) 3	36	33.33%	34.95%
	4	21	19.44%	20.39%
	(Extremely Useful) 5	22	20.37%	21.36%
	Sub-Total	103	95.37%	
Invalid	System	5	4.63%	
Total		108	100.00%	

Use instant messaging/chat on the web to communicate/collaborate with other students in the course			
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	1	0.93%	0.95%
	2	5	4.63%	4.76%
	(Neutral) 3	20	18.52%	19.05%
	4	35	32.41%	33.33%
	(Extremely Useful) 5	44	40.74%	41.90%
	Sub-Total	*105*	*97.22%*	
Invalid	System	3	2.78%	
Total		108	100.00%	

Use instant messaging/chat on the web to communicate with lecturing and administrative staff from the course			
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	8	7.41%	7.77%
	2	10	9.26%	9.71%
	(Neutral) 3	33	30.56%	32.04%
	4	22	20.37%	21.36%
	(Extremely Useful) 5	30	27.78%	29.13%
	Sub-Total	*103*	*95.37%*	
Invalid	System	5	4.63%	
Total		108	100.00%	

Use social networking software on the web to communicate/collaborate with other students in the course			
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	5	4.63%	4.81%
	2	8	7.41%	7.69%
	(Neutral) 3	28	25.93%	26.92%
	4	32	29.63%	30.77%
	(Extremely Useful) 5	31	28.70%	29.81%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

Use the web to share digital files related to your course			
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	3	2.78%	2.88%
	2	9	8.33%	8.65%
	(Neutral) 3	29	26.85%	27.88%
	4	36	33.33%	34.62%
	(Extremely Useful) 5	27	25.00%	25.96%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

Use web-conferencing or video chat to communicate/collaborate with other students in the course				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	8	7.41%	7.69%
	2	13	12.04%	12.50%
	(Neutral) 3	39	36.11%	37.50%
	4	27	25.00%	25.96%
	(Extremely Useful) 5	17	15.74%	16.35%
	Sub-Total	104	96.30%	
Invalid	System	4	3.70%	
Total		108	100.00%	

Receive alerts about course information via RSS feeds on the web				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	5	4.63%	4.81%
	2	7	6.48%	6.73%
	(Neutral) 3	38	35.19%	36.54%
	4	28	25.93%	26.92%
	(Extremely Useful) 5	26	24.07%	25.00%
	Sub-Total	104	96.30%	
Invalid	System	4	3.70%	
Total		108	100.00%	

Keep your own blog as part of your course requirements				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	21	19.44%	20.19%
	2	20	18.52%	19.23%
	(Neutral) 3	38	35.19%	36.54%
	4	18	16.67%	17.31%
	(Extremely Useful) 5	7	6.48%	6.73%
	Sub-Total	104	96.30%	
Invalid	System	4	3.70%	
Total		108	100.00%	

Contribute to another blog as part of a course requirement				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	20	18.52%	19.23%
	2	19	17.59%	18.27%
	(Neutral) 3	41	37.96%	39.42%
	4	19	17.59%	18.27%
	(Extremely Useful) 5	5	4.63%	4.81%
	Sub-Total	104	96.30%	
Invalid	System	4	3.70%	
Total		108	100.00%	

Contribute with other students to the development of a wiki as part of your course requirements				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	15	13.89%	14.71%
	2	8	7.41%	7.84%
	(Neutral) 3	46	42.59%	45.10%
	4	20	18.52%	19.61%
	(Extremely Useful) 5	13	12.04%	12.75%
	Sub-Total	*102*	*94.44%*	
Invalid	System	6	5.56%	
Total		108	100.00%	

Receive grades/marks from your Lecturer via text message on your mobile phone				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	20	18.52%	19.42%
	2	7	6.48%	6.80%
	(Neutral) 3	37	34.26%	35.92%
	4	21	19.44%	20.39%
	(Extremely Useful) 5	18	16.67%	17.48%
	Sub-Total	*103*	*95.37%*	
Invalid	System	5	4.63%	
Total		108	100.00%	

Receive pre-class discussion questions from your Lecturer via text message on your mobile phone				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	15	13.89%	14.56%
	2	13	12.04%	12.62%
	(Neutral) 3	37	34.26%	35.92%
	4	25	23.15%	24.27%
	(Extremely Useful) 5	13	12.04%	12.62%
	Sub-Total	*103*	*95.37%*	
Invalid	System	5	4.63%	
Total		108	100.00%	

Receive administrative information about the course via text message on your mobile phone				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	10	9.26%	9.80%
	2	14	12.96%	13.73%
	(Neutral) 3	37	34.26%	36.27%
	4	24	22.22%	23.53%
	(Extremely Useful) 5	17	15.74%	16.67%
	Sub-Total	*102*	*94.44%*	
Invalid	System	6	5.56%	
Total		108	100.00%	

Use social bookmarking as part of your studies				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	13	12.04%	13.40%
	2	17	15.74%	17.53%
	(Neutral) 3	45	41.67%	46.39%
	4	15	13.89%	15.46%
	(Extremely Useful) 5	7	6.48%	7.22%
	Sub-Total	*97*	*89.81%*	
Invalid	System	11	10.19%	
Total		108	100.00%	

Use YouTube videos, either as part of your studies or uploading content from your studies				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	6	5.56%	5.88%
	2	14	12.96%	13.73%
	(Neutral) 3	38	35.19%	37.25%
	4	29	26.85%	28.43%
	(Extremely Useful) 5	15	13.89%	14.71%
	Sub-Total	*102*	*94.44%*	
Invalid	System	6	5.56%	
Total		108	100.00%	

Use web conferencing, VOIP or Video chat to communicate/ collaborate with students around the world				
		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	11	10.19%	10.89%
	2	13	12.04%	12.87%
	(Neutral) 3	44	40.74%	43.56%
	4	24	22.22%	23.76%
	(Extremely Useful) 5	9	8.33%	8.91%
	Sub-Total	*101*	*93.52%*	
Invalid	System	7	6.48%	
Total		108	100.00%	

Use a Virtual Learning Environment (e.g. WebCT, Moodle) to access course content, discussion, etc.		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	4	3.70%	3.85%
	2	7	6.48%	6.73%
	(Neutral) 3	33	30.56%	31.73%
	4	34	31.48%	32.69%
	(Extremely Useful) 5	26	24.07%	25.00%
	Sub-Total	*104*	*96.30%*	
Invalid	System	4	3.70%	
Total		108	100.00%	

Use Google documents for collaboration and sharing content		Frequency	Percent	Valid Percent
Valid	(Not Useful) 1	6	5.56%	5.83%
	2	9	8.33%	8.74%
	(Neutral) 3	42	38.89%	40.78%
	4	30	27.78%	29.13%
	(Extremely Useful) 5	16	14.81%	15.53%
	Sub-Total	*103*	*95.37%*	
Invalid	System	5	4.63%	
Total		108	100.00%	

The use of WebCT

Q1. How many course sections have you taught in the 2008-09 academic year (1st and 2nd terms)?		Frequency	Percent	Valid Percent
Valid	None	3	3.23%	3.26%
	1-2	20	21.51%	21.74%
	3-4	34	36.56%	36.96%
	5-6	17	18.28%	18.48%
	7-8	3	3.23%	3.26%
	9 or more	15	16.13%	16.30%
	Sub-Total	*92*	*98.92%*	*100.00%*
Invalid	System	1	1.08%	
Total		93	100.00%	

Q2. For how many course sections have you used WebCT as a component during the 2008-09 academic year (1st and 2nd terms)?		Frequency	Percent	Valid Percent
Valid	None	36	38.71%	40.45%
	1-2	16	17.20%	17.98%
	3-4	17	18.28%	19.10%
	5-6	12	12.90%	13.48%
	7-8	3	3.23%	3.37%
	9 or more	5	5.38%	5.62%
	Sub-Total	*89*	*95.70%*	*100.00%*
Invalid	System	4	4.30%	
Total		93	100.00%	

Q3. To what extent do you utilize the following functions/features in WebCT for your course(s)?

