E-Portfolios for Language Learning at Lingnan University

Interactive Qualifying Project
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Abstract

The goal of the project was to improve the use of e-portfolios for language learning at Lingnan University. The study gathered information on student and faculty use and perception of e-portfolios using student surveys, interviews, and Self Access Centre sessions. The results indicated strong trends relating effort, opinions, and resources surrounding e-portfolios. The research concluded with several recommendations including the implementation of "tech tutors", more in-class demonstrations, curriculum changes, and incentives for well-presented e-portfolio view layouts.

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Executive Summary

The WPI project team conducted an Interactive Qualifying Project at Lingnan University in the spring of 2011. Lingnan University implemented e-portfolios into all introductory English language learning classes beginning in the fall of 2010. Both students and faculty found the transition to an e-portfolio system difficult. Minor changes were made to the use of e-portfolios in the spring 2011 semester, but no comprehensive research study was ever conducted on the program. The goal of the project was to improve the use of e-portfolios as it pertains to displaying evidence of independent language learning at Lingnan University. To achieve this goal, the project team developed the following key objectives: identify potential issues associated with the current assessment of e-portfolio views, gage students' perceptions, evaluate students' use of technological assistance for e-portfolio views, correlate technology preferences to learning styles, and recommend improvements.

The WPI research team reviewed a number of different technologies currently used at Lingnan University. The most applicable technology researched was Mahara e-portfolios. Mahara is an open-source and web-based piece of software that allows users to upload documents and information in a variety of displays. Lingnan University uses Mahara e-portfolios in their LCE 101 and LCE 102 introductory English classes as a tool for students to show evidence of their Independent Learning (IL).

Mahara e-portfolios was new software to Lingnan, implemented in the fall of 2010. Therefore, the project team studied other schools that had implemented e-portfolios. An example of one of these schools is Rosny College, a senior secondary college located in Hobart, Tasmania. They implemented an e-portfolio system which they called a "Skillsbook" back in

2008. This Skillsbook was designed to provide evidence of learning specifically for their Vocational Education Training (VET) course. Lingnan University is using e-portfolios for a similar purpose. Both Lingnan and Rosny College met with student and faculty resistance during the first year of implementing e-portfolios. The research team learned that Rosny College gathered student and faculty feedback after the first year and implemented appropriate changes. These changes resulted in an improved perception of their e-portfolio "Skillsbook" in the following year. Therefore, the WPI project team gathered information from students and faculty in order to provide recommendations to Lingnan University. The project team anticipates these recommendations, if implemented, will achieve the positive outcome that Rosny College accomplished.

The project methodology included surveys, interviews, focus groups, and Centre for English and Additional Languages (CEAL) Self Access Centre (SAC) sessions. Table ES.1 shows a summary of the number of responses the research team was able to receive from each method. The target population for the surveys, Centre for English and Additional Languages (CEAL) Self Access Centre (SAC), focus groups and student interviews were composed of students who took LCE 101 in the fall of 2010. The target population for faculty interviews consisted of the instructors who taught LCE 101 in the fall of 2010. The team contacted these students and teachers by visiting classes, face-to-face communication, and email.

Table ES.1 - Methodology Population Overview

	Methods				
	Survey	Faculty Interviews	CEAL SAC	Student Interviews	Student Focus Groups
Participants	379	5	8	9	0
Participants in Target Population	340	5	4	9	0
Total Target Population	530	9	530	530	530
Percent of Population	64.15%	55.56%	0.75%	1.70%	0.00%

Each method was developed by the team based upon the project's goal and objectives. The surveys gave the team valuable insight into students perceptions of e-portfolios in relation to their learning styles, grades, and help received. The faculty interviews gave the team a deeper understanding of the challenges and difficulties associated with e-portfolios, specifically regarding grading and plagiarism issues. As can be seen in Table ES.1, the team was not able to hold a successful focus group due to a lack of student interest but was able to substitute them with student interviews. These student interviews helped the research group understand students' common challenges when creating an e-portfolio view. They also gave students the opportunity to voice their thoughts on future improvements to the use of resources and e-portfolios at Lingnan University. The project team was in the CEAL SAC for two hours every weekday and had only four relevant participants for the entirety of the team's time in the SAC. Overall, the team was able to gather information in a number of different approaches which strengthened the team's results.

From the Centre for English and Additional Languages (CEAL) Self Access Centre (SAC) sessions, the team was unable to collect enough data from the students to conduct a thorough analysis. The total number of students that attended these sessions was eight, and the

team was unable to help four students because the problems were unrelated to e-portfolios. The group did find value in the faculty contacts made by offering their assistance during these sessions. From the survey data, the team found interesting information regarding the students' opinions and perceptions regarding e-portfolios. On average, the students selected the "Don't like it" options from the survey when asked how they felt towards e-portfolios. Furthermore, the correlations between the data sets gave the team a better understanding of the information. Question 8, students' opinions of grading view presentation, showed that students have a slight negative idea of grading the layout of the view. Once the team correlated this question to Question 4, students overall opinion of e-portfolios, there was a trend. The more students like e-portfolios, the more open to the idea of grading the layout of the view they are. The data gathered from the faculty interviews gave insight into instructors' perspectives on the e-portfolio system and how it is used at Lingnan. The student interviews provided more in-depth information on the survey data and confirmed the survey results.

Table ES.2 outlines the conclusions and recommendations from this project. It also explains potential benefits to Lingnan University.

Table ES.2 - Findings and Proposed Recommendations

Findings	Recommendations	Benefits
Students have trouble with creating the layout of their e-portfolio views.	Give incentive for creating well-presented view	Students will create more well-presented view and the teacher will have an easier time grading the view.
The more students like using e-portfolios, the more open they are to incorporating the presentation of a view into the marking scheme.		
The students that spend more time on the presentation and layout of their views were increasingly interested in receiving marks for their efforts.		
Students would like to be rewarded for taking the time to make a well-presented view.		
The faculty members were thrilled to have e-portfolio technical support for their student.	Find long-term tech tutors	The tutor can help the student with any technical difficulty that the student might have.
Students want more e-portfolio technical support.		
The more help the students got, the better their opinion was of e-portfolios.		
Student obtained most of their help from their friends and in-class demonstrations.	Increase the amount of in-class demonstrations offered to the students	The student will also be able to learn how to efficiently make views.
Students who had in-class demonstrations liked e-portfolios better.		
The requirements of the English introductory e-portfolio assignments are identical.	Have a more structured assignment submission plan and have different set of requirements for each English introductory course	Students won't be able to submit their work from LCE 101 as a LCE 102 assignment. It will also discourage students from allowing friend to submit their work since they will be turning in the same view.
The e-portfolios assignments can be submitted in any order which gives the students a feasible way to copy each other's work and submit it as their own.		
The ability to download a view added to the problem of plagiarism since saving someone's work and submitting it as one's own is a simple task.	Remove the download feature from the students capabilities or apply a digital watermark to the view	Both of these options will discourage students from using someone else work as their own.
Student's e-portfolios views are deleted at the end of the semester.	Keep the students view for at least the duration of both introductory classes	The views will help the teacher practice their grading. Additionally the student won't feel like their work is not worth saving.

Using these recommendations will facilitate improvement in the students' and faculty members' perceptions of e-portfolios, directly affecting the impact that e-portfolios will have on language learning. Lingnan University is working towards a curriculum that supports a strong development of students' technical skills within their education. This project will aid them in that transition.

1. Introduction

Technology has become an integral part of both social and educational aspects of daily life. With many new smart phones, laptop features, and mobile applications, students are finding new technical means to stay connected, and gather and share information. With this movement towards such a technological society, education too must evolve to include technologies well-suited for learning purposes. In order to continually engage students in learning, educational systems all over the world need to incorporate new technologies into classroom activities.

Lingnan University is a publicly-supported liberal arts university in Hong Kong that was granted full university status on July 30, 1999 (About LU, 2010). In 2008, Lingnan developed a five-year strategic plan. A key point of this plan is to further develop students' knowledge and understanding of technology. Since then, many departments and courses began integrating technologies into their curriculum. However, this process involved a great deal of adjustment for students and faculty, and Lingnan has not yet evaluated the use of these technologies.

Lingnan University's Teaching and Learning Centre director, Dr. David Kennedy, has conducted research on using technology for learning, teaching and social purposes (Cabrera, et al., 2010). In order to better understand the use of technologies in education at Lingnan, a group of students from Worcester Polytechnic Institute (WPI) conducted a technological inventory at Lingnan University in 2010. They concluded that students at Lingnan preferred to see a wide range of technology used in their education. Teachers favored technologies that simplified the process of sharing information and grading. E-portfolios are one type of educational technology commonly used at universities. E-portfolios are a medium where students can present their work and progress in a variety of formats. This allows for instructors and peers to view students' accomplishments. At Rosny College in Tasmania, an e-portfolio system called Skillsbook was

implemented in 2008 (Sophie, 2009). Rosny College met with many objections and complaints to the use of the program. However, with a great deal of evaluation and feedback, the Skillbook program was improved and became a popular and effective tool.

Lingnan University implemented e-portfolios into all introductory English language learning classes beginning in the fall of 2010. Students were required to use the e-portfolios to visually display their independent learning activities and outcomes. Both students and faculty found the transition to an e-portfolio system difficult. Lingnan wanted to have a deeper understanding of the associated challenges that were faced and the specific issues that faculty and students experienced. Minor changes were made to the use of e-portfolios in spring semester of 2011, but no comprehensive research study was ever conducted on the opinions, perceptions, and challenges of the program. Lingnan needed to have a better understanding of students' problems and objections to using e-portfolios. It was also necessary for the University to understand the issues faculty members encountered when teaching and grading with e-portfolios.

The goal of the project was to improve the use of e-portfolios as it pertains to displaying evidence of independent language learning at Lingnan University. The research plan included surveys and interviews with faculty and students within the Centre for English and Additional Languages (CEAL) department. We were able to gage the opinions and perceptions of students surrounding the use of e-portfolios in English language courses. We evaluated the learning styles of the students using e-portfolios and compared them with their experience. Speaking to faculty members allowed the team to make recommendations regarding the current grading system of e-portfolios and the associated challenges. Finally, our results include assessment of the resources available to Lingnan students relating to e-portfolios and made recommendations to the faculty for improvements and further research. Lingnan University is working towards a

curriculum that supports a strong development of students' technical skills, and this project will facilitate that transition.

2. Background

Technology is widely-used for educational purposes and has a great deal of impact on students' learning experience. This chapter highlights specific technologies commonly used in education and analyzes examples of previous learning applications of virtual platforms. Additionally, students' attitudes and perceptions of incorporating technology into learning are strongly influenced by their learning style preferences. The Felder-Silverman Model and the Kolb Model are outlined in this chapter to provide an understanding of the way that students learn. At Lingnan University, technology is becoming more commonplace in the classroom. Using this understanding of technologies and learning styles as guides, this project uses several approaches to investigate current attitudes and opinions of faculty and students with respect to expanding use of technology in the language learning curriculum at Lingnan University.

Technology is used in education to provide new and interesting mediums to access and present information. In general, there are two main categories of technological environments – asynchronous and synchronous.

2.1 Asynchronous environments

Asynchronous environments do not require concurrent interactions. An example of an asynchronous environment is email. Users can send messages, and the recipient can interact with the information at a later time. Moodle and e-portfolios are asynchronous environments frequently used in education.

2.1.1 E-portfolios

An e-portfolio is a dynamic and developmental space for users to showcase information on the web (E-Sirinsoyoz, 2010, Penn State University). It is also described as a digital collection of documents relating to a learner's progress, development and achievements (InfoNet).

Today, more and more information is stored online. This online information ranges from classroom documents to résumés to even financial information. Many schools have started to be involved with this rapid online progression of documentation by using e-portfolios (E-Sirinsoyoz, 2009, HEFCE: Enhancing learning and teaching). An e-portfolio is a place for the user to collect data over an extended period of time and display that information on the web.

E-portfolios provide users with a space to display their work and an area to reflect upon their past work. Many schools have begun uniting the concepts of Personal Development Process (PDP), e-portfolios and reflection. PDP is "a structured and supported process undertaken by an individual to reflect upon his or her own learning, performance and/or achievement and to plan for their personal, educational and career development" (E-Sirinsoyoz, 2005, Stefani). If universities wish to use e-portfolios as a means of reflection and student development, the university must make sure that users and staff understand the proposed pedagogical role of the e-portfolios. According to Trent Batson (2002) e-portfolios offer significant benefits to learners. "We seem to be beginning a new wave of technology development in education. There is a push to free student's work from paper and to make it organized, searchable, and transportable" (p. 1). Batson goes on to discuss how e-portfolios would allow for all these possibilities and for the evaluation of faculty, assessment of programs, certification of student work, and accreditation methods. In addition to the educational and

reflective benefit to the student, Batson reveals the many advantages of online documentation of students' work.

The benefits of e-portfolios reached students, schools, faculty, and other parties of interest. The technology enables students to showcase their work, skills, competencies and creativity while progressing to a final result. Once a final result has been accomplished, an evaluator can trace the student's steps in arriving at the final decision. Therefore, the evaluator can see the students' progression. The student can also reflect back on prior work while improving it for the future. The advantages for e-portfolios are significant and benefit students, faculty and employers.