Organize page tool (in addition to the Homepage)		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	10	10.75%	18.52%
	Never	9	9.68%	16.67%
	Seldom	6	6.45%	11.11%
	Occasionally	4	4.30%	7.41%
	Frequently	17	18.28%	31.48%
	Very Frequently	8	8.60%	14.81%
	Sub-Total	*54*	*58.06%*	*100.00%*
Invalid	System	39	41.94%	
Total		93	100.00%	

Single page tool (HTML or text file within WebCT)		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	8	8.60%	16.33%
	Never	7	7.53%	14.29%
	Seldom	4	4.30%	8.16%
	Occasionally	8	8.60%	16.33%
	Frequently	8	8.60%	16.33%
	Very Frequently	14	15.05%	28.57%
	Sub-Total	*49*	*52.69%*	*100.00%*
Invalid	System	44	47.31%	
Total		93	100.00%	

URL tool to view a website outside of WebCT		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	14	15.05%	28.57%
	Never	14	15.05%	28.57%
	Seldom	5	5.38%	10.20%
	Occasionally	6	6.45%	12.24%
	Frequently	7	7.53%	14.29%
	Very Frequently	3	3.23%	6.12%
	Sub-Total	*49*	*52.69%*	*100.00%*
Invalid	System	44	47.31%	
Total		93	100.00%	

Course content		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	1	1.08%	2.00%
	Never	3	3.23%	6.00%
	Seldom	5	5.38%	10.00%
	Occasionally	8	8.60%	16.00%
	Frequently	16	17.20%	32.00%
	Very Frequently	17	18.28%	34.00%
	Sub-Total	*50*	*53.76%*	*100.00%*
Invalid	System	43	46.24%	
Total		93	100.00%	

Announcement		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	2	2.15%	4.00%
	Never	12	12.90%	24.00%
	Seldom	9	9.68%	18.00%
	Occasionally	10	10.75%	20.00%
	Frequently	11	11.83%	22.00%
	Very Frequently	6	6.45%	12.00%
	Sub-Total	*50*	*53.76%*	*100.00%*
Invalid	System	43	46.24%	
Total		93	100.00%	

Image database tool		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	14	15.05%	31.82%
	Never	19	20.43%	43.18%
	Seldom	8	8.60%	18.18%
	Occasionally	1	1.08%	2.27%
	Frequently	2	2.15%	4.55%
	Sub-Total	*44*	*47.31%*	*100.00%*
Invalid	System	49	52.69%	
Total		93	100.00%	

Discussions		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	6	6.45%	13.04%
	Never	23	24.73%	50.00%
	Seldom	9	9.68%	19.57%
	Occasionally	6	6.45%	13.04%
	Frequently	2	2.15%	4.35%
	Sub-Total	*46*	*49.46%*	*100.00%*
Invalid	System	47	50.54%	
Total		93	100.00%	

Mail		Frequency	Percent	Valid Percent
Valid	Never	11	11.83%	21.15%
	Seldom	9	9.68%	17.31%
	Occasionally	19	20.43%	36.54%
	Frequently	9	9.68%	17.31%
	Very Frequently	4	4.30%	7.69%
	Sub-Total	*52*	*55.91%*	*100.00%*
Invalid	System	41	44.09%	
Total		93	100.00%	

Chat		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	8	8.60%	16.33%
	Never	32	34.41%	65.31%
	Seldom	7	7.53%	14.29%
	Occasionally	1	1.08%	2.04%
	Frequently	1	1.08%	2.04%
	Sub-Total	*49*	*52.69%*	*100.00%*
Invalid	System	44	47.31%	
Total		93	100.00%	

Assessment (Quizzes/Survey)		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	8	8.60%	16.00%
	Never	28	30.11%	56.00%
	Seldom	7	7.53%	14.00%
	Occasionally	2	2.15%	4.00%
	Frequently	3	3.23%	6.00%
	Very Frequently	2	2.15%	4.00%
	Sub-Total	*50*	*53.76%*	*100.00%*
Invalid	System	43	46.24%	
Total		93	100.00%	

Self Test		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	6	6.45%	12.50%
	Never	36	38.71%	75.00%
	Seldom	5	5.38%	10.42%
	Occasionally	1	1.08%	2.08%
	Sub-Total	*48*	*51.61%*	*100.00%*
Invalid	System	45	48.39%	
Total		93	100.00%	

Assignment		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	2	2.15%	4.00%
	Never	19	20.43%	38.00%
	Seldom	3	3.23%	6.00%
	Occasionally	9	9.68%	18.00%
	Frequently	12	12.90%	24.00%
	Very Frequently	5	5.38%	10.00%
	Sub-Total	*50*	*53.76%*	*100.00%*
Invalid	System	43	46.24%	
Total		93	100.00%	

Global Calendar		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	9	9.68%	18.37%
	Never	28	30.11%	57.14%
	Seldom	5	5.38%	10.20%
	Occasionally	3	3.23%	6.12%
	Frequently	2	2.15%	4.08%
	Very Frequently	2	2.15%	4.08%
	Sub-Total	*49*	*52.69%*	*100.00%*
Invalid	System	44	47.31%	
Total		93	100.00%	

Manage Students (Gradebook)		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	11	11.83%	22.00%
	Never	25	26.88%	50.00%
	Seldom	4	4.30%	8.00%
	Occasionally	4	4.30%	8.00%
	Frequently	4	4.30%	8.00%
	Very Frequently	2	2.15%	4.00%
	Sub-Total	*50*	*53.76%*	*100.00%*
Invalid	System	43	46.24%	
Total		93	100.00%	

Track Students			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	11	11.83%	22.45%
	Never	22	23.66%	44.90%
	Seldom	5	5.38%	10.20%
	Occasionally	7	7.53%	14.29%
	Frequently	2	2.15%	4.08%
	Very Frequently	2	2.15%	4.08%
	Sub-Total	*49*	*52.69%*	*100.00%*
Invalid	System	44	47.31%	
Total		93	100.00%	

SafeAssign (Anti-plagiarism software)			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	14	15.05%	28.57%
	Never	28	30.11%	57.14%
	Seldom	1	1.08%	2.04%
	Occasionally	2	2.15%	4.08%
	Frequently	2	2.15%	4.08%
	Very Frequently	2	2.15%	4.08%
	Sub-Total	*49*	*52.69%*	*100.00%*
Invalid	System	44	47.31%	
Total		93	100.00%	

Q4. Reasons for NOT using WebCT

not suitable for the subject matter			
		Frequency	Percent	Valid Percent
Valid	Not Sure	4	4.30%	14.81%
	Neutral	14	15.05%	51.85%
	Agree	9	9.68%	33.33%
	Sub-Total	*27*	*29.03%*	*100.00%*
Invalid	System	66	70.97%	
Total		93	100.00%	

not user-friendly			
		Frequency	Percent	Valid Percent
Valid	Not Sure	6	6.45%	19.35%
	Disagree	2	2.15%	6.45%
	Neutral	14	15.05%	45.16%
	Agree	4	4.30%	12.90%
	Strongly Agree	5	5.38%	16.13%
	Sub-Total	*31*	*33.33%*	*100.00%*
Invalid	System	62	66.67%	
Total		93	100.00%	

too time consuming to create a WebCT course		Frequency	Percent	Valid Percent
Valid	Not Sure	1	1.08%	3.23%
	Disagree	5	5.38%	16.13%
	Neutral	9	9.68%	29.03%
	Agree	9	9.68%	29.03%
	Strongly Agree	7	7.53%	22.58%
	Sub-Total	*31*	*33.33%*	*100.00%*
Invalid	System	62	66.67%	
Total		93	100.00%	

insufficient general computer knowledge		Frequency	Percent	Valid Percent
Valid	Not Sure	1	1.08%	3.45%
	Strongly Disagree	5	5.38%	17.24%
	Disagree	6	6.45%	20.69%
	Neutral	12	12.90%	41.38%
	Agree	4	4.30%	13.79%
	Strongly Agree	1	1.08%	3.45%
	Sub-Total	*29*	*31.18%*	*100.00%*
Invalid	System	64	68.82%	
Total		93	100.00%	

insufficient knowledge of using WebCT		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	2	2.15%	6.90%
	Disagree	3	3.23%	10.34%
	Neutral	13	13.98%	44.83%
	Agree	9	9.68%	31.03%
	Strongly Agree	2	2.15%	6.90%
	Sub-Total	*29*	*31.18%*	*100.00%*
Invalid	System	64	68.82%	
Total		93	100.00%	

lack of technical support		Frequency	Percent	Valid Percent
Valid	Not Sure	2	2.15%	6.90%
	Strongly Disagree	1	1.08%	3.45%
	Disagree	3	3.23%	10.34%
	Neutral	13	13.98%	44.83%
	Agree	8	8.60%	27.59%
	Strongly Agree	2	2.15%	6.90%
	Sub-Total	*29*	*31.18%*	*100.00%*
Invalid	System	64	68.82%	
Total		93	100.00%	

lack of knowledge about the instructional use of WebCT in teaching				
		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	2	2.15%	6.67%
	Disagree	4	4.30%	13.33%
	Neutral	13	13.98%	43.33%
	Agree	10	10.75%	33.33%
	Strongly Agree	1	1.08%	3.33%
	Sub-Total	*30*	*32.26%*	*100.00%*
Invalid	System	63	67.74%	
Total		93	100.00%	

such work is not recognized by the department and the University				
		Frequency	Percent	Valid Percent
Valid	Not Sure	4	4.30%	14.29%
	Strongly Disagree	3	3.23%	10.71%
	Disagree	3	3.23%	10.71%
	Neutral	12	12.90%	42.86%
	Agree	3	3.23%	10.71%
	Strongly Agree	3	3.23%	10.71%
	Sub-Total	*28*	*30.11%*	*100.00%*
Invalid	System	65	69.89%	
Total		93	100.00%	

not interested in web-based teaching				
		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	6	6.45%	21.43%
	Disagree	8	8.60%	28.57%
	Neutral	12	12.90%	42.86%
	Agree	2	2.15%	7.14%
	Sub-Total	*28*	*30.11%*	*100.00%*
Invalid	System	65	69.89%	
Total		93	100.00%	