Despite e-portfolios' numerous benefits, they do have several disadvantages (E-Sirinsoyoz, 2010). One of the major disadvantages is the time needed to set up, maintain and implement e-portfolios. In addition, maintenance is necessary to keep electronic profiles updated and organized. Technologies are always improving, and e-portfolios need to keep pace with technological advances to be effective.

Another challenge to e-portfolios is they have a wide-variety of uses (E-Sirinsoyoz, 2010). A challenge to the user is presented if e-portfolios are introduced to an educational system without a central educational concept and supervision. The benefit, however, is that e-portfolios can be used in many contexts to accomplish different goals. While this can be a positive, if the scope of an e-portfolio is left open, users can get confused and frustrated. Moreover, experts argue that e-portfolios slow the progression of learning since "they require a lot of time for learners to reproduce ideas as a result of reflections" (p. 1).

E-Sirinsoyoz (2010) discusses concerns of e-portfolios in education. Difficulties are encountered while persuading staff of the potential benefits of e-portfolios and deciding on an e-portfolio system that best suits the educational goals of an institution.

2.1.2 Rosny College Implementation

Rosny College is a senior secondary college located in Hobart, Tasmania. In 2008 Rosny College implemented an e-portfolio that they called Skillsbook (Sophie, 2009). This Skillsbook was designed to provide evidence of learning specifically for the Vocational Education Training (VET) courses. VET is a type of program which prepares trainees for jobs based on manual or practical activities (Wikipedia, 2010, Vocational Education). The use of online communication in the form of an e-portfolio was a new phenomenon for Rosny College (Sophie, 2009). Despite encountering frustration on all fronts, Rosny College collected feedback on the 2008 Skillsbook and implemented an improved version in 2009. "From the learner's perspective, the use of an internet-based tool into which they were able to upload evidence, maintain a journal and communicate with fellow [classmates] and teachers was all positive"   (p. 1). Prior to the use of e-portfolios, teachers had to collect and maintain evidence of students' learning progression throughout the entire year. With the use of e-portfolios, this process was streamlined for teachers. Requiring students to "input into forums, blogs, user homepages and event attendance over a whole year brought efficiency and robustness to the assessment of competency" (p. 1).

One of the major improvements Rosny College implemented in the 2009 Skillsbook was the use of more social networking tools including walls and chat boxes (Sophie, 2009). Many college students today use social networking sites frequently. Therefore, the students were more comfortable using an e-portfolio because it reflected a social network site with which they were already familiar. "It was noted that the transfer of learning from other social networking sites to

the new Rosny site was very fast, with the average student being able to put the site to full use in under a day" (p. 1). Another improvement from the 2008 to the 2009 Skillsbook was the reduction of clutter and unneeded pages. Making the e-portfolio as straightforward as possible keeps the user from getting distracted by extra features. The "initial feedback [on the 2009 improvements] from both teachers and students was that the new site is very comfortable to use and to navigate" (p. 1).

This investigation can benefit from Rosny College's implementation of an e-portfolio system. At Rosny College the e-portfolios advanced and enhanced the learning experience for students. It is important to focus on user feedback to improve whatever technology or environment is being implemented. In the case of Rosny College the initial implementation of the Skillsbook was frustrating for students and teachers, but after taking feedback into consideration and upgrading the Skillsbook appropriately, students and teachers attitudes towards e-portfolios improved.

2.1.3 Mahara

Mahara is an open-source and web-based software that allows users to upload documents and information in a variety of displays. Each created display is called a view, and users have the freedom to design the view in any way they choose. An example of a view can be seen below in Figure 2.1a.

Figure 2.1a: Example Mahara View; Lingnan University, CEAL (2010)

The New Zealand government developed Mahara because no affordable software platform existed for e-learning (Buzetto-More, 2010). Popular platforms at the time were hindered by a lack of flexibility and high cost. Mahara was designed to manage e-portfolios but also implemented social network applications, allowing users to interact with one another. The word "Mahara" means "thought" in the Māori language, which is the language of New Zealand's indigenous inhabitants. This conveys the purpose of Mahara's development which was to create a "user-centered life-long learning and development application" (Mahara Open Source ePortfolios, 2006). Since the conclusion of the project, the Flexible Learning Network has guided the ongoing development of an e-portfolio service through My Portfolio, which is powered by Mahara.

2.1.4 Moodle

Moodle is a course management system that enables teachers and students to interact outside the classroom. The program is an open-source project with a G.N.U. General Public License (Free Software Foundation, 2007). Since the source code is open, Moodle users have

the freedom to make their own additions and improvements to the software and share those changes with others.

Moodle is a popular tool in education due to its accessibility and wide-variety of features. For example, the software is available to students and faculty from any computer, so course information can be referenced from anywhere. A tool most commonly used in classrooms is the discussion board feature of Moodle. Students can post to the discussion board and students and teachers can interact with the posts by responding and offering information. For teachers, Moodle offers a grade book feature to assess assignments that are submitted electronically.

2.2 Synchronous environments

A synchronous technology is an environment that requires concurrent interactions (Foreman, 2003). An example of such a technology would be a simple chatting program where two users are online at the same time to talk to one another. Other synchronous environments include video conferencing programs or online virtual worlds such as Second Life.

2.2.1 Second Life

In 1999, Philip Rosedale founded the Linden Lab (2002) and launched Second Life in 2003. Second Life is a free program that enables users to create an avatar in a virtual world. In this virtual world, users can customize their avatars in any way they choose. Users can spend real money to purchase virtual currency used to buy in-game items ranging from special clothing to buildings. Using their avatar, users can peruse the virtual world, visit places owned and built by other people, as well as meet other avatars belonging to people from around the world. Figure 2.1 displays one of the many virtual worlds within Second Life with a variety of avatars interacting with one another.

Figure 2.1 - Avatars Interacting in Second Life

At first glance, Second Life may appear to be a video game since the original purpose

was purely leisure. In Second Life one can impersonate any character and meet any other avatar

in the virtual world. Second Life provides users unique experiences with different constraints and

laws of physics. Since the world of Second Life allows "teleportation" and "flying", one doesn't

need to travel to meet someone else. A person in the USA can seamlessly meet the avatar of a

person in Japan and interact. Hence, Second Life became the ultimate program for distance

communication (Lagorio, 2007). Second Life, offering a realistic simulation, can be used for

many purposes and communications. This versatility makes it an excellent program for

networking in new contexts. With these new ways to connect with others, education has been

introduced to Second Life. Since one doesn't need to be embarrassed by making a mistake in a

video game, its rate of adoption as an educational platform has increased.

The makers of Second Life have noticed the potential for virtual learning in their program

(Linden Research, 2009). They provide a complete website with information and guides for

teaching in Second Life, and language education is rapidly expanding. People who have trouble

interacting socially may be able to interact more comfortably through a virtual reality (Rogers, 2010). It was observed that autistic people, for example, could interact comfortably with other users through a video game. Therefore, individuals with slight social anxiety could benefit from a Second Life experience.

Second Life users can purchase "islands". Islands are basically large pieces of virtual land they can completely customize and even make private. In 2007, the Kyoto Gakuen High School, in collaboration with Californian schools, created a virtual world called the Pacific Rim Island (McNicol, 2007). This island enables Japanese and American students to interact and learn each other's languages as preparation for an exchange program. Language learning is so important in Second Life that a few companies have opened businesses just teaching languages in Second Life (Erard, 2007). A company called Language Lab created their own educational island. For roughly five U.S. dollars per hour, they teach general English in addition to preparing students for exams such as the Test of English as a Foreign Language (TOEFL).

Language is not the only subject taught in Second Life. The University of Texas invested a quarter of a million dollars to develop educational programs in Second Life (Haurwitz, 2009). Texas students will soon be able to earn credit hours by attending classes in Second Life, which will revolutionize online education (Nutter, 2009). In addition, Hong Kong Polytechnic University designed a complete virtual campus in Second Life and opened it in September 2009 (Research SEA, 2009). They also hosted SL Actions 2009, the first 48-hour research conference in Second Life.

Cost Helper (2007) is a company that evaluates the cost of products' usage, including Second Life. While creating a simple avatar and traversing through the virtual world might be free, it can become costly to own custom virtual property. Setting up a private "island" costs

$1,675 and includes a $295 monthly fee. To manage such an island, one needs a "premium account" which costs $9.95 per month. Any items used in Second Life, from furniture to buildings also need to be purchased in the game. The game features ATM's that allow users to convert real money into virtual money. The exchange rate is roughly of one U.S. dollar for 266 virtual dollars, which is sufficient to purchase a virtual leather sofa. Terdiman (2006) assessed the cost of Second Life in terms of resources needed to run the program. While massively popular multiplayer online games (MMOGs) such as World of Warcraft might require only one server to host hundreds of thousands of players, Second Life needs a server for every three users at peak hours. Kinicki and Claypool (2008) studied Second Life and determined the enormous amount of Internet bandwidth required is due to users' ability to customize the world.

While the cost is not necessarily a significant drawback for large institutions, Second Life may contain several nuisances educators might want to avoid. In Second Life, users are free to go wherever they want. A user can thus disrupt an important conference or a class. Strangers have been found disrupting Harvard classes in Second Life (Lagorio, 2007). Since Second Life is completely liberal, allowing users to upload their own content to customize their experience, a large amount of pornography is now present in Second Life. For this reason, Japanese people have been driven away from Second Life, and a Japanese firm called Transcosmos Inc. designed the program Meet-me, a clean and secure alternative to Second Life (Associated Press, 2007).

Second Life is free and can be installed on private servers. A project called Open Simulator (2010) provides a free and open-source program that allows running virtual worlds on private servers. This program is usually used to run Second Life, hence allowing users to have their own private world, free of disruptions or undesirable activity.

2.3 Learning Styles

Learning style models are valuable for faculty members who introduce new technologies into their curriculum to improve students' learning experiences. Student attitudes towards using technology in education could be strongly influenced by their learning style preferences. This section explores two learning styles models.

2.3.1 Kolb's Experiential Learning Model

College students have knowledge, values and intentions that influence the way they behave and learn (Kolb, 2004). Learning typically involves four main activities: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC) and active experimentation (AE). Furthermore, learning styles can be divided into four sections of preference: accommodating, converging, assimilating and diverging, which are represented in Figure 2.2
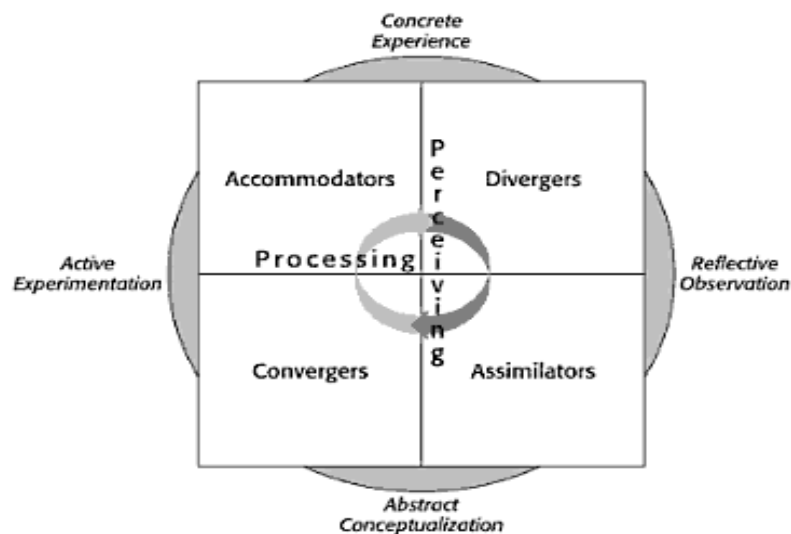
Figure 2.2 - Learning Styles Inventory (Kolb, 2004, p. 267)

Accommodating style individuals prefer to learn when they are involved with the topic (Kolb, 2004). Their dominant learning abilities are active experimentation and concrete experience (Kolb & Kolb, 2005). Individuals who exercise the accommodating style learn mainly from hands-on experience and tend to act on emotions rather than logical analysis. When it comes to problem solving, these individuals rely on other people for information instead of their own technical analysis. They enjoy working in teams where they can communicate and work together with others. This learning style is predominant with people in action-oriented careers such as business and marketing.

Individuals with converging styles learn through solving problems (Kolb, 2004). They are interested in finding the practical application of ideas. Their dominant learning abilities are abstract conceptualization and active experimentation (Kolb & Kolb., 2005). Converging style individuals tend to be technical in nature and do not perform well socially or in conflict. These individuals enjoy laboratory assignments and simulations where they can put knowledge to practical use. Technology-based careers are best for people with this learning style.

Assimilators are theorists who learn effectively with abstract ideas and enjoy constructing models (Kolb, 2004). They tend to be concise and logical. Abstract conceptualization and reflective observation are great strengths for people with this learning style (Kolb & Kolb, 2005). These individuals have the ability to grasp a wide range of material that they can use to form a concise and simple idea. Their theories have more logical soundness than practical values. They are more interested in ideas and abstract concepts than social interactions. People with this learning style often hold information and science careers.

Diverging style individuals learn by observing and making sense of experiences (Kolb, 2004). They benefit from recording their thoughts in a log. These individuals' dominant learning

abilities are concrete experience and reflective observation (Kolb & Kolb, 2005). They are inclined to generate many ideas in a brainstorming situation and enjoy seeing these ideas from several points of view. Diverging individuals generally care about cultural issues and like to gather information. They enjoy being in group activities where they can have feedback on their ideas and listen to new ones. This learning style is predominant with people in art careers.

2.3.2 The Felder-Silverman Model

According to the Felder-Silverman Model, there are five dimensions of learning styles that can be used to describe most students (Felder & Silverman, 2002). The dimensions are perception, input, organization, processing and understanding. Furthermore, each of these dimensions has two preferences that a student might possess. All of the dimensions and their subsections are represented in Table 2.3.2.

Table 2.1 - Dimensions of Learning and Teaching Styles (Felder & Silverman, 2002, p. 675).

Preferred Learning Style		Corresponding Teaching Style	
sensory / intuitive	perception	concrete / abstract	content
visual / auditory	input	visual / verbal	presentation
inductive / deductive	organization	inductive / deductive	organization
active / reflective	processing	active / passive	student participation
sequential / global	understanding	sequential / global	perspective

In the perception dimension, the student's preferred strategy to perceive the world can be identified (Felder & Silverman, 2002). Sensors prefer facts and data and dislike unexpected outcomes during experimentation. They enjoy solving problems using standard methods and are

uncomfortable with complications. Sensors are skilled at memorizing facts, and they are patient when it comes to making decisions. At the other end of the spectrum, intuitive individuals prefer principals and theories. Intuitors favor innovation and avoid repetition. When it comes to experimentation, they are bored by details and like to experience challenges. They are also skilled at grasping new concepts. Intuitors tend to be careless due to their tendency to respond quickly.

In the input dimension, the student's preference on how to receive data from the world can be found (Felder & Silverman, 2002). Visual learners remember facts better when they are presented in a visual manner. They enjoy pictures, diagrams, and flow charts that facilitate remembering the material. If facts and details are presented orally, visual learners are likely to forget them. Conversely, auditory learners retain orally-presented material better and if they repeat what they hear, that information will not be forgotten.

Inductive and deductive learners lie in the organization dimension (Felder & Silverman, 2002). Induction is a reasoning method that interprets events and forms a generalized idea such as a rule or theory. Deduction is the opposite of induction, meaning that from a generalized theory, the outcome of a particular event can be predicted. Induction is the natural human learning style which can be explained further with the following example. A baby might think abstractly, "If I throw my bottle and scream loudly, someone will eventually show up" (p. 3); this is deductive reasoning. Inductive reasoning would be shown after the baby had screamed and thrown the bottle several times. The baby will use inductive reasoning by believing that throwing a bottle and screaming loudly will result in attention.

Methods which convert information into knowledge can be divided into two categories: active experimentation or reflective observation, both of which are part of the processing

dimension (Felder & Silverman, 2002). Active learners, as extraverts, prefer to reinforce the learned information by discussing it and/or explaining it to someone else in the external world. Reflective learners, as introverts, are more comfortable examining and manipulating the data within their own mind.

Global and sequential learners are within the understanding dimension (Felder & Silverman, 2002). Sequential learners follow a linear process when solving problems. They can work with the given directions even though they might not understand it completely. Global learners do not follow a linear process. They take intuitive leaps and may not be able to explain the steps taken to their results. Global learners are proficient at divergent thinking and synthesizing information.

2.4 Methods Research – Focus Groups

When research methods are implemented, it is important to fully understand how they are used and the type of data that these methods will provide. This section contains a brief overview of prior research on focus groups. It also describes how they are used and their effectiveness as a social science research method.

Focus groups are a research technique where data is collected through group interaction on a selected topic (Morgan, 1996). There are three components that define a focus group. The first component states that focus groups are a research technique devoted for data collection. Secondly the source of the data in a focus group is contained in the interactions within the group discussion. The final component acknowledges the researcher's role in creating group discussion for data collection purposes. These components help to separate focus groups from others forms of group interviews.

Focus groups are used in many different contexts during social science research (Morgan, 1997). For instance, they could be used as a self-contained method in studies where they serve as the main source of data. Focus groups can also serve as a supplementary source in a study where the primary source is another method such as a survey. Another possible strategy is to employ focus groups within a multi-methods study that combines two or more means of gathering data where there is no primary method.

To run a successful focus group session and maximize interaction between participants, the facilitator or moderator should conduct the session in a relaxed manner (Kitziner, 1994). The main goal of the facilitator should be to involve the participants and direct them to focus on the discussion of the chosen topic. The moderator should make every effort to draw attention towards the topic and not to themselves. This approach is intended to increase the interaction between participants, make the discussion into a debate-style conversation, and minimize the input and bias of the moderator. These exercises can be used to gather invaluable data and enable cross-comparisons between groups during the data analysis.

2.5 Technology at Lingnan University

Lingnan University aims to take the whole-student approach to teaching and learning where they strive to educate the student not only in the classroom, but in all facets of life such as community service and student life. The use of technology in their curriculum is an important aspect that the University is looking to further develop and enhance. Departments on Lingnan's campus are constantly striving to integrate useful technologies into the learning experience for their students.

2.5.1 Technology Resources at Lingnan University

The Teaching and Learning Centre (TLC) at Lingnan University (2010) serves the University by providing technological support to teachers for their courses. Dr. David Kennedy, the director of the Centre, works with nine other employees such as consultants, research assistants, and educational development officers. The TLC offers seminars and resources for the faculty and students of Lingnan University to assist with the integration of technology into classrooms.

Additionally, Lingnan University (2010) developed a Strategic Plan for the years ranging from 2009 to 2016. This plan highlights the goals of the institution during that time period. A key point mentioned in the strategic plan is that the University would like to further develop students' knowledge and understanding of technologies. The plan also encourages the Information Technology Services Centre to grow and expand to provide additional technology and resources to the Lingnan community.

2.5.2 Technology Studies at Lingnan University

In 2010, a study was completed at Lingnan University by students of Worcester Polytechnic Institute (WPI) in order to inventory the physical resources, preferences, and knowledge of students and faculty at Lingnan with respect to technologies for education (Cabrera, et al., 2010). This study gave insight into the technologies that Lingnan supports for academic purposes, and identified opportunities for improvement in the future.

Lingnan University houses four language laboratories on campus primarily for use in language learning (Cabrera, et al., 2010). The capacity of these rooms varies from 27 to 34 students. In a language laboratory, there are computers for student use, as well as headphones and microphones. The room is arranged with cubicles for each computer so that students can

independently practice their language skills with the supervision of the professor or instructor. These four language laboratories support Internet as well and language learning software. Featuring a projection screen and a lecturer podium, each language laboratory at Lingnan University can serve as an interactive classroom or provide a setting for more independent activity and practice. Lingnan also has several general computer laboratories to be used by the students for independent work.

Lingnan University supports a variety of technologies for use with education, and the study done there in 2010 made recommendations as to where the use of these current technologies could be improved (Cabrera, et al., 2010). Mostly, faculty members at Lingnan use these available technologies for lectures and course management. However, some faculty have begun incorporating other technology uses to further engage the students' interest. Figure 2.5.3a highlights the most common uses of technology by members of the Lingnan University faculty.
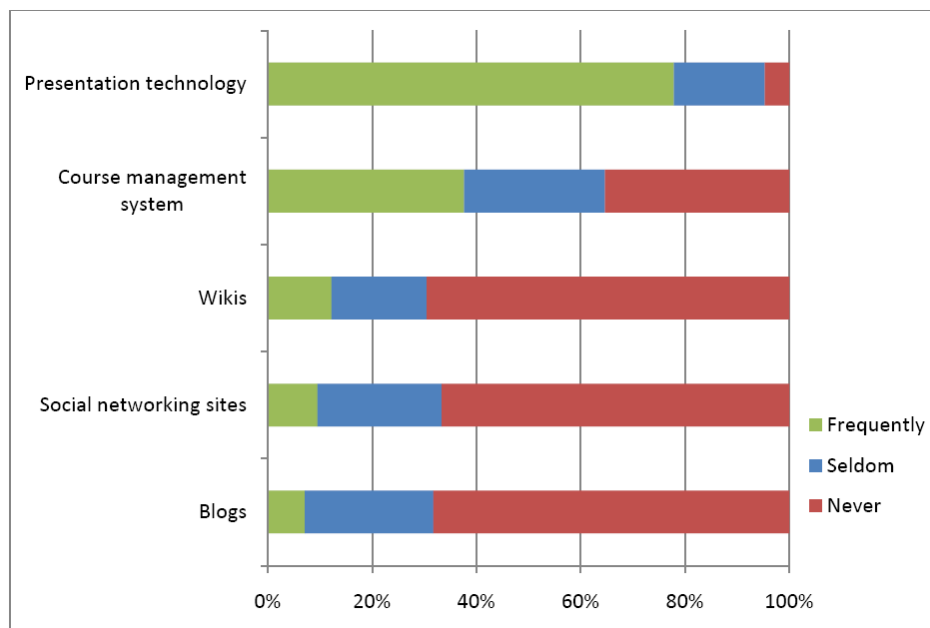
Figure 2.3 - Faculty Uses of Technology at Lingnan (Cabrera, et al., 2010, p. 50)

Blackboard and Moodle are programs supported by Lingnan University that are predominantly used for course management (Cabrera, et al., 2010). Faculty members have

administrator access to these programs, and they can customize the site for a particular course. Students are able to view their grades, course materials, syllabi, etc. The 2010 study recommended that professors become more educated in the other functions of Blackboard and Moodle such as discussion boards and course communication in order to allow for more transitive communication where students have the opportunity to learn from one another.

E-portfolios are a currently supported technology at Lingnan University, and each student has access to an e-portfolio account (Cabrera, et al., 2010). This program allows for peer editing of written work and also creates a central space for students to store their writing.

There were many faculty complaints about the use of technology in a classroom or educational setting. Mainly, slow Internet speeds and lack technical skills played a factor in the faculty's frustrations (Cabrera, et al., 2010). In Figure 2.5.3b, reasons for faculty resistance to the use of technology are highlighted. The data was obtained through a mixture of a survey and interviews with Lingnan University faculty members.
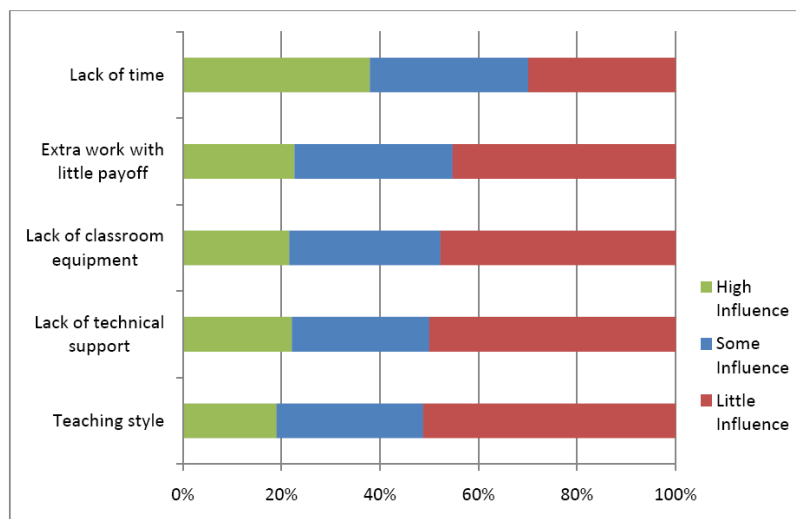
Figure 2.4 - Influential Factors of Faculty's Use of Technology (Cabrera, et al., 2010, p. 56)

The information gathered by the WPI students in 2010 at Lingnan University led to recommendations for technological improvements as a means of improving the educational

experience (Cabrera, et al., 2010). It was suggested that network capacity be increased for the campus to provide students and faculty better access to the Internet and the educational tools available there. The team suggested an expanded use of Blackboard and Moodle in order for students to have both greater access to course information as well as opportunities to interact through the course management interfaces. Lastly, the study noticed an opportunity in social networking sites and proposed that incorporating more social activity into learning would further engage the students in practicing learned material.

2.5.3 CEAL

The Centre for English and Additional Languages, CEAL, is a department at Lingnan University which focuses on helping students advance their language skills. CEAL's mission "is to enhance the English language and thinking skills of its students, and to provide language support to help students succeed in their academic studies through core and elective courses as well as co-curricular language activities" (Lingnan, 2010). At Lingnan, CEAL provides students with independent learning opportunities to develop their potential for the global workplace.

CEAL strives to provide quality teaching and assessment, professional support and learning environments to all of the students at Lingnan. The center is involved with the design and implementation of engaging English language courses which focus on encouraging student participation. The Centre for English and Additional Languages expects teachers to use effective and motivating methods to teach their students. If teachers' methods are not effective CEAL provides presentations and one-on-one professional support to ensure the use of effective methods.

All of the CEAL classes at Lingnan University use independent learning. Independent Learning (IL) can be showcased in a number of different ways. In CEAL introductory English

classes, students accomplish IL through activities such as videos, news articles, and even music. The students use Mahara to show evidence, document and reflect on their independent learning.