I use other Web tools for teaching, e.g. self-made websites or other software or online platforms				
		Frequency	Percent	Valid Percent
Valid	Not Sure	2	2.15%	6.67%
	Strongly Disagree	1	1.08%	3.33%
	Disagree	4	4.30%	13.33%
	Neutral	8	8.60%	26.67%
	Agree	6	6.45%	20.00%
	Strongly Agree	9	9.68%	30.00%
	Sub-Total	*30*	*32.26%*	*100.00%*
Invalid	System	63	67.74%	
Total		93	100.00%	

The use of IT in teaching and research

Q5. To what extent did you use the following information technologies in your TEACHING during the 2008-09 academic year?			
Presentation technology (e.g. PowerPoint)			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	1	1.08%	1.16%
	Never	3	3.23%	3.49%
	Seldom	6	6.45%	6.98%
	Occasionally	9	9.68%	10.47%
	Frequently	15	16.13%	17.44%
	Very Frequently	52	55.91%	60.47%
	Sub-Total	*86*	*92.47%*	*100.00%*
Invalid	System	7	7.53%	
Total		93	100.00%	

Video show (DVD, VCD)			
		Frequency	Percent	Valid Percent
Valid	Never	14	15.05%	16.09%
	Seldom	12	12.90%	13.79%
	Occasionally	31	33.33%	35.63%
	Frequently	16	17.20%	18.39%
	Very Frequently	14	15.05%	16.09%
	Sub-Total	*87*	*93.55%*	*100.00%*
Invalid	System	6	6.45%	
Total		93	100.00%	

Video sharing applications (e.g. YouTube)			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	1	1.08%	1.16%
	Never	23	24.73%	26.74%
	Seldom	12	12.90%	13.95%
	Occasionally	19	20.43%	22.09%
	Frequently	15	16.13%	17.44%
	Very Frequently	16	17.20%	18.60%
	Sub-Total	*86*	*92.47%*	*100.00%*
Invalid	System	7	7.53%	
Total		93	100.00%	

Library electronic databases		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	4	4.30%	4.88%
	Never	21	22.58%	25.61%
	Seldom	18	19.35%	21.95%
	Occasionally	22	23.66%	26.83%
	Frequently	8	8.60%	9.76%
	Very Frequently	9	9.68%	10.98%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

Course Management System (e.g. WebCT)		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	7	7.53%	8.24%
	Never	23	24.73%	27.06%
	Seldom	8	8.60%	9.41%
	Occasionally	15	16.13%	17.65%
	Frequently	13	13.98%	15.29%
	Very Frequently	19	20.43%	22.35%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Online CTLE (Course Teaching and Learning Evaluation)		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	9	9.68%	10.98%
	Never	42	45.16%	51.22%
	Seldom	10	10.75%	12.20%
	Occasionally	13	13.98%	15.85%
	Frequently	5	5.38%	6.10%
	Very Frequently	3	3.23%	3.66%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

e-Portfolio		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	19	20.43%	23.46%
	Never	42	45.16%	51.85%
	Seldom	11	11.83%	13.58%
	Occasionally	5	5.38%	6.17%
	Frequently	2	2.15%	2.47%
	Very Frequently	2	2.15%	2.47%
	Sub-Total	*81*	*87.10%*	*100.00%*
Invalid	System	12	12.90%	
Total		93	100.00%	

Online plagiarism checking (e.g. TurnItin or SafeAssign)		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	19	20.43%	23.17%
	Never	46	49.46%	56.10%
	Seldom	3	3.23%	3.66%
	Occasionally	4	4.30%	4.88%
	Frequently	5	5.38%	6.10%
	Very Frequently	5	5.38%	6.10%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

World Wide Web		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	1	1.08%	1.16%
	Never	10	10.75%	11.63%
	Seldom	4	4.30%	4.65%
	Occasionally	15	16.13%	17.44%
	Frequently	22	23.66%	25.58%
	Very Frequently	34	36.56%	39.53%
	Sub-Total	*86*	*92.47%*	*100.00%*
Invalid	System	7	7.53%	
Total		93	100.00%	

Videoconferencing/virtual meetings				
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	7	7.53%	8.54%
	Never	63	67.74%	76.83%
	Seldom	6	6.45%	7.32%
	Occasionally	3	3.23%	3.66%
	Frequently	3	3.23%	3.66%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

IT courseware tailor-made by TLC				
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	20	21.51%	24.39%
	Never	53	56.99%	64.63%
	Seldom	7	7.53%	8.54%
	Occasionally	1	1.08%	1.22%
	Frequently	1	1.08%	1.22%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

RSS feeds				
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	26	27.96%	32.10%
	Never	47	50.54%	58.02%
	Seldom	7	7.53%	8.64%
	Very Frequently	1	1.08%	1.23%
	Sub-Total	*81*	*87.10%*	*100.00%*
Invalid	System	12	12.90%	
Total		93	100.00%	

Instant messaging (e.g. MSN, ICQ)				
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	7	7.53%	8.54%
	Never	51	54.84%	62.20%
	Seldom	10	10.75%	12.20%
	Occasionally	6	6.45%	7.32%
	Frequently	5	5.38%	6.10%
	Very Frequently	3	3.23%	3.66%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

Digital image collections				
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	8	8.60%	9.76%
	Never	32	34.41%	39.02%
	Seldom	13	13.98%	15.85%
	Occasionally	21	22.58%	25.61%
	Frequently	4	4.30%	4.88%
	Very Frequently	4	4.30%	4.88%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

web development tools (e.g. Dreamweaver, HTML)				
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	15	16.13%	18.52%
	Never	46	49.46%	56.79%
	Seldom	7	7.53%	8.64%
	Occasionally	8	8.60%	9.88%
	Frequently	2	2.15%	2.47%
	Very Frequently	3	3.23%	3.70%
	Sub-Total	*81*	*87.10%*	*100.00%*
Invalid	System	12	12.90%	
Total		93	100.00%	

Wikis				
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	13	13.98%	15.85%
	Never	44	47.31%	53.66%
	Seldom	6	6.45%	7.32%
	Occasionally	9	9.68%	10.98%
	Frequently	6	6.45%	7.32%
	Very Frequently	4	4.30%	4.88%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

Blogs			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	4	4.30%	4.71%
	Never	54	58.06%	63.53%
	Seldom	13	13.98%	15.29%
	Occasionally	8	8.60%	9.41%
	Frequently	3	3.23%	3.53%
	Very Frequently	3	3.23%	3.53%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Social networking sites (e.g. MySpace, Facebook, Twitter)			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	4	4.30%	4.76%
	Never	52	55.91%	61.90%
	Seldom	13	13.98%	15.48%
	Occasionally	7	7.53%	8.33%
	Frequently	4	4.30%	4.76%
	Very Frequently	4	4.30%	4.76%
	Sub-Total	*84*	*90.32%*	*100.00%*
Invalid	System	9	9.68%	
Total		93	100.00%	

Q6. Which of the following information technology skills/tools/programs do your students need to use for your course(s)?