2.5.4 Future Challenges

Currently Lingnan is a three-year university. By 2012, Lingnan University must change to a four-year program for all of its students (Study in Hong Kong, 2007). This change will be universally implemented throughout all of Hong Kong's universities. The change will also affect secondary schools which will change to 12-year programs instead of the traditional 13 years. Therefore, in 2012 Lingnan will accept student who have undergone both 12 and 13 years of secondary schooling. These students will be at Lingnan jointly for four years.

The transformation from three to four years has altered the educational structure of Lingnan University. Instructors must adapt to the change and become accustomed to teaching different levels of students. The transition will provided Lingnan University with the opportunity to use the extra year to ease the learning curve associated with using technologies in the curriculum.

2.6 Summary

Lingnan University has invested a great deal of time, money and effort into expanding the use of technology in their English curriculum. Currently, Lingnan uses e-portfolios, Moodle, and Second Life, but the University has met with resistance and complaints from students and faculty. Methods for evaluation of the use of e-portfolios at Lingnan University are outlined in the next chapter

3. Methodology

The purpose of the project was to improve the use of e-portfolios as it pertains to displaying evidence of independent language learning at Lingnan University. To achieve this goal, the project team developed the following key objectives: identify potential issues associated with the current assessment of e-portfolio views, gage students' perceptions, evaluate students' use of technological assistance for e-portfolio views, correlate technology preferences to learning styles, and recommend improvements. To accomplish these objectives, the research team developed a methodology which included surveys, interviews, focus groups, and Centre for English and Additional Languages (CEAL) Self Access Centre (SAC) sessions. The team first created and distributed questionnaires to students who used e-portfolios in their English classes and interviewed teachers who taught classes which utilized e-portfolios. After reviewing the preliminary results from the surveys and interviews, the research group determined focus group topics which delved deeper in select areas of interest. The team attended 20 of the CEAL SAC sessions during the duration of the project team's time at Lingnan University. These sessions gave the group further insight into students' problems associated with e-portfolio views.

3.1 CEAL Self Access Centre Help Sessions

The WPI student team served as technical tutors for the Centre for English and Other Languages' (CEAL) Self Access Centre (SAC) for two hours per day from 1:30-3:30 p.m. During these sessions the team was prepared to help Lingnan students with their technical questions about Mahara. Additionally, the project team guided students on creating open views that were easily readable by the teachers and at the same time simple to create for the students. Students were asked to give their personal information each time they visited the SAC. Group

members also kept a detailed summary of the assistance given. This information was saved in an online document for Lingnan's records.

Helping students with their technical problems at the SAC was beneficial to teachers as well as students. Most teachers were very willing to allow the project team to survey their classes when they found out the group was available to give technical support to their students.

3.2 Student Surveys

The project team conducted surveys to collect data on students' perceptions of e-portfolios and their learning styles. The first draft of the questionnaire was developed (see Appendix B, Section 1) and then shown to the project sponsors Dr. David Kennedy and Brant Knutzen. Both Dr. Kennedy and Mr. Knutzen provided valuable feedback on both the content and structure of the survey questions. The project team revised the survey (see Appendix B, Section 2). Finally, the survey questions were shown to faculty member Marc Lebane. Mr. Lebane gave the project team feedback on the language and word order of the questions. The advice from Mr. Lebane was focused on improving the students' understanding of each question and to minimize confusion. The final version of the survey consisted of 18 question (see Appendix B, Section 3).

The target population consisted of 573 students who took LCE 101 in the fall of 2010. LCE 101 is an introductory English class which used e-portfolios as a method for publicizing students' independent learning. Since LCE 101 ended before the project team's arrival at Lingnan University, the group decided to distribute the survey to the 626 students in LCE 102, the next level class after LCE 101. Out of the 626 students only 96 had not taken LCE 101 in the fall of 2010. Therefore, the research team's accessible population size was 530 students. Forty three students were categorized as unreachable by the project team. These unreachable students

did not take LCE 102 for any number of reasons. For instance, they could have dropped out of school or transferred to another University.

To differentiate students who had taken LCE 101 from those who had not, the group examined the first question on the survey. This question asked if students had taken LCE 101during the 2010 fall semester. By identifying the students' background in this manner, the project team was able to separate the target population data from the other data. This ensured that the survey sample could be isolated to the target population.

To obtain data from students in LCE 102, Lingnan faculty members needed to give the project team their permission to distribute the questionnaire to their class sections. In order to get consent, the group contacted these instructors by email or visited them during their office hours. After a time and place was arranged, two group members visited the class. One group member introduced the team, emphasized that the survey was anonymous, and asked the students to be truthful with their responses. While the first team member handed out the surveys to the class, the second team member presented the focus group sign-up sheet. He or she informed the class that focus groups would be held by the project team and students were asked to write down their name and email addresses on the sheet if they were interested in participating. After both the surveys and signup sheet were collected, the two group members announced that the project team would be in the Self Access Center (SAC) between 1:30-3:30 p.m. every school day for technical help with Mahara. The group members thanked the teacher and exited the classroom. In total, the survey took about ten minutes to administer for each class.

After each classroom visit, the data was entered into an Excel spreadsheet manually via an Excel macro. The macro was laid out similarly to the survey to aid in the accuracy of data

entry. The process made it easy for group members to fill out the surveys with student responses and save the responses as data in an Excel spread sheet.

Over a period of seven school days, the team visited 23 out of the 33 sections of LCE 102. Each section has a maximum of 20 students. Some sections could not be reached due to faculty's unwillingness to spare valuable classroom time for the research team's survey. However, the group surveyed 379 students, 340 of whom took LCE 101 last semester. In total, 64.2 percent of the target population took the questionnaire. The target population was the 530 students who took LCE 101 in the fall of 2010 and continued on to LCE 102 in the spring of 2011.

3.2.1 Data Collection

A macro is a small computer program that runs within a larger piece of software. The team implemented such a macro for the project using Visual Basic for Applications (VBA), designed to function within Microsoft Office Excel. All pages and tabs of the macro can be seen in Appendix F.
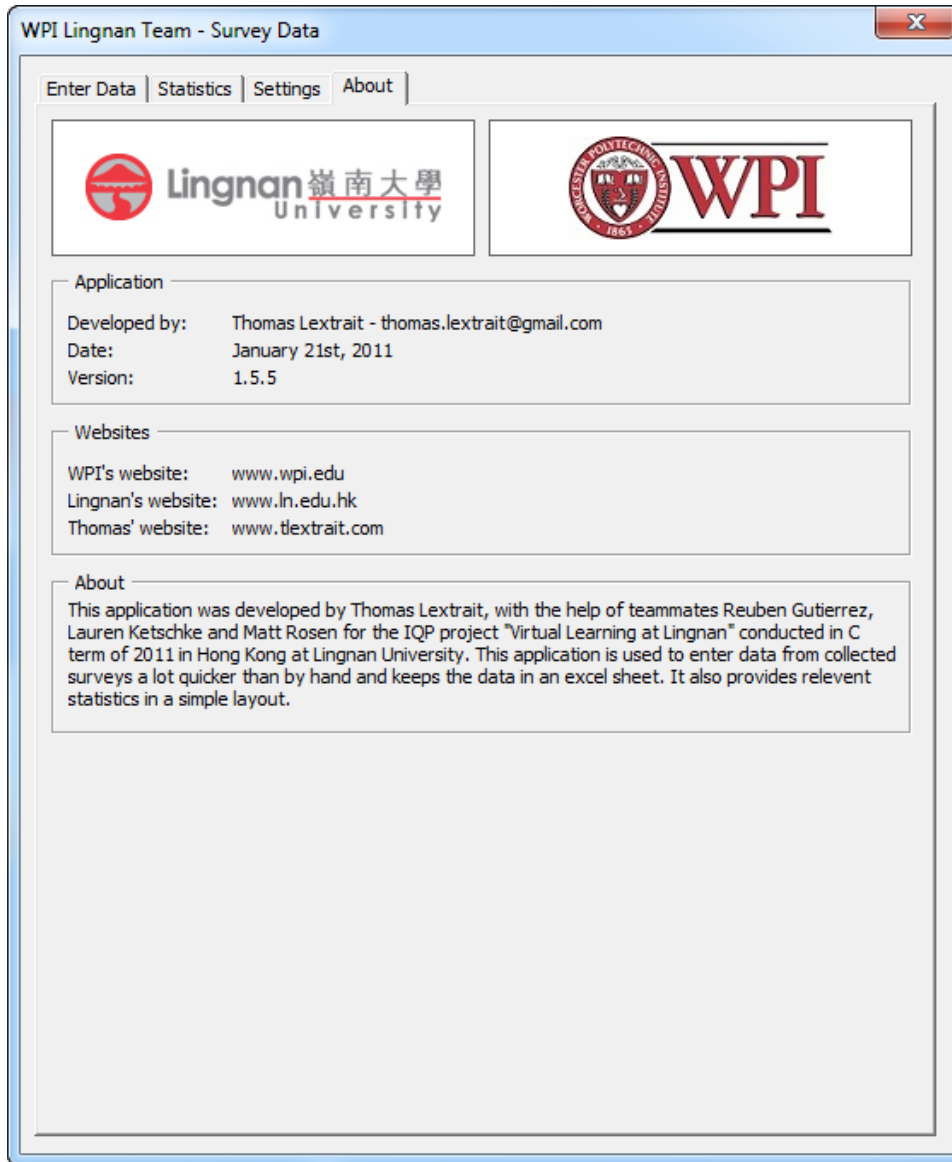
Figure 3.1 - Excel Macro About Page

Figure 3.1 is a screenshot of the macro. It represents the "about" page of the program which provides generic information about the program's development such as the author, date and a paragraph explaining its purpose.

One task the macro helped with was the data entry process. Doing it by hand takes a long time since each question of the questionnaire has its own set of answers. In the Data Entry page of the macro, the questions were ordered and represented in a virtual questionnaire exactly as

they were on the real, paper-based questionnaire. One needed to simply check the boxes in the macro's interface to match the answers on a real answer sheet, and click the "Enter" button in the program to save the data.

Figure 3.2 - Excel Macro Interface Page 1

Figures 3.2 and 3.3 show a screenshots of the macro. The part of the macro represented in the figure is used to enter data in the Excel spreadsheet. In case of doubt, hovering the mouse pointer on a question number or an answer key displayed the entire textual question or answer in a popup tooltip, as a reminder. Once the checkboxes are checked, clicking "Enter" will add the data to the spreadsheet and reset the virtual questionnaire.

The macro was also designed to help with analyzing the gathered data. While Excel plot charts are simple, it would have been much more difficult to perform any advanced analysis that correlates one survey variable with another. For example, the team was interested in knowing the relationship between how much technical support students received and their perception of using Mahara. The macro was therefore designed to perform all data correlations required by the team. It displayed the results in the program in the form of charts, numerical results and textual interpretations of the results.

The advanced analysis of the data provided by the macro helped interpret the survey data. However, while the results provide information which was previously unknown, they also raised new questions germane to the goals of this study. Thus, focus groups and interviews were conducted in order to further understand the preliminary results.

3.3 Interviews with CEAL Faculty

The project team interviewed five teachers who taught LCE 101 in the fall of 2010. All of the instructors' names were kept confidential. This was the first time the teachers had taught using Mahara. The interviews provided the team with valuable information on the teachers' experiences assessing Mahara's e-portfolios effectiveness in providing evidence of English learning.

When conducting interviews, the first step was to obtain the list of teachers who taught LCE 101 in the fall 2010 semester. Most of the teachers who had already been contacted about surveys had also used Mahara when teaching LCE 101. After the surveys were distributed in their LCE 102 courses, the next phase was to send follow-up emails to instructors who had previous Mahara experience. This email thanked the instructors for their time in the classroom

and took the opportunity to ask if they would be willing to participate in an interview. Using this strategy, the team was able to conduct five interviews.

The second step was the creation of a set of questions to ask during the interviews. The first draft questions are shown in Appendix C, Section 1. After speaking with Dr. Kennedy, the team reorganized and changed the tone of the questions to accommodate his comments and concerns with respect to biased and leading questions. The finalized interview questions (see Appendix C, Section 2) enabled the team to gather information on major topics surrounding the use of Mahara including the grading scheme, difficulties on grading views and problems with plagiarism of views.

The team was divided into sub-groups of two and alternated conducting the interviews. For each interview, one of the team members asked the interview protocol questions (see Appendix C, Section 2) and used follow up questions when applicable. The other team member recorded notes on the discussion.

3.4 Focus Groups and Student Interviews

After reviewing the initial results gathered from the student surveys, the final phase of this investigation involved developing focus group topics. The focus group discussion topics covered e-portfolios and were separated into the following categories: improvements to the user experience, improvements to the grading system, the storage of old views, and plagiarism. Appendix D, Section 1 shows the first draft questions created to facilitate discussion on these four major topics. Dr. Kennedy and Mr. Knutzen gave the project team feedback on the first draft and then the second draft of questions. They suggested changes to make the questions clearer for the students. The second and final drafts of the focus group questions can be viewed in Appendix D, Section 2 and 3 respectively. The focus group's targeted population was

students who took LCE 101 in the fall of 2010. As mentioned in Section 3.2, students were asked to write down their name and email address on a signup sheet when team members distributed surveys to their LCE 102 classrooms. The research team sent the students who voluntarily signed up emails informing them of two different dates and times for the focus groups. They were asked to respond by email and confirm one time and date or inform the group that they would not be able to attend. When no students indicated they would attend the first focus group, it was necessary to schedule an additional time. The project team went into three LCE 102 classes on February 14, 2011 and asked students to attend a focus group that afternoon. Due to the poor response rate from the first focus group, the project team advertised an incentive to promote student's attendance for the second focus group. If students attended the focus group, they would have the opportunity to take pictures with the WPI project team and enjoy light refreshments. No students volunteered for the focus group session despite the incentives and encouragement from their instructors and group members.

The project team decided that student interviews would be a suitable substitute for focus groups. Mr. Knutzen offered to provide the research team with coupons for free egg tarts (see Figures 3.4 and 3.5) and a table inside Lingnan's cafeteria. The team offered egg tarts to anyone who took LCE 101 during the fall of 2010 in exchange for a short interview.

Thank you for your participation.

Coupon redemption,
you get a tasty EGG Tart from Lingnan Café.

Coupon due on: March 30, 2011
一張 Coupon 可換一乃 free 蛋撻
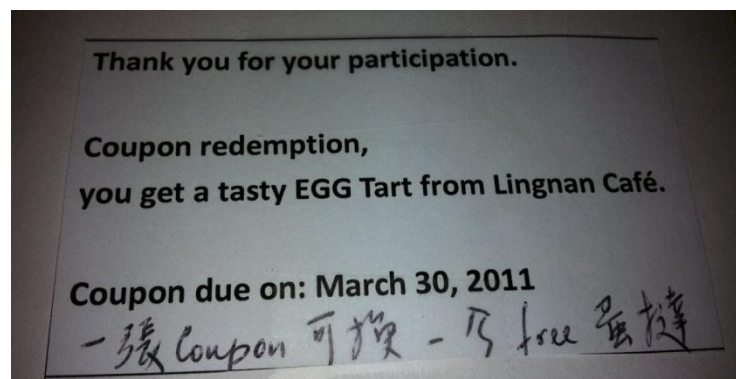
Figure 3.4 - Back of the Free Egg Tart Coupon

Figure 3.5 - Front of the Free Egg Tart Coupon

The team needed to modify the focus group questions because the student interviews needed to take less time than the focus groups. The project team estimated that a student would be willing to sit through no more than a ten minute interview for a free egg tart. Therefore, the project team developed a shorter version of the focus group questions. This version can be viewed in Appendix D, Section 4.

In total, nine students were interviewed. One team member was the solicitor and approached students advertising the project team's interview incentive. The other three team members interviewed the students and took notes in an Excel template (see Appendix D, Section 5). Following Mr. Knutzen's suggestion, the project team asked students the name of their LCE 101 instructor as a control question, which was used to determine if a student had actually taken LCE 101.

Through the use of student and faculty interviews and student surveys, this investigation obtained sufficient data to yield useful results which are discussed and analyzed in the next chapter.

4. Results

This chapter contains all the data and analysis gathered by this investigation at Lingnan University. The results were obtained using the research methods mentioned in the methodology chapter. From the Centre for English and Additional Languages (CEAL) Self Access Centre (SAC) sessions, the team was unable to collect enough data from the students to conduct a thorough analysis but through these sessions the team made many useful faculty contacts. In the survey data, the team found interesting information regarding the students' opinions and perceptions regarding e-portfolios. Furthermore, the correlations between the data sets elicited a better understanding of the information. The data gathered from the faculty interviews gave the team an insight into instructors' perspectives on the e-portfolio system and how it is used at Lingnan. The student interviews provided the team with more in-depth information on the survey data and confirmed the results.

4.1 CEAL

The CEAL SAC sessions continued through the team's stay at Lingnan. However, the sessions did not provide enough data to yield any type of useful analysis. Nevertheless, the team benefited from the contacts that working in the SAC provided, such as Mr. Marc LeBane who helped the project on several occasions. Mr. LeBane, as mentioned in Chapter 3, helped the team with the student questionnaire and with faculty interviews.

The total number of people that visited the SAC for Mahara technical support was eight. The data recorded on these visits can be seen in Appendix E. Due to the fact that a majority of students wait until the week prior to their deadlines to seek technical help, students did not seek assistance from the SAC until after this study had concluded. Additionally, four out the eight

students had problems that the team was unable to assist with because their resolution was beyond the capability of the team. This part of the data was not included in the final analysis since such a small data size of four would not bring any significant impact.

4.2 Student Surveys

This study obtained data through the use of surveys that were distributed to students in Lingnan University's LCE 102 class. The survey had 18 questions, and results and correlations were drawn from the data. In total, 379 students participated in the survey. Table 4.1 below is an outline of the data displayed from the surveys questionnaires. The data obtained from the survey was divided into seven sections and are presented in the following sections. For each survey result, "n" is defined as the number of students who answered a given question.

Table 4.1 - Outline of Survey Result Categories

Gender	
Prior E-portfolio Use	Demographics
Students Who took LCE 101 in Fall 2010	
E-portfolio Preferences	
Opinion of Expanding Use of E-portfolios	
Effectiveness	Opinions
Effectiveness versus Preferences	
Perceived Benefits	
Time spent	
Efforts	Time Spent
Time spent Versus Efforts	
Grading Layout Opinion	
Time Spent Versus Grading Layout Opinion	Grade Layout
Grading Layout Opinion Versus Preference	
LCE 101 Grades	Grades
Grade Received Versus Perceived Benefits	
Help Received	
SAC Help Versus Average Help	
In-Class Demo Help Versus Average Help	Help and Resources
Office Hour Help Versus Average Help	
Friend Help Versus Average Help	

Help Received Versus Preference	
Learning Styles	
Visual/Auditory Learner Questions	
Active/Reflective Learner Questions	
Visual/Auditory Learner Versus Perceived Benefits	Learning Style
Reflective/Active Learner Versus Perceived Benefits	
Visual/Auditory Grades	
Reflective/Active Grades	

4.2.1 Demographics

Three questions on the student questionnaire allowed the group to obtain demographical data of the students being surveyed. Figure 4.1 shows the distribution of males and females that participated in the survey. The data was retrieved from Question 2 of the questionnaire, and in total, 163 males and 213 females answered. Three students abstained from this question.
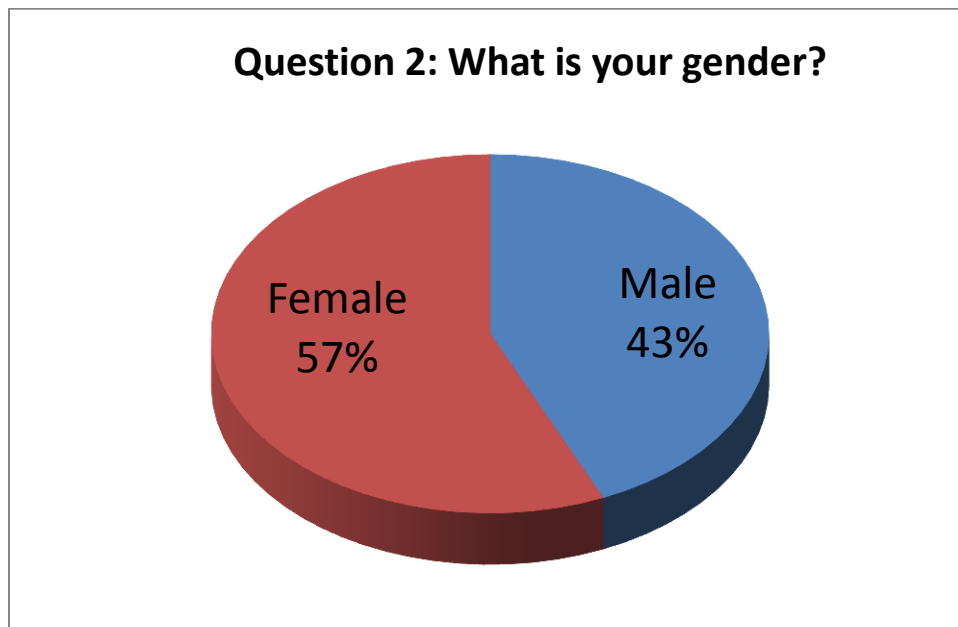
Figure 4.1 – Distribution of Males and Females Surveyed (n=376)

The research team wanted to look specifically at students who had taken LCE 101 in the 2010 fall semester at Lingnan. These students had experience using Mahara e-portfolios through that course. This allowed for the analysis to include only data from students who have experience and knowledge of e-portfolios. The information displayed in Figure 4.2 is from the first question of the questionnaire, and 340 out of 379 students took LCE 101 and used e-portfolios. The group analyzed the remaining survey results using exclusively answers from students with Mahara experience, unless otherwise specified. For these questions, the number of responses, n, is smaller due to the omitted data. Additionally, some students opted to not answer every question on the survey, so there is variance in the sample size for each question.

Question 1: Did you take LCE101 last semester?

No, 10%

Yes, 90%
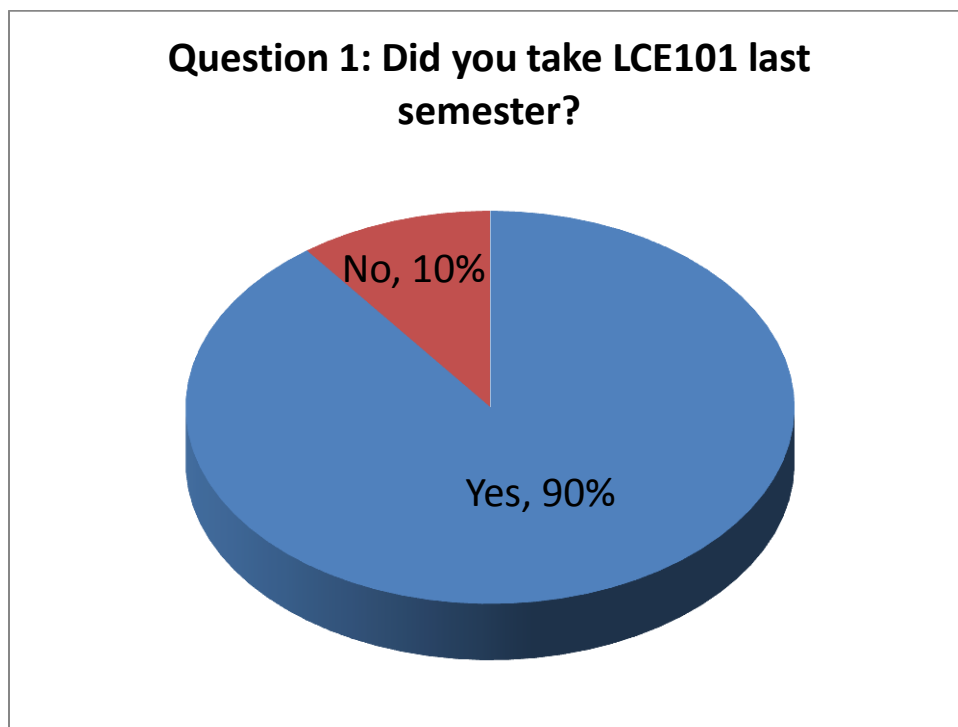
Figure 4.2 - Students Who Took LCE 101 in the fall 2010 Semester (n=379)

Students reported whether or not they had experience with e-portfolios prior to taking LCE 101. Figure 4.3 displays the distribution of experience among the students. Only 26 of the

336 students who answered this question had e-portfolio experience prior to taking LCE 101 in the fall of 2010.

Question 10: Have you ever used e-portfolios before taking LCE 101?

Yes 8%

No 92%

4.3.2 Students' Opinions of E-portfolios

This project aimed to solicit student feedback on the opinions and perceptions of e-portfolios at Lingnan University. Figure 4.4 is based on Question 4 of the survey and shows the distribution of student ranking with respect to using this technology. Each answer to the question was assigned a numerical score ranging from 1, "Hated it," to 5, "Loved it." The average score reported by students on this question was 2.37, which was closest to "Didn't like it" on the given scale. This average value was calculated automatically by the macro, and the corresponding statistics page can be seen in Appendix F, Figure F.4.