Internet search			
		Frequency	Percent	Valid Percent
Valid	Yes	75	80.65%	100.00%
Invalid	System	18	19.35%	
Total		93	100.00%	

Excel			
		Frequency	Percent	Valid Percent
Valid	Yes	31	33.33%	100.00%
Invalid	System	62	66.67%	
Total		93	100.00%	

PowerPoint			
		Frequency	Percent	Valid Percent
Valid	Yes	72	77.42%	100.00%
Invalid	System	21	22.58%	
Total		93	100.00%	

Word			
	Frequency	Percent	Valid Percent
Valid Yes	81	87.10%	100.00%
Invalid System	12	12.90%	
Total	93	100.00%	

Microsoft Project			
	Frequency	Percent	Valid Percent
Valid Yes	3	3.23%	100.00%
Invalid System	90	96.77%	
Total	93	100.00%	

SPSS			
	Frequency	Percent	Valid Percent
Valid Yes	8	8.60%	100.00%
Invalid System	85	91.40%	
Total	93	100.00%	

SAS			
	Frequency	Percent	Valid Percent
Valid Yes	1	1.08%	100.00%
Invalid System	92	98.92%	
Total	93	100.00%	

STATA			
	Frequency	Percent	Valid Percent
Valid Yes	1	1.08%	100.00%
Invalid System	92	98.92%	
Total	93	100.00%	

NUD*IST		
	Frequency	Percent
Invalid System	93	100.00%

Database (e.g. Access, SQL)			
	Frequency	Percent	Valid Percent
Valid Yes	1	1.08%	33.33%
10	2	2.15%	66.67%
Total	3	3.23%	100.00%
Invalid System	90	96.77%	
Total	93	100.00%	

Concept-mapping (e.g. Mind Mapping software)			
	Frequency	Percent	Valid Percent
Valid Yes	3	3.23%	100.00%
Invalid System	90	96.77%	
Total	93	100.00%	

Desktop publishing (e.g. InDesign, Quark Xpress, PageMaker)			
	Frequency	Percent	Valid Percent
Valid Yes	3	3.23%	100.00%
Invalid System	90	96.77%	
Total	93	100.00%	

Graphics/Animation (e.g. Photoshop, Freehand, Flash, Illustrator)			
	Frequency	Percent	Valid Percent
Valid Yes	12	12.90%	100.00%
Invalid System	81	87.10%	
Total	93	100.00%	

Video shooting			
	Frequency	Percent	Valid Percent
Valid Yes	16	17.20%	100.00%
Invalid System	77	82.80%	
Total	93	100.00%	

Audio and video production (e.g. ACID, Sound Booth, Sound Track Pro, Premiere, Ulead VideoStudio, Final Cut Pro)			
	Frequency	Percent	Valid Percent
Valid Yes	9	9.68%	100.00%
Invalid System	84	90.32%	
Total	93	100.00%	

Scanning			
	Frequency	Percent	Valid Percent
Valid Yes	13	13.98%	100.00%
Invalid System	80	86.02%	
Total	93	100.00%	

Web page development (e.g. CSS, Dreamweaver, FrontPage, HTML)			
	Frequency	Percent	Valid Percent
Valid Yes	5	5.38%	100.00%
Invalid System	88	94.62%	
Total	93	100.00%	

Web programming (e.g. JavaScript, PHP)			
	Frequency	Percent	Valid Percent
Valid Yes	3	3.23%	100.00%
Invalid System	90	96.77%	
Total	93	100.00%	

None			
	Frequency	Percent	Valid Percent
Valid Yes	2	2.15%	100.00%
Invalid System	91	97.85%	
Total	93	100.00%	

Q7. How much has each of the following factors influenced your use of technology in your teaching?

Lack of technical skills			
	Frequency	Percent	Valid Percent
Valid Not at all	22	23.66%	25.00%
Little	20	21.51%	22.73%
Some	29	31.18%	32.95%
Much	11	11.83%	12.50%
Very Much	6	6.45%	6.82%
Sub-Total	*88*	*94.62%*	*100.00%*
Invalid System	5	5.38%	
Total	93	100.00%	

Lack of instructional design skills			
	Frequency	Percent	Valid Percent
Valid Not at all	24	25.81%	27.91%
Little	22	23.66%	25.58%
Some	21	22.58%	24.42%
Much	13	13.98%	15.12%
Very Much	6	6.45%	6.98%
Sub-Total	*86*	*92.47%*	*100.00%*
Invalid System	7	7.53%	
Total	93	100.00%	

Lack of technical support

			Frequency	Percent	Valid Percent
Valid		Not at all	16	17.20%	18.60%
		Little	27	29.03%	31.40%
		Some	24	25.81%	27.91%
		Much	10	10.75%	11.63%
		Very Much	9	9.68%	10.47%
		Sub-Total	*86*	*92.47%*	*100.00%*
Invalid		System	7	7.53%	
Total			93	100.00%	

Lack of classroom equipment

			Frequency	Percent	Valid Percent
Valid		Not at all	22	23.66%	25.00%
		Little	20	21.51%	22.73%
		Some	27	29.03%	30.68%
		Much	14	15.05%	15.91%
		Very Much	5	5.38%	5.68%
		Sub-Total	*88*	*94.62%*	*100.00%*
Invalid		System	5	5.38%	
Total			93	100.00%	

Lack of time

			Frequency	Percent	Valid Percent
Valid		Not at all	14	15.05%	16.09%
		Little	12	12.90%	13.79%
		Some	28	30.11%	32.18%
		Much	25	26.88%	28.74%
		Very Much	8	8.60%	9.20%
		Sub-Total	*87*	*93.55%*	*100.00%*
Invalid		System	6	6.45%	
Total			93	100.00%	

Lack of money

			Frequency	Percent	Valid Percent
Valid		Not at all	32	34.41%	37.21%
		Little	29	31.18%	33.72%
		Some	15	16.13%	17.44%
		Much	7	7.53%	8.14%
		Very Much	3	3.23%	3.49%
		Sub-Total	*86*	*92.47%*	*100.00%*
Invalid		System	7	7.53%	
Total			93	100.00%	

Extra work with little payoff				
		Frequency	Percent	Valid Percent
Valid	Not at all	22	23.66%	26.19%
	Little	16	17.20%	19.05%
	Some	27	29.03%	32.14%
	Much	15	16.13%	17.86%
	Very Much	4	4.30%	4.76%
	Sub-Total	*84*	*90.32%*	*100.00%*
Invalid	System	9	9.68%	
Total		93	100.00%	

Instructional technology does not fit my teaching style				
		Frequency	Percent	Valid Percent
Valid	Not at all	24	25.81%	28.57%
	Little	19	20.43%	22.62%
	Some	25	26.88%	29.76%
	Much	11	11.83%	13.10%
	Very Much	5	5.38%	5.95%
	Sub-Total	*84*	*90.32%*	*100.00%*
Invalid	System	9	9.68%	
Total		93	100.00%	

Little impact on tenure/promotion				
		Frequency	Percent	Valid Percent
Valid	Not at all	37	39.78%	43.53%
	Little	18	19.35%	21.18%
	Some	18	19.35%	21.18%
	Much	8	8.60%	9.41%
	Very Much	4	4.30%	4.71%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Lack of incentives/rewards				
		Frequency	Percent	Valid Percent
Valid	Not at all	29	31.18%	34.94%
	Little	21	22.58%	25.30%
	Some	24	25.81%	28.92%
	Much	5	5.38%	6.02%
	Very Much	4	4.30%	4.82%
	Sub-Total	*83*	*89.25%*	*100.00%*
Invalid	System	10	10.75%	
Total		93	100.00%	

Students do not know how to use it well				
		Frequency	Percent	Valid Percent
Valid	Not at all	33	35.48%	38.82%
	Little	23	24.73%	27.06%
	Some	19	20.43%	22.35%
	Much	7	7.53%	8.24%
	Very Much	3	3.23%	3.53%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Technologies change too quickly				
		Frequency	Percent	Valid Percent
Valid	Not at all	31	33.33%	36.47%
	Little	22	23.66%	25.88%
	Some	18	19.35%	21.18%
	Much	9	9.68%	10.59%
	Very Much	5	5.38%	5.88%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Copyright/Intellectual property issues				
		Frequency	Percent	Valid Percent
Valid	Not at all	25	26.88%	29.41%
	Little	16	17.20%	18.82%
	Some	28	30.11%	32.94%
	Much	13	13.98%	15.29%
	Very Much	3	3.23%	3.53%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Q8. In your opinion, how useful are/would be the following technology support services to help you effectively incorporate technology into your course?