Question 4: What is your opinion of using e-portfolios for LCE 101?
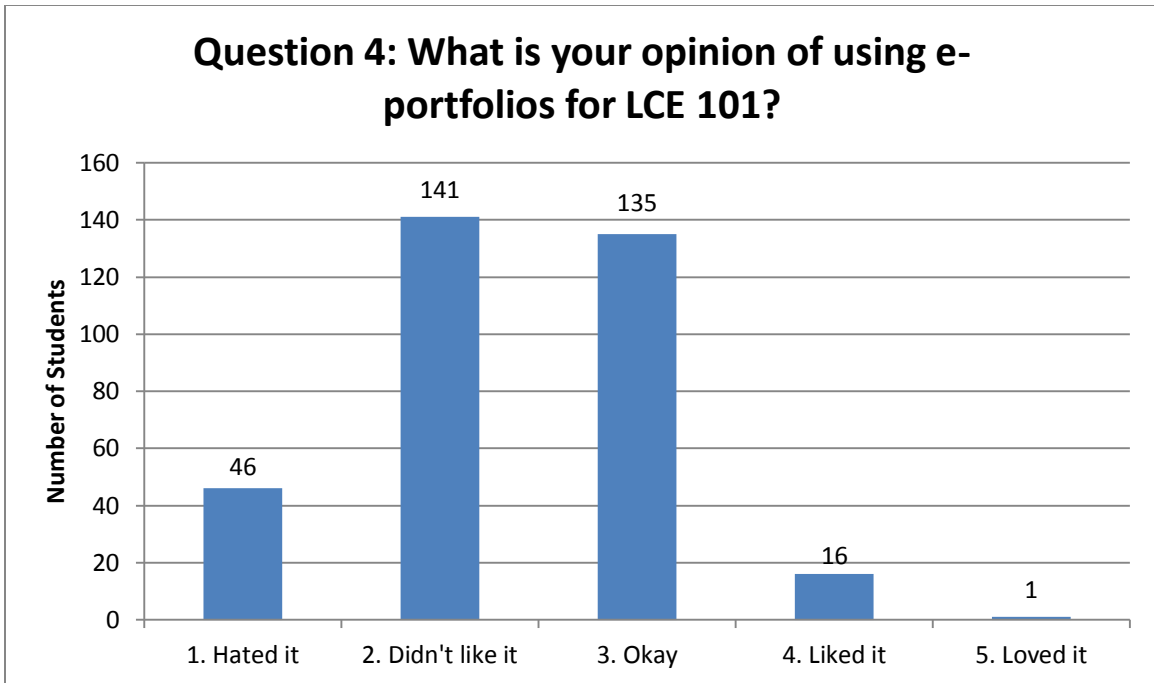
Figure 4.4 - Student Opinion on Using E-Portfolios (n=339)

Students were also asked whether or not they would like to expand the use of e-portfolios in courses at Lingnan University on Question 3 of the survey, and the results are shown in Figure 4.5. In total, 49 students out of the surveyed population were interested in using e-portfolios in more of their courses.

Question 3: Would you like more classes to use e-portfolios?
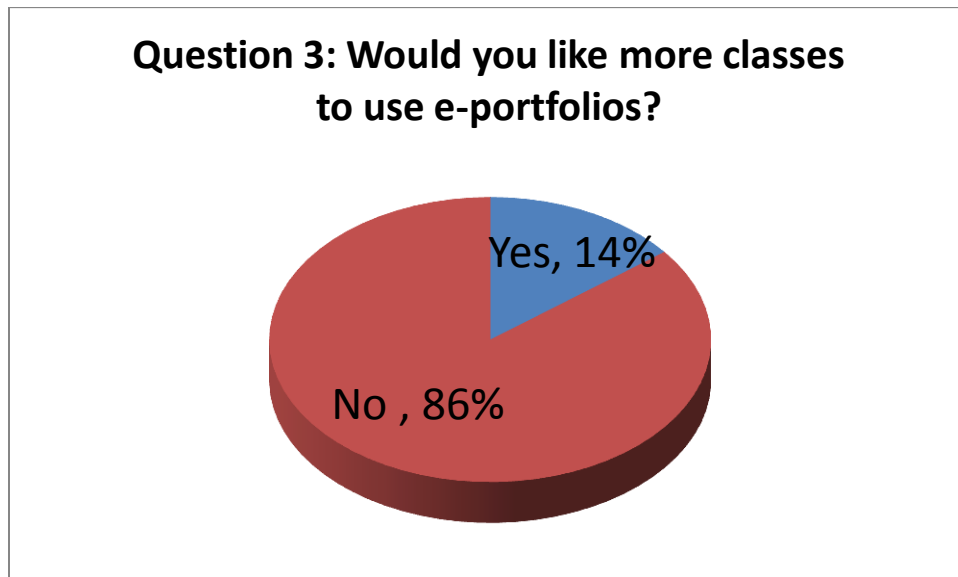
Figure 4.5 - Opinions on Expanding E-portfolio Use (n=339)

In LCE 101, e-portfolios are required for students to display evidence of the Independent Learning (IL) component of the course. In Question 5 of the questionnaire, the team asked students if they felt that this technology was well-suited for providing evidence of their IL. The average answer for this question was 2.35 out of 5, where 5 corresponds to a belief that e-portfolios are "very much" a good way to provide evidence of independent learning. The average was calculated in the macro, and the corresponding statistics page can be seen in Figure F.4 of Appendix F. This average corresponds to "a little," and the results are shown in Figure 4.6. This question gave insight into students' perceptions of the effectiveness of e-portfolios as an educational tool.
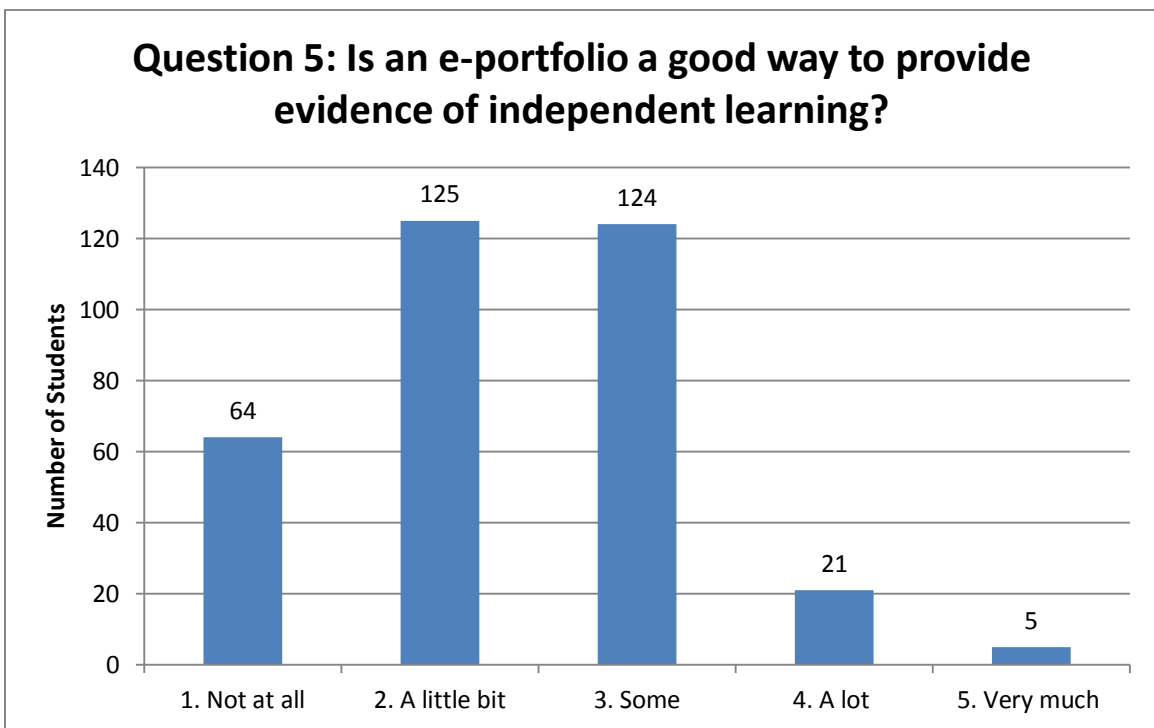
Figure 4.6 - Students' Perceived Effectiveness of E-portfolios (n=339)

The Excel macro developed by the team for this project allowed for correlation of data from the survey. The study compared students' preferences towards e-portfolios with their perception of the technology's effectiveness using Questions 4 and 5. For each student who reported that they hated e-portfolios, their average answer on Question 5, effectiveness of e-portfolios, was calculated. This was repeated for each possible preference. The n-values displayed above each bar represent the number of students in each category of e-portfolio preference. This comparison is shown in Figure 4.7. Students who expressed more positive feelings towards e-portfolios also saw the technology as a good way to display their IL. It should be noted that only one student answered "Love it" for their e-portfolio preference, therefore only that single student's answer was averaged for this correlation.
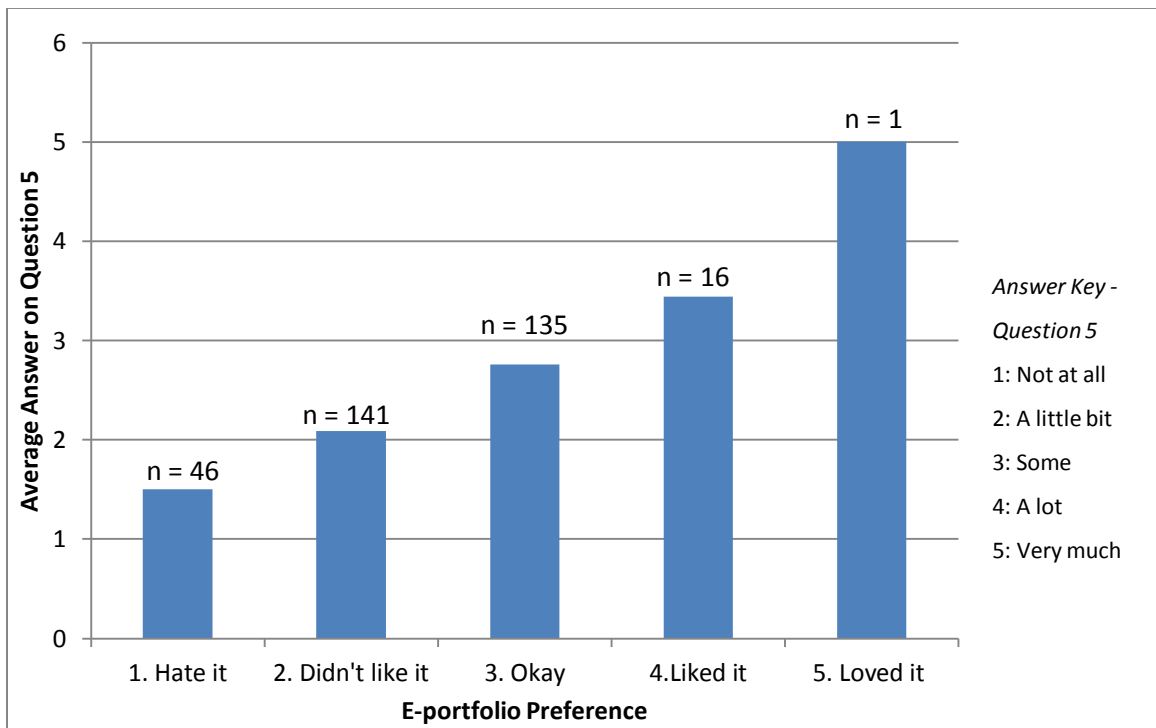
Figure 4.7 - Perceived Effectiveness of E-portfolios versus Students' Preferences

This study examined the benefits that students obtained from using e-portfolios for language learning. Question 17 of the questionnaire was in three parts and asked students to identify how little or how much the use of e-portfolios has benefited them in their course work. On average, students gave a score of 2.47 out of 5 when asked how much using e-portfolios helped them to become more engaged with the course content and concepts; 2.51 out of 5 when asked about e-portfolios influence on becoming more motivated to participate in independent learning; and 2.62 out of 5 with respect to e-portfolios improving students' ability to express themselves. Figures 4.8, 4.9 and 4.10 respectively show the results for the three parts of Question 17.
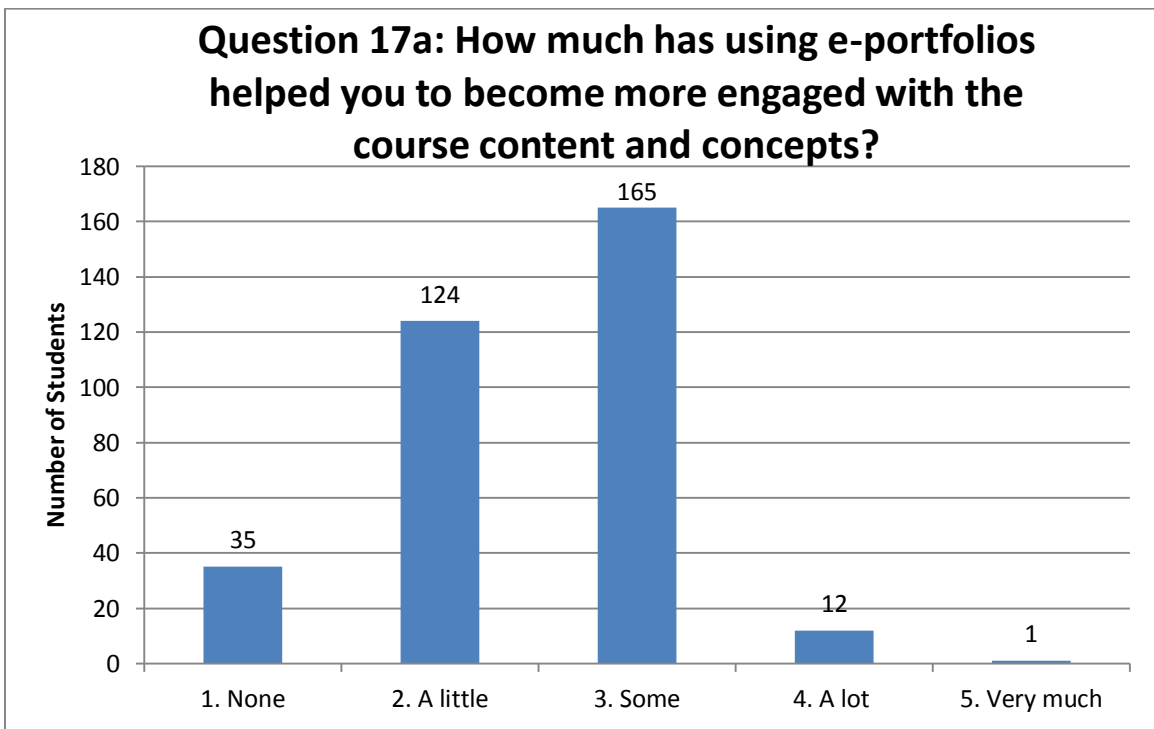
Figure 4.8 - E-portfolio Benefits – Engagement (n=337)
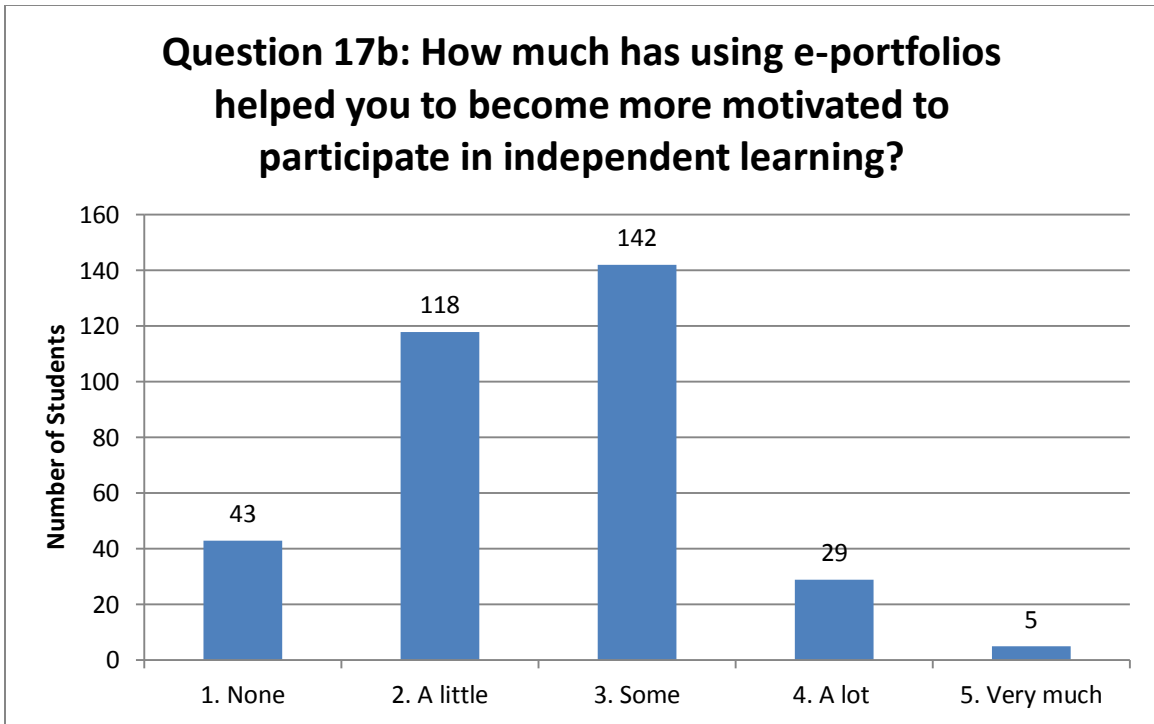
Figure 4.9 - E-portfolio Benefits – Motivation (n=337)
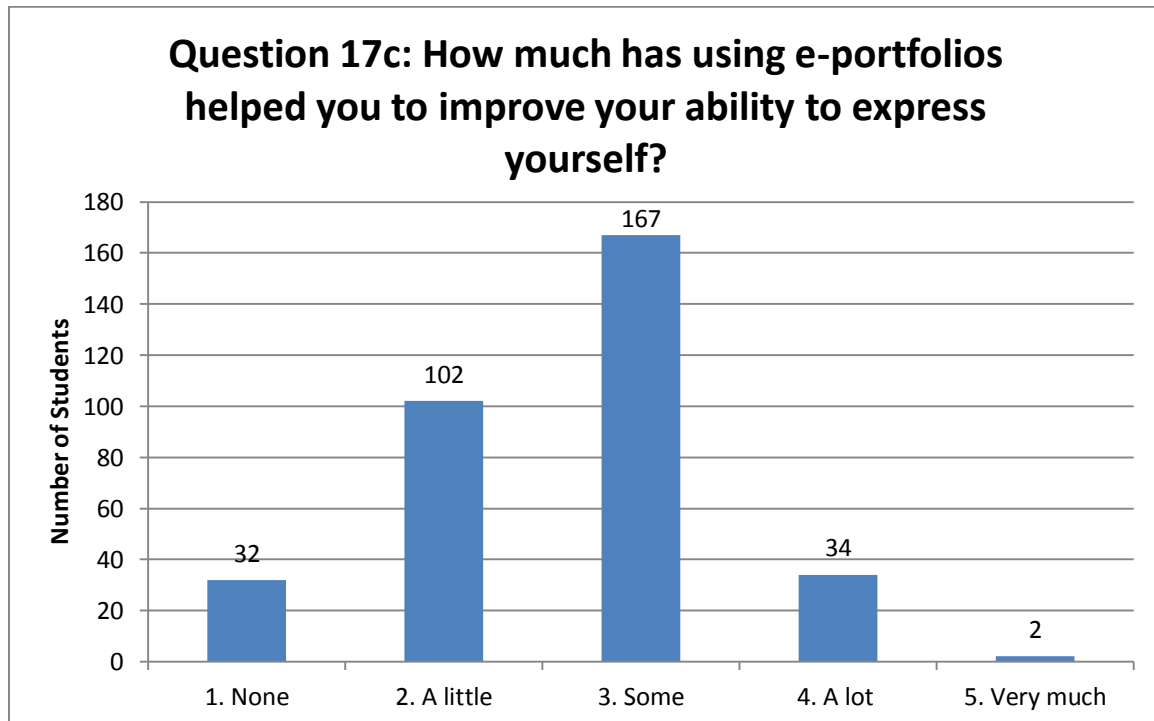
Figure 4.10 - E-portfolio Benefits – Expressing Yourself (n=337)

45

4.2.3 Time Spent on E-portfolios

The group asked about the time Lingnan students spent working on the layout of their e-portfolios as well as the students' reported effort. Question 6 of the survey asked students how much time they spent, on average, for the Mahara view submissions in LCE 101. Figure 4.11 shows that the greatest number of students reported spending between two and four hours per submission.
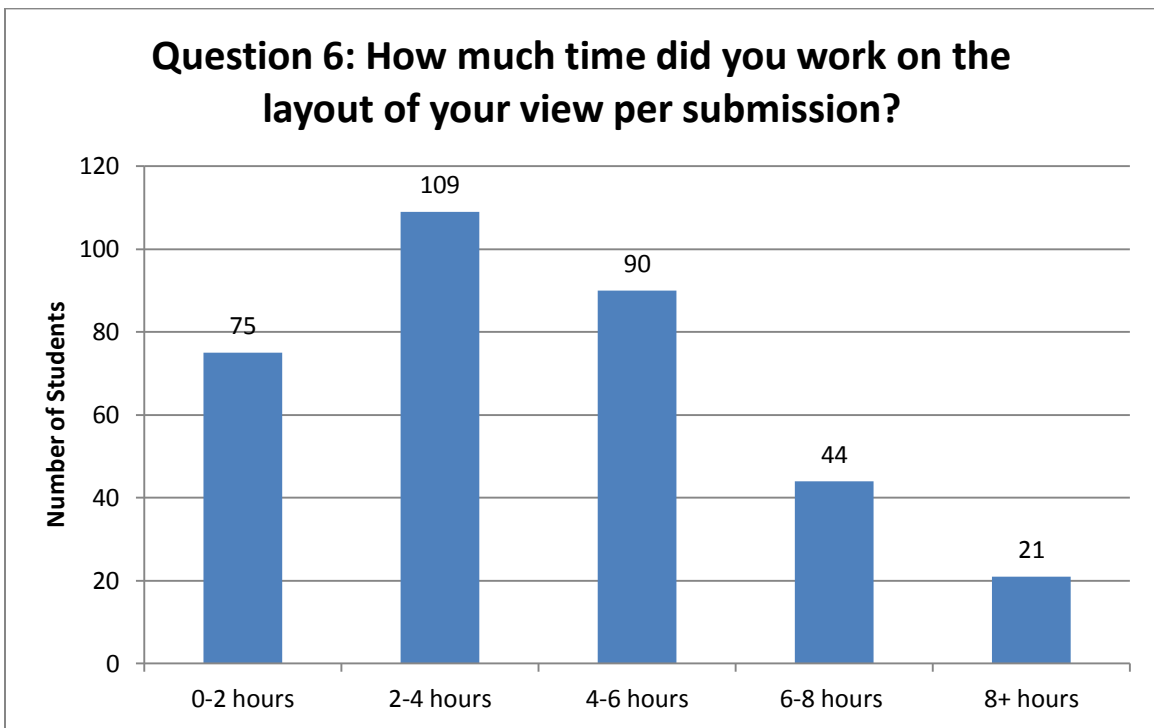
Figure 4.11 - Time Spent on a View per Submission (n=339)

The project team also asked the students to report the effort they felt they applied to each e-portfolio assignment in Question 7. Students believe that the effort required per submission was "a lot," which can be seen in Figure 4.12. The average answer for this question was 2.45 out of 5 where 1 and 5 correspond respectively to "too much effort" and "no effort".
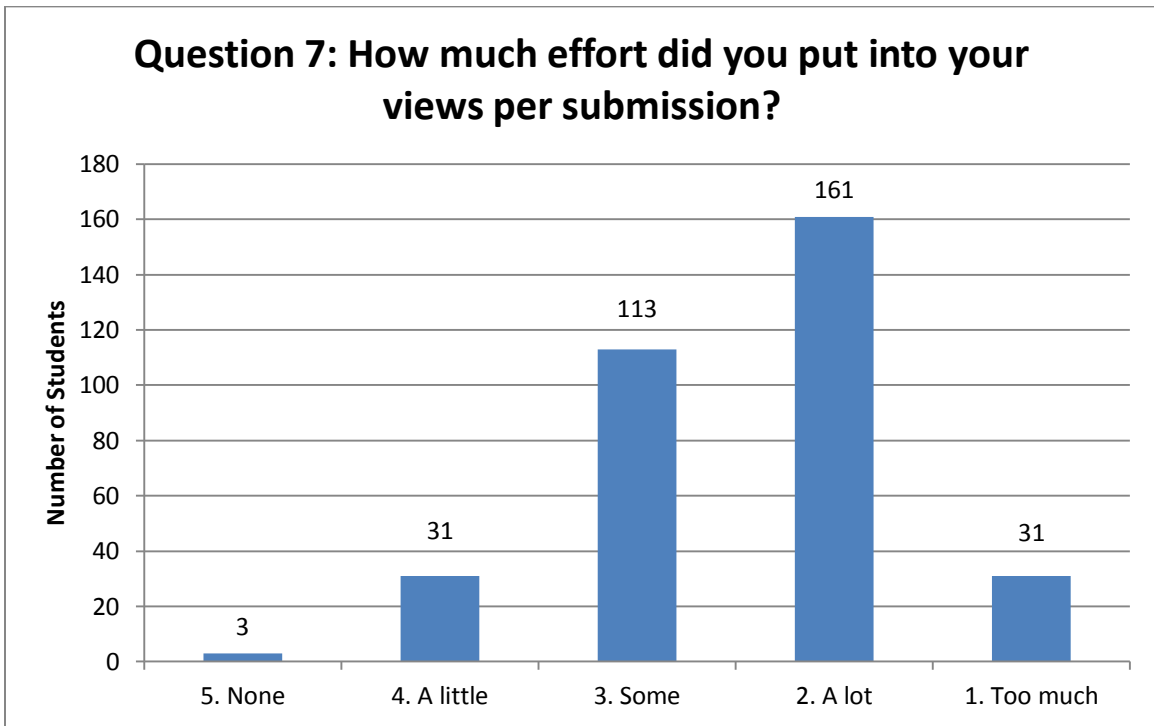
Figure 4.12 - Effort per E-portfolio Submission (n=339)