Individual consultants		Frequency	Percent	Valid Percent
Valid	Not at all useful	4	4.30%	4.60%
	A little useful	17	18.28%	19.54%
	Somewhat useful	28	30.11%	32.18%
	Quite useful	25	26.88%	28.74%
	Extremely useful	13	13.98%	14.94%
	Sub-Total	*87*	*93.55%*	*100.00%*
Invalid	System	6	6.45%	
Total		93	100.00%	

Your departmental support staff		Frequency	Percent	Valid Percent
Valid	Not at all useful	2	2.15%	2.25%
	A little useful	13	13.98%	14.61%
	Somewhat useful	22	23.66%	24.72%
	Quite useful	33	35.48%	37.08%
	Extremely useful	19	20.43%	21.35%
	Sub-Total	*89*	*95.70%*	*100.00%*
Invalid	System	4	4.30%	
Total		93	100.00%	

Delegated student helper		Frequency	Percent	Valid Percent
Valid	Not at all useful	10	10.75%	11.49%
	A little useful	18	19.35%	20.69%
	Somewhat useful	29	31.18%	33.33%
	Quite useful	26	27.96%	29.89%
	Extremely useful	4	4.30%	4.60%
	Sub-Total	*87*	*93.55%*	*100.00%*
Invalid	System	6	6.45%	
Total		93	100.00%	

Technology training sessions offered by TLC or ITSC		Frequency	Percent	Valid Percent
Valid	Not at all useful	11	11.83%	12.50%
	A little useful	23	24.73%	26.14%
	Somewhat useful	31	33.33%	35.23%
	Quite useful	16	17.20%	18.18%
	Extremely useful	7	7.53%	7.95%
	Sub-Total	*88*	*94.62%*	*100.00%*
Invalid	System	5	5.38%	
Total		93	100.00%	

Department customized training (i.e. training offered for your department)		Frequency	Percent	Valid Percent
Valid	Not at all useful	12	12.90%	13.95%
	A little useful	21	22.58%	24.42%
	Somewhat useful	22	23.66%	25.58%
	Quite useful	17	18.28%	19.77%
	Extremely useful	14	15.05%	16.28%
	Sub-Total	*86*	*92.47%*	*100.00%*
Invalid	System	7	7.53%	
Total		93	100.00%	

Web-based or online training		Frequency	Percent	Valid Percent
Valid	Not at all useful	14	15.05%	16.47%
	A little useful	18	19.35%	21.18%
	Somewhat useful	33	35.48%	38.82%
	Quite useful	11	11.83%	12.94%
	Extremely useful	9	9.68%	10.59%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Seminars or sharing sessions showing how other faculties are using IT in teaching		Frequency	Percent	Valid Percent
Valid	Not at all useful	14	15.05%	16.47%
	A little useful	23	24.73%	27.06%
	Somewhat useful	32	34.41%	37.65%
	Quite useful	11	11.83%	12.94%
	Extremely useful	5	5.38%	5.88%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Tailor-made courseware produced by TLC		Frequency	Percent	Valid Percent
Valid	Not at all useful	13	13.98%	14.94%
	A little useful	19	20.43%	21.84%
	Somewhat useful	37	39.78%	42.53%
	Quite useful	13	13.98%	14.94%
	Extremely useful	5	5.38%	5.75%
	Sub-Total	*87*	*93.55%*	*100.00%*
Invalid	System	6	6.45%	
Total		93	100.00%	

Printed resources (e.g. user manuals and short papers)		Frequency	Percent	Valid Percent
Valid	Not at all useful	13	13.98%	15.48%
	A little useful	20	21.51%	23.81%
	Somewhat useful	27	29.03%	32.14%
	Quite useful	15	16.13%	17.86%
	Extremely useful	9	9.68%	10.71%
	Sub-Total	*84*	*90.32%*	*100.00%*
Invalid	System	9	9.68%	
Total		93	100.00%	

Q9. To what extent have you used the following information technologies in your RESEARCH in the 2008-09 academic year?

Internet search		Frequency	Percent	Valid Percent
Valid	Never	3	3.23%	3.53%
	Seldom	2	2.15%	2.35%
	Occasionally	4	4.30%	4.71%
	Frequently	26	27.96%	30.59%
	Very Frequently	50	53.76%	58.82%
	Sub-Total	*85*	*91.40%*	*100.00%*
Invalid	System	8	8.60%	
Total		93	100.00%	

Presentation technology (e.g. PowerPoint)			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	1	1.08%	1.20%
	Never	9	9.68%	10.84%
	Seldom	6	6.45%	7.23%
	Occasionally	16	17.20%	19.28%
	Frequently	24	25.81%	28.92%
	Very Frequently	27	29.03%	32.53%
	Sub-Total	*83*	*89.25%*	*100.00%*
Invalid	System	10	10.75%	
Total		93	100.00%	

Online library licensed journals, electronic databases			
		Frequency	Percent	Valid Percent
Valid	Never	5	5.38%	5.95%
	Seldom	7	7.53%	8.33%
	Occasionally	10	10.75%	11.90%
	Frequently	24	25.81%	28.57%
	Very Frequently	38	40.86%	45.24%
	Sub-Total	*84*	*90.32%*	*100.00%*
Invalid	System	9	9.68%	
Total		93	100.00%	

Data analysis software (e.g. SPSS, SAS, STAT, NUD*IST)			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	13	13.98%	15.85%
	Never	18	19.35%	21.95%
	Seldom	17	18.28%	20.73%
	Occasionally	13	13.98%	15.85%
	Frequently	9	9.68%	10.98%
	Very Frequently	12	12.90%	14.63%
	Sub-Total	*82*	*88.17%*	*100.00%*
Invalid	System	11	11.83%	
Total		93	100.00%	

Online survey tools		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	8	8.60%	10.13%
	Never	31	33.33%	39.24%
	Seldom	23	24.73%	29.11%
	Occasionally	10	10.75%	12.66%
	Frequently	4	4.30%	5.06%
	Very Frequently	3	3.23%	3.80%
	Sub-Total	*79*	*84.95%*	*100.00%*
Invalid	System	14	15.05%	
Total		93	100.00%	

Videoconferencing/ virtual meetings		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	7	7.53%	8.75%
	Never	48	51.61%	60.00%
	Seldom	10	10.75%	12.50%
	Occasionally	12	12.90%	15.00%
	Frequently	1	1.08%	1.25%
	Very Frequently	2	2.15%	2.50%
	Sub-Total	*80*	*86.02%*	*100.00%*
Invalid	System	13	13.98%	
Total		93	100.00%	

Video sharing applications (e.g. YouTube)		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	3	3.23%	3.75%
	Never	34	36.56%	42.50%
	Seldom	19	20.43%	23.75%
	Occasionally	15	16.13%	18.75%
	Frequently	7	7.53%	8.75%
	Very Frequently	2	2.15%	2.50%
	Sub-Total	*80*	*86.02%*	*100.00%*
Invalid	System	13	13.98%	
Total		93	100.00%	

RSS feeds			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	20	21.51%	25.00%
	Never	39	41.94%	48.75%
	Seldom	9	9.68%	11.25%
	Occasionally	11	11.83%	13.75%
	Frequently	1	1.08%	1.25%
	Sub-Total	*80*	*86.02%*	*100.00%*
Invalid	System	13	13.98%	
Total		93	100.00%	

Instant messaging (e.g. MSN, ICQ)			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	7	7.53%	8.86%
	Never	41	44.09%	51.90%
	Seldom	16	17.20%	20.25%
	Occasionally	10	10.75%	12.66%
	Frequently	1	1.08%	1.27%
	Very Frequently	4	4.30%	5.06%
	Sub-Total	*79*	*84.95%*	*100.00%*
Invalid	System	14	15.05%	
Total		93	100.00%	

Database applications (e.g. Access, MySQL)			
		Frequency	Percent	Valid Percent
Valid	Not familiar with this tool	12	12.90%	15.38%
	Never	39	41.94%	50.00%
	Seldom	12	12.90%	15.38%
	Occasionally	11	11.83%	14.10%
	Frequently	3	3.23%	3.85%
	Very Frequently	1	1.08%	1.28%
	Sub-Total	*78*	*83.87%*	*100.00%*
Invalid	System	15	16.13%	
Total		93	100.00%	

Q10. Please rate the extent of your agreement/disagreement on each of the following statements.

I think IT can enhance my teaching.		Frequency	Percent	Valid Percent
Valid	Disagree	2	2.15%	2.22%
	Neutral	14	15.05%	15.56%
	Agree	48	51.61%	53.33%
	Strongly Agree	26	27.96%	28.89%
	Sub-Total	*90*	*96.77%*	*100.00%*
Invalid	System	3	3.23%	
Total		93	100.00%	

I think I can teach my existing courses sufficiently well without using IT at all.		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	15	16.13%	17.05%
	Disagree	27	29.03%	30.68%
	Neutral	25	26.88%	28.41%
	Agree	17	18.28%	19.32%
	Strongly Agree	4	4.30%	4.55%
	Sub-Total	*88*	*94.62%*	*100.00%*
Invalid	System	5	5.38%	
Total		93	100.00%	

My IT knowledge is already good enough for the technology that I use in my teaching and research.		Frequency	Percent	Valid Percent
Valid	Not Sure	1	1.08%	1.14%
	Strongly Disagree	5	5.38%	5.68%
	Disagree	19	20.43%	21.59%
	Neutral	27	29.03%	30.68%
	Agree	29	31.18%	32.95%
	Strongly Agree	7	7.53%	7.95%
	Sub-Total	*88*	*94.62%*	*100.00%*
Invalid	System	5	5.38%	
Total		93	100.00%	

I would like to have more IT related knowledge and skills for use in my teaching.				
		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	3	3.23%	3.41%
	Disagree	6	6.45%	6.82%
	Neutral	27	29.03%	30.68%
	Agree	37	39.78%	42.05%
	Strongly Agree	15	16.13%	17.05%
	Sub-Total	*88*	*94.62%*	*100.00%*
Invalid	System	5	5.38%	
Total		93	100.00%	

I already get enough IT support for my teaching and research.				
		Frequency	Percent	Valid Percent
Valid	Strongly Disagree	6	6.45%	6.90%
	Disagree	27	29.03%	31.03%
	Neutral	37	39.78%	42.53%
	Agree	16	17.20%	18.39%
	Strongly Agree	1	1.08%	1.15%
	Sub-Total	*87*	*93.55%*	*100.00%*
Invalid	System	6	6.45%	
Total		93	100.00%	

Demographics

Gender		Frequency	Percent	Valid Percent
Valid	Male	54	58.06%	59.34%
	Female	37	39.78%	40.66%
	Sub-Total	*91*	*97.85%*	*100.00%*
Invalid	System	2	2.15%	
Total		93	100.00%	

Number of years of teaching experience		Frequency	Percent	Valid Percent
Valid	less than 12 months	3	3.23%	3.33%
	1-2 years	10	10.75%	11.11%
	3-4 years	14	15.05%	15.56%
	5-6 years	13	13.98%	14.44%
	7-8 years	9	9.68%	10.00%
	9 or more years	41	44.09%	45.56%
	Sub-Total	*90*	*96.77%*	*100.00%*
Invalid	System	3	3.23%	
Total		93	100.00%	

Your affiliation		Frequency	Percent	Valid Percent
Valid	Lingnan University	61	65.59%	68.54%
	Community College	7	7.53%	7.87%
	LIFE	21	22.58%	23.60%
	Sub-Total	*89*	*95.70%*	*100.00%*
Invalid	System	4	4.30%	
Total		93	100.00%	

Your department (for Lingnan University staff only)				
		Frequency	Percent	Valid Percent
Valid	BSocSc (Hons) Programme Office	5	5.38%	8.20%
	Chinese Language Education and Assessment Centre (CLEAC)	1	1.08%	1.64%
	Department of Accountancy	6	6.45%	9.84%
	Department of Chinese	2	2.15%	3.28%
	Department of Computing and Decision Sciences	4	4.30%	6.56%
	Department of Cultural Studies	2	2.15%	3.28%
	Department of Economics	2	2.15%	3.28%
	Department of English	2	2.15%	3.28%
	Department of Finance and Insurance	1	1.08%	1.64%
	Department of History	4	4.30%	6.56%
	Department of Management	2	2.15%	3.28%
	Department of Marketing and International Business	5	5.38%	8.20%
	Department of Philosophy (Philosophy & Visual Studies)	11	11.83%	18.03%
	Department of Political Science	1	1.08%	1.64%
	Department of Sociology and Social Policy	5	5.38%	8.20%
	Department of Translation	3	3.23%	4.92%
	English Language Education and Assessment Centre (ELEAC)	5	5.38%	8.20%
	Sub-Total	*61*	*65.59%*	*100.00%*
Invalid	System	32	34.41%	
Total		93	100.00%	

APPENDIX O: ITSC STAFF INTERVIEW NOTES

Interviewee A

1. Personal Information
   a. Working at Lingnan University for 15 Years
   b. In the same position he is now for 7 years
2. What is the number 1 priority of ITSC?
   a. To establish a good infrastructure
3. Wireless Internet
   a. Car park basement, dead zone for wireless(not necessary)
   b. Collaborative hotspots with all universities
      i. Y5 Zone
      ii. PCCW
   c. EduRoam
      i. Cooperate with other student universities
      ii. Allows students to get Wi-Fi for other schools, all 8 universities
4. Resources at Lingnan
   a. IP Cisco phones issues 1,500 license for each student hostel
      i. Allows students to call from anywhere
   b. Biggest problem is slow Internet
      i. 800 kbps minimum, YouTube videos (higher priority)
      ii. Internet has gotten better every semester; they are constantly trying to improve it.
         1. Jan, 2009 - 840 MB
         2. Set 2009 – 1.2 GB
         3. March 2010 – 1.5 GB
   c. Netbooks are not popular at Lingnan
5. Current technology that can be huge : Video conferencing
   a. One class at Lingnan in 2009 did at 130 student video conference lecture(100 from Taiwan and 30 from Lingnan)
   b. Remote lectures technology is available, if faculty is willing to use, funding can be provided
      i. Echo 360
      ii. Mediasite
6. UGC(University Grand Committee)
   a. Wants to see more collaborations between all of the universities
   b. All 8 IT's are in the JUCC(The Joint Universities Computer Centre (JUCC))
      i. Nonprofit organization
      ii. Promotes collaboration between all the universities
         1. JUCC's primary objective is to provide computing and information technology services for its members with an aim to further the

development of information technology and services in the
education community in Hong Kong

     c. All 8 universities have similar infrastructure

Interviewee B

1. Personal Information
   a. Higher Education from Canada
   b. HKPU – 30 years, spent last 10 years there
   c. Has only been at Lingnan for roughly 1 month
2. Responsibilities
   a. Looks after IT services
   b. Policies
   c. New initiatives
3. Mobile learning
   a. More seats outside
   b. More communication with students outside of the classroom
   c. Wants kids to learn with each other socially, and right now, at Lingnan, you don't really see people outside socializing/learning, more accommodation for that is needed.
   d. More LCD screens, more PDA communications
   e. Stimulation of ideas through debate and communication
4. Concerns
   a. Hacking
   b. Piracy
   c. Copyrighting
5. Interest for Future
   a. Second Life
      i. Virtual library
      ii. IT help center
      iii. Hotel/tourism majors – practice
      iv. Bring Second Life to HK to help w/ bandwidth issues
         1. Needs both commercial and university support
   b. E-books
   c. Recording technologies(video/audio)
   d. Wants to talk with students in a smaller social setting
      i. Café
      ii. Dinner
6. Biggest problem is Internet bandwidth
   a. 2pm traffic jam on network
7. Perception of Faculty
   a. "Faculty should have an open mind"
      i. YouTube/Facebook for social collaboration of learning

        ii.   Movement toward Internet cloud

       iii.   "mind stimulation"

       iv.   Internationalize the university

            1.   Make use of video clips from other university professors

8. Perception of Students
   a. Hong Kong social skills need improvement
      i. Lingnan tries to focus on soft skills
9. Move to the cloud will take place but cloud computing needs to mature first
   a. Private cloud is more secure
   b. Public cloud = more trust in service providers
   c. Student email could move to the cloud
   d. Staff email should not move to cloud
      i. Confidential material
         1. Student information
         2. Research
   e. Make use of private cloud first

Interviewee C

1. Most popular services
   a. Luna – database software
   b. ELEAC – application
   c. Email
      i. Ranked as highest learning technology
         1. Campus E-mail
         2. Web E-mail
2. They provide AV services
   a. Lets people generate multimedia
   b. Can loan anything from camera to an entire multimedia setup
3. Annual User Survey
   a. Given to staff and students
      i. Online survey
   b. Satisfaction of tech services
   c. Questions students on which new tech is desired
4. All new technology needs to be supported by hardware and experts behind the scenes
   a. Requires discussions and proposals to implement
   b. Example
      i. Helped student union acquire a server
         1. Need to address security issues
         2. UI concerns
         3. Number of people to support
5. Teaching and Learning will change from Professor to student to multi-source to student
   a. Rapid change to Internet and other areas

6. Learning psychology is the same here as other schools
    a. Tech is a good complement to humans, but cannot replace them
    b. Liberal Arts forces a human component but tech will enhance it further
7. WebCT usage is growing
    a. Select best service for students
8. Looking to develop discussion board for campus
    a. Class based? – in proposal stage
9. ITSC can provide the platform for social network
    a. Infrastructure
    b. Networking
    c. Security
    d. Support
    e. Content to come from TLC or SSC
10. Collaboration between departments
    a. ITSC provides infrastructure and support
        i. ITSC = road
        ii. Other departments = car
        iii. ITSC provides good roads for nice cars to drive on
11. New technologies require funding from other sources when not in the ITSC budget
12. Add/Drop is a transaction system that needs improvement
    a. Students must release (drop) before others can add
    b. Creates bandwidth bottle neck
13. Best way to evaluate cloud computer is neglecting brand
    a. Answer: how can it bring benefit?
    b. Security
        i. Where is the data?
        ii. Must rely completely on vendor for data security
14. Use ln.hk for social networking
    a. Clouds for alumni, professors, etc
15. Use ln.edu.hk for education/business
16. Cloud is pay-as-you-go
    a. For space and CPU time
    b. Can be more expensive in the long run
17. Rationale for more bandwidth (in hostels)
    a. If you want more, you need to pay more
    b. Is it fair to charge people more who only use Internet to study because other people want to play games?

APPENDIX P: FACULTY INTERVIEW NOTES

Interviewee A

1. Use of PowerPoint
    a. Student push for PowerPoint handouts
2. Tutorial room
    a. Used for actual teaching at times
    b. Lack of computer and LED projector an issue
        i. Hindrance to furthering curriculum
    c. Tutorial room laptop hookup issue
        i. System was down – never tried again
        ii. Embarrassing to teacher in front of students
        iii. Takes too much time to set up
3. Moodle and Mahara
    a. Difficult to use these tools without a computer in the classroom
    b. Lack of infrastructure
4. Use of WebCT
    a. Successful module at City University of Hong Kong
        i. Wimba plug-in – voice tool for WebCT
        ii. Voice emails, recording
        iii. Could either keep it private or make it public to other students for feedback
        iv. Graded on improvement
    b. Too expensive for Lingnan
        i. Looking into other possible tools
5. Lecture capturing
    a. Lecturing not personal teaching style
    b. Might be useful for teacher training
    c. Not perceived as useful for the students
6. Transparencies issues
    a. Wants course materials online or on USB to use in class
    b. Transparencies are a hassle to deal with
7. Social networks
    a. Never used them
    b. Receptive to ideas
8. Outside of class communication
    a. Always uses email to communicate with students
        i. Occasional mailbox fills up
    b. Has access to student mobile numbers but hasn't used them
9. In class polling devices
    a. Has used them previously but not often
10. Administrative rights issues

a. Can't download or load software
b. Sometimes need to phone for support while in class
c. Hostel network is too slow to work
d. Add/drop issues

Interviewee B

1. Use of WebCT
   a. Video clips
   b. Sample course material
   c. Discussion boards not used
   d. Very useful – would go to a workshop if offered
   e. Will use any technology that helps students
   f. Posts material for students that are struggling
      i. Saves money on copying
      ii. Students can choose material they need
2. Use of PowerPoint
   a. Used only sometimes
3. Greatest challenge
   a. Adjusting levels of material for students of different levels
   b. Need to pick the appropriate level to teach at depending on students attending
4. Time issues prevent learning using new technology
   a. Computers take time to set up
   b. Need help from students
   c. Otherwise open to trying new tools
5. Social networking
   a. Good to know more about students
      i. What they learn, what they struggle with
   b. Some students' posts on Facebook alert that students are being overworked
   c. Can catch on to student emotional problems
      i. Will call up to see if they are OK
   d. Interpersonal relationships with students, some benefit from adult guidance
      i. Good informal communication tool
6. Blogs
   a. Colleagues use blogs
      i. Likes creative writing on blogs
      ii. Seen as very successful
   b. Have not used them in class yet
7. E-mails
   a. Perceives students don't check e-mail
      i. One student has over 4000 unchecked messages
   b. Perceives they mostly check personal account
   c. Very interested in communicating via text message

i. Good for informing students of a class cancellation

Interviewee C

1. Use of PowerPoint
   a. Using more frequently than in past
   b. Likes using pictures, not just text
   c. Perceives PowerPoint slides with masses of text is not very helpful
   d. Perceives 15-20 slides per lecture is appropriate
2. Used to show video clips however classrooms no longer have VCR's
   a. Some information is not available on DVD
3. Use of WebCT
   a. Posts some PowerPoint slides, but not all of them
4. Technology hurdles
   a. "I think one of the things holding me back is that something will go wrong and I'll look like a complete idiot in front of the class"
   b. Not very good at playing DVD clips
5. Lingnan's technology level is at current comfort level
   a. Sometimes students have issues with the technology in the tutorial rooms
6. Text messages
   a. Would not send from personal phone
      i. Does not want to give out number
   b. Would use if integrated into WebCT or Banner
   c. Perceives students would check it more than email
7. Online social networks
   a. Would not use it
   b. Some colleagues ("younger generation") use it
8. In-class polling devices
   a. Perceives that it could help bridge cultural divide
9. Classroom setup comments
   a. Tutorial rooms
      i. Too many of them have tables
      ii. Likes the chairs as they can be moved into a circle
      iii. "Students shouldn't be looking at the back of somebody's head"
      iv. Likes a conference style
   b. Conference room
      i. Always booked
      ii. Used for meetings, interviews, speakers
      iii. Occasionally used for classes, but hard to get a permanent time slot

Interviewee D

1. Use of PowerPoint
    a.   Uses to lecture
2. WebCT
    a. Posts PowerPoint slides
3. Plays video clips for class
4. Recording of lectures
    a.   Would not mind being recorded
    b.   Would need help
5. Biggest challenge as a professor at Lingnan
    a.   Language barrier
6. Incentives to attend ITSC training:
    a.   Comfortable
    b.   Useful
7. Online social networks
    a.   Facebook not really used
    i.   Security concern
8. In-class polling devices
    a.   Great idea (possible use for end of class recap questions)
9. Tools that have been effective for teaching and learning
    a.   Reflective journals (handwritten)

Interviewee E

1. Useful class tool
    a. 20 questions passed out at end of lecture, students answer 10 of them for tutorial
2. Usage of WebCT
    a. Posts PowerPoint slides
3. Blogs or Wikis as a learning tool
    a. Would love to use them but have not yet
4. Social networking
    a. Everyone in department is on Facebook
    b. Uses it to keep in touch with alumni and to communicate with students that may potentially be going through unfortunate times
5. Technology interest requirement
    a. Promotes thought and critical thinking during class
6. Issues
    a. Language barrier
    b. Would like to see discussion classrooms (i.e. round table)

Interviewee F

1. PowerPoint
   a. Perceives as useful for class
   b. However experimenting with not using it
2. Challenge in teaching at Lingnan
   a. Essays as assignments
      i. Many students have relatively poor English skills
      ii. Some students copy from book
3. Online course material
   a. Does not use WebCT
   b. Uses own website to make materials available
4. New technology at Lingnan
   a. Interested in electronic whiteboards
5. Blogs and Wikis in learning
   a. Perceives it could not keep students' interest
6. Online social networking
   a. On Facebook, but not for teaching
      i. Okay with being friends with students
7. In-classroom polling devices
   a. Interesting idea
8. Texting
   a. Thinks sending mass texts might be easier than sending email
9. Computer issues
   a. Computers can be slow to load PowerPoint at times

Interviewee G

1. Use of PowerPoint
   a. Used for all lectures and some tutorials
   b. Helps overcome language barrier
   c. Feels compelled to use PowerPoint
      i. Perceives students are lost without it
2. Student problems
   a. Perceives many students are passive learners
   b. Perceives many students think using English is intimidating
3. Recording lectures
   a. Never thought about it
   b. Does not see benefit
4. Use of WebCT
   a. Uses discussion forum online
      i. Mostly for tutorials
      ii. Posts questions
      iii. Student participation is graded
   b. Posts PowerPoint slides

      c.   Posts readings as pdf's

      d.   Uses E-mail function

      e.   Does not know how to use grading

           i.   Would like to learn it

5. Text messages

      a.   Interested in using for class

6. Blogs and Wiki for class

      a.   Uses wiki as a class assignment

           i.   Continuous editing a benefit

           ii.   Both exciting and fearful

           iii.   Good kind of pressure due to global audience

      b.   Time constraints prevent usage of blogs for class

7. Open to the use of online student collaboration tools

Interviewee H

1. Classroom environment

      a.   Use of YouTube

           i.   Three or four minute clips ideal – "Good for classrooms as students tend to go to sleep after five minutes"

      b.   Perceives students as passive learners

           i.   "Student don't mind you lecturing most of the time"

           ii.   "The problem isn't really getting information into their heads, it's getting them to apply it"

           iii.   "They are into memory rather than medium"

      c.   Use class handouts

           i.   Passes out handouts on subtopics

2. Lecturer capturing

      a.   Previous experience at City University of Hong Kong

      b.   "I wouldn't want to do that myself, but if that kind of service was provided, I wouldn't mind"

3. WebCT

      a.   Used discussion boards in the past

           i.   Current usage limited by time constraints

4. Teaches small classes

      a.   40 student maximum

5. Online social networking

      a.   Used Facebook

           i.   Current usage limited by time constraints

      b.   "Lots of potential for sharing"

6. Blogs and wikis

      a.   Particularly good for certain classes where students can record their experiences

      b.   Potential use for first-year student interdisciplinary course

7. Mobile devices
    a. Perceived as potentially useful for taking and uploading photos for class
8. Online social networking
    a. Facebook used to communicate with former students
        i. Does not do this with current students
9. Text messaging
    a. Perceives as potentially useful for locating students
10. Classroom design comments
    a. Suggests less furniture for easier chair rearrangement
        i. Furniture is difficult to move
    b. Prefers round-table or multiple round table style
    a. Classroom language barrier is an issue

APPENDIX Q: RESEARCH PROFESSOR INTERVIEW NOTES

Interviewee A

1. Most successful class
   a. A course that was intended to teach people how to use technology in their teaching
   b. Final essay replaced with six smaller blogging assignments
      i. Average student wrote between 4,000 – 8,500 total words
   c. Received Dean's accommodation medals, 3 in a row
2. Teaching and learning technologies
   a. Underutilized
      i. Blogging
      ii. Online collaboration
      iii. Wiki-ing
      iv. Forums
   b. Least favorite
      i. PowerPoint
         1. Too often abused
         2. Less density in the slides
         3. No less than font 18
   c. Most favorite
      i. No favorites
3. New technologies for teaching and learning
   a. Online social networking
   b. Online student collaboration
   c. Hopes for "Open Content movement"
      i. Trying to break the monopoly of textbook movements
4. Mobile technology usage in teaching and learning
   a. Usage in field studies
      i. Voice notes
      ii. Record a set of observations
      iii. Attach the voice notes to photos
      iv. Instantly record data in spreadsheets
5. Future plans for technology in teaching and learning
   a. Increased Mahara use
      i. Online portfolio tool
      ii. Blogging
      iii. Discussion
      iv. Content management
6. New classroom technology implementation
   a. Involve students in the process
   b. Perceive that students do not get upset when told what is expected

Interviewee B

1. Most successful class
   a. Used virtual teams – linked to students in Netherlands, US, and France
      i. International video chats
      ii. Online forums
      iii. Second life meetings
   b. Projects on impact of technology – themes
      i. Applications of virtual worlds
      ii. Publish book to go into the library
2. Online virtual worlds
   a. Success stories involve things that cannot be done in the real world
   b. Have great potential, but can be difficult to use for some students
   c. Harvard Law uses Second Life
   d. World of Warcraft
      i. Environment too restrictive
   e. Sun Microsystems' Project Wonderland
      i. Built around business support
      ii. Open source
      iii. Exportable and importable content
3. International video conferencing
   a. Good to see what other people are like from different areas of the world
   b. Can be hard because people have to be online at the same time
      i. Time difference
4. Learning bubble is always with the student
   a. Universities need to be part of that bubble
   b. Mobile phones can be used to access that bubble
5. Individual instructors drive innovation
   a. Not by country
   b. Only occasionally university policy
6. Mobile devices for teaching and learning
   a. Asynchronously used to download quizzes, etc
   b. Some colleges give away iPhones to all students
   c. Major next step – use phones as a mobile learning platform
      i. Need deep pockets
      ii. Always keep programmer and visual artist on staff
   d. PDA's worked well when instructors liked it and got excited
   e. Need school support (funding) and instructor support
   f. Really young and really old instructors embrace it
      i. Older instructors are curious and tenured
      ii. Young instructors are already familiar with the technology
      iii. Instructors in the middle have no time to devote
   g. Virtual worlds on a mobile phone

           i. Use direct movements on phone to naturally interact with virtual world

7. New technologies in the classroom
    a. Instructors can lose face if something crashes
    b. The technology must fit with the class activities
    c. Can be used to cut costs and increase safety
        i. Virtual chemistry experiments
        ii. Airplane simulations, etc
8. Current research
    a. Project wonderland
    b. Mobile government applications
        i. App to alert government of problems (pile of garbage, person collapses)
        ii. Take a picture of the problem and send to central server
    c. Mobile healthcare
        i. Medicine
        ii. Personal health
        iii. First aid instructions
    d. Never lost with a cell phone
9. Online learning managers
    a. Blackboard
        i. Can build apps for blackboard
        ii. Used for many years
        iii. Perceived as not being innovative anymore
        iv. Bad user interface
        v. No push to leave Blackboard
    b. Moodle
        i. Open source
        ii. Very innovative
        iii. Formerly not trusted enough to use at universities
        iv. Trust factor less of an issue currently
    c. Sakai
        i. Open source collaboration
        ii. Buy-in form membership
10. Not as much innovation as Moodle

APPENDIX R: STUDENT FOCUS GROUP NOTES

Student Focus Group A

1. Popular software
   a. Microsoft Office
   b. MSN
   c. Photoshop
   d. Illustrator
   e. Windows Media Player
   f. Paint
   g. Firefox / Internet Explorer
2. Popular websites
   a. Facebook
      i. Some information not shared with professors
      ii. "Safer way to communicate with professors than in face-to-face confrontation because you have time to think about what you want to say"
      iii. More time to think about response
   b. Gmail
   c. YouTube
   d. Google
   e. Hotmail
   f. Yahoo
3. Texting usage
   a. "Text every minute"
   b. Texting used more than e-mail
4. Wireless connection issues
   a. Disconnects very frequently
   b. Little difference in reliability between on main campus area and hostels
5. E-mail usage
   a. Private e-mail accounts used more frequently than Lingnan accounts
6. WebCT usage
   a. Used by students if it is utilized by instructors or tutors
      i. Used to upload/download class files
   b. Discussion forum is not used
      i. "I don't know why, [the WebCT discussion features] can be quite useful but many professors don't know how to use it"
7. PowerPoint usage
   a. Always used by instructors
   b. Sometimes too wordy
8. Blog usage
   a. Do not see much difference between writing blogs versus regular essays

9. YouTube usage
    a. Used for fun but some professors use it change up style of lectures
    b. Interesting and interactive

Student Focus Group B

1. General classroom perceptions
    a. Discussion based classes liked
    b. Mandarin language classes disliked
    c. Critical thinking courses interesting
    d. Lecture format can be boring
2. Internet usage
    a. Used multiple hours a day
    b. Most often used for chatting / communication
    c. Online TV popular
    d. Facebook popular
        i. Mixed feels about communicating with instructors on Facebook
    e. Collaboration tools not used
        i. Students receptive to concept
3. Texting perceptions
    a. Texting very popular
    b. Text notice if instructor is sick would be useful
4. Desired change
More material available in both Chinese and English

APPENDIX S: COMPUTER LAB SOFTWARE

This appendix contains a complete listing of the software installed on machines in Lingnan University computer labs. This information is current as of October 30, 2009. An online listing can be found at: http://www.ln.edu.hk/itsc/desktop/software/lab

Operating System

Microsoft Windows XP with Multilingual User Interface

Software Available in All Computer Labs

Adobe Acrobat Reader 9

Apabi Reader

Borland JBuilder X Foundation

CAJViewer

Eviews 6.0

Insight 5.1

Internet Explorer 7

J2SE Runtime Environment 6.0

Java JSD2 Standard Edition 1.4

Media Player Classic

MetaFrame Presentation Server Client

Microsoft Office 2007 Suite

Microsoft Office Project 2003

Microsoft Visual Basic 6.0

Microsoft Visual C++ 6.0

MS HKSCS-2001

MYOB 8.0

Oracle Jinitiator

Oracle ODBC

Print Balance

SQL Client 7.0

SSH

Symantec Endpoint Protection

Symantec Ghost Console Client

Thunderbird

VNC

ZipGenius

Additional Licensed Software for Dedicated Computers Labs Only

BUG19

Adobe Creative Suite 2 Professional, including

Photoshop CS2

Illustrator CS2

InDesign CS2

GoLive CS2

Acrobat 7.0 Professional

Version Cue CS2

Bridge CS2

Stock Photos

BUG19 and MB412

    Adobe Creative Suite 3 Production Premium, including

    After Effects CS3

    Bridge CS3

    Device Central CS3

    Encore CS3

    ExtendScript Toolkit 2

    Extension Manager CS3

    Flash CS3 Professional

    Flash CS3 Video Encoder

    Illustrator CS3

    Photoshop CS3

    Premiere Pro CS3

    Soundbooth CS3

    Stock Photos CS3

    Adobe Ultra CS3

    Adobe OnLocation CS3

MB202, MB412, NAB204, NAB206, NAB209 and NAB213

    Audacity

    Firefox

NAB204, NAB206 and NAB209

    Eclipse IDE for Java EE Developers

    Gvim 7.1

J2SE Development Kit 5.0

NetBeans IDE 5.0

Visual Paradigm for UML

Visual Studio Express 2008

NAB201, NAB202, NAB214 and NAB215

HYPY

NAB204, NAB206, NAB209, NAB213 and NAB215

Kompozer

BUG19, BU321, S0202, MB202 and MB412

Macromedia Dreamweaver 8

Macromedia Fireworks 8

Macromedia Flash 8

Macromedia FreeHand 8

NoteTab Light

Openwave SDK 6.22