The correlation between the number of hours students spent on each submission and the effort they applied was calculated in the Excel macro and reported in Figure 4.13. The calculation was completed by observing the average answers to Questions 7 and 8 of the survey. See Appendix F, Figure F.6 to view the data output from the macro. Students were grouped by the amount of time they spent on each submission. For each group, the macro calculated the average response to Question 7 regarding the effort that the students applied to the assignment. The design of Question 7 was such that an answer of 1 corresponded to "Too much" effort per

submission, and an answer of 5 represented no effort. Therefore, the trend in Figure 4.13

displays that the more time students spent on creating their view, the more effort they applied.
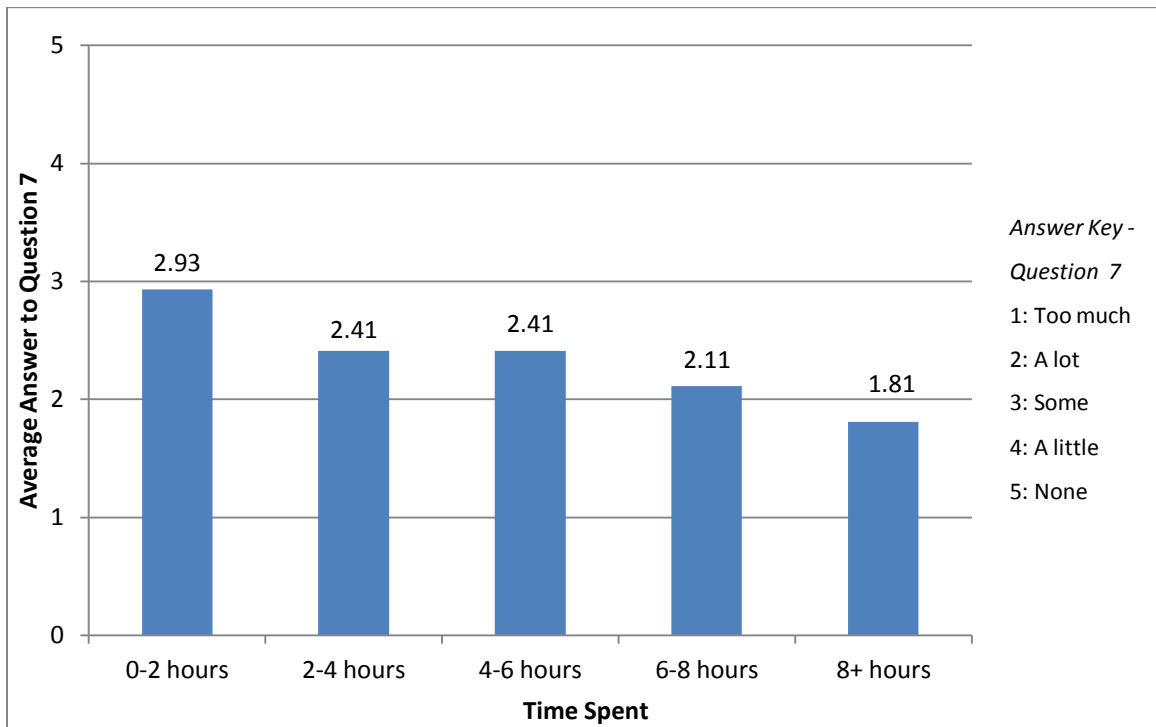
Figure 4.13 - Time Spent Creating Views versus Effort Applied Per Submission

4.2.4 Grading Views

Instructors for LCE 101 did not grade the presentation and layout of the Mahara views

submitted by students. Through the use of Question 8 on the survey, this investigation looked at

students' opinions and perceptions on the idea that they could receive points towards their grade

for submitting a well-presented view. On average, students were only slightly negative about this

idea, with an average answer 2.72 out of a possible 5. The overall results are presented in Figure

4.14.

Question 8: How would you feel if part of your grade was based on the time and effort you put into the layout of your view?
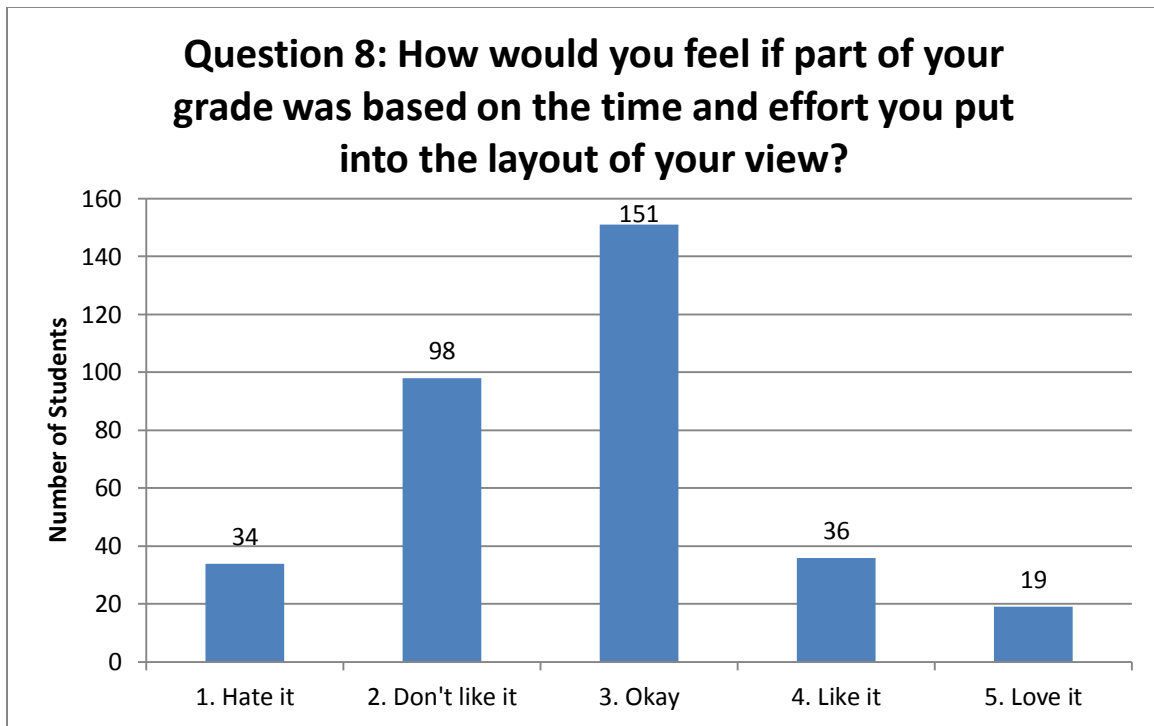
Figure 4.14 - Students' Opinion on Grading View Layout and Presentation (n=338)

The group inspected the correlation between students' opinions regarding grading view layouts and their overall preferences for using e-portfolios. This comparison, shown in Figure 4.15, was found by observing the answers to Questions 8 and 4. Students were grouped by their preference on using Mahara, and the macro calculated the average response for Question 8 regarding awarding points for well-presented views. The n-values displayed above each bar represent the number of students in each category of e-portfolio preference. The calculated averages can be seen in Appendix F, Figure F.17. The data represented in figure 4.15 suggests that the more students like e-portfolios, the more likely they are to be accepting of having their

view presentation graded. Due to the fact that only one student answered "Loved it" for their e-portfolio preference, their answer is the only one contributing to the correlation.

Opinions on Grading View Layout vs. E-portfolio Prefrences

Y-axis: Average Answer on Question 8 (0 to 4.5)

n = 46 (1. Hate it)
n = 141 (2. Didn't like it)
n = 135 (3. Okay)
n = 16 (4. Liked it)
n= 1 (5. Loved it)

X-axis: E-portfolio Prefrence
1. Hate it, 2. Didn't like it, 3. Okay, 4. Liked it, 5. Loved it

Answer Key - Question 8
1: Hate it
2: Don't like it
3:Okay
4: Like it
5: Love it
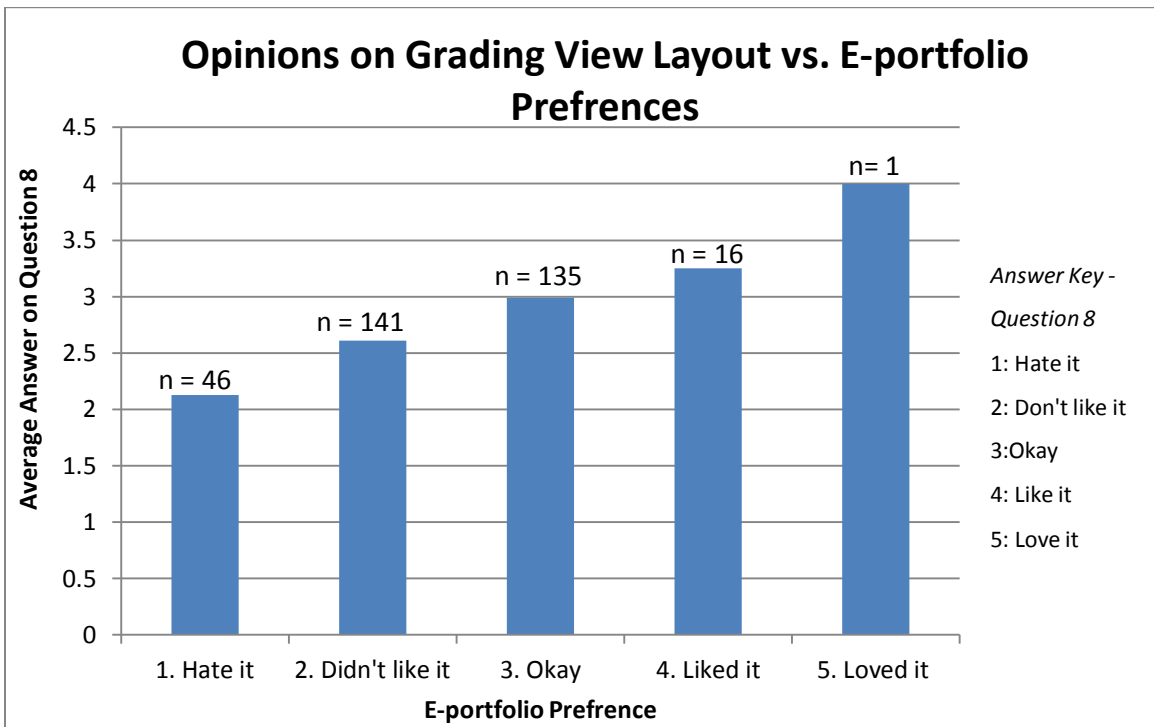
Figure 4.15 - Opinions of Grading View Layouts Compared to Students' E-portfolio Preferences

An additional comparison between students' opinions of grading the view layouts and the time they spent per submission was also determined through this study. By observing the average preference of students who reported to have spent the same amount of time on creating their views, the group was able to observe a trend from this correlation. Figure 4.16 shows that generally students who spent more time working on the layout of the views were more willing to earn credit for their efforts.
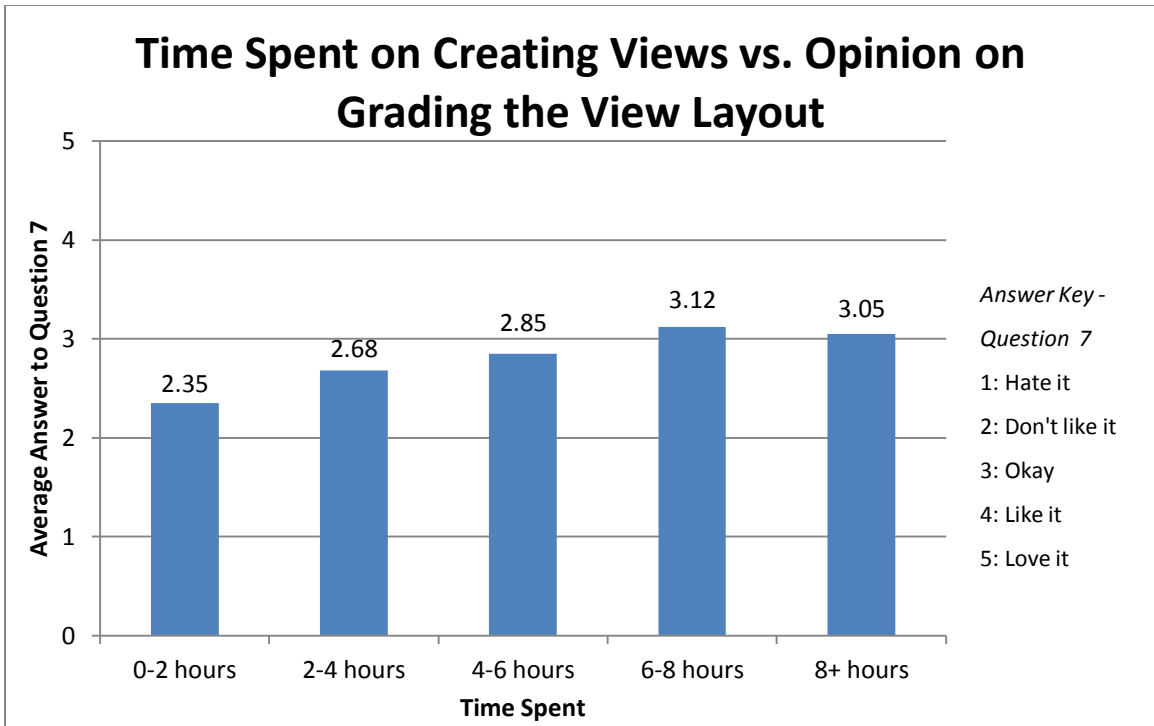
Figure 4.16 - Time Creating Views Compared to Opinion of Grading the View Layout

4.2.5 LCE 101 E-portfolio Submission Grades

The survey asked the students to report the grades they received for each of the three e-portfolio view submissions from LCE 101. These grades enabled the group to assess the progress of the students' use of e-portfolios over time. The final grade for the course was also reported. Figure 4.17 displays the number of A's, B's, and C's reported by the students for the three submissions and the final grade. Many students who reported their grades for the e-portfolio submissions did not report their grades for the course. Additionally, e-portfolios make up only 20% of a students' grade. Taking this into account, there is a discrepancy between the submission grades and the final grade because many other factors contribute to determining the course grade.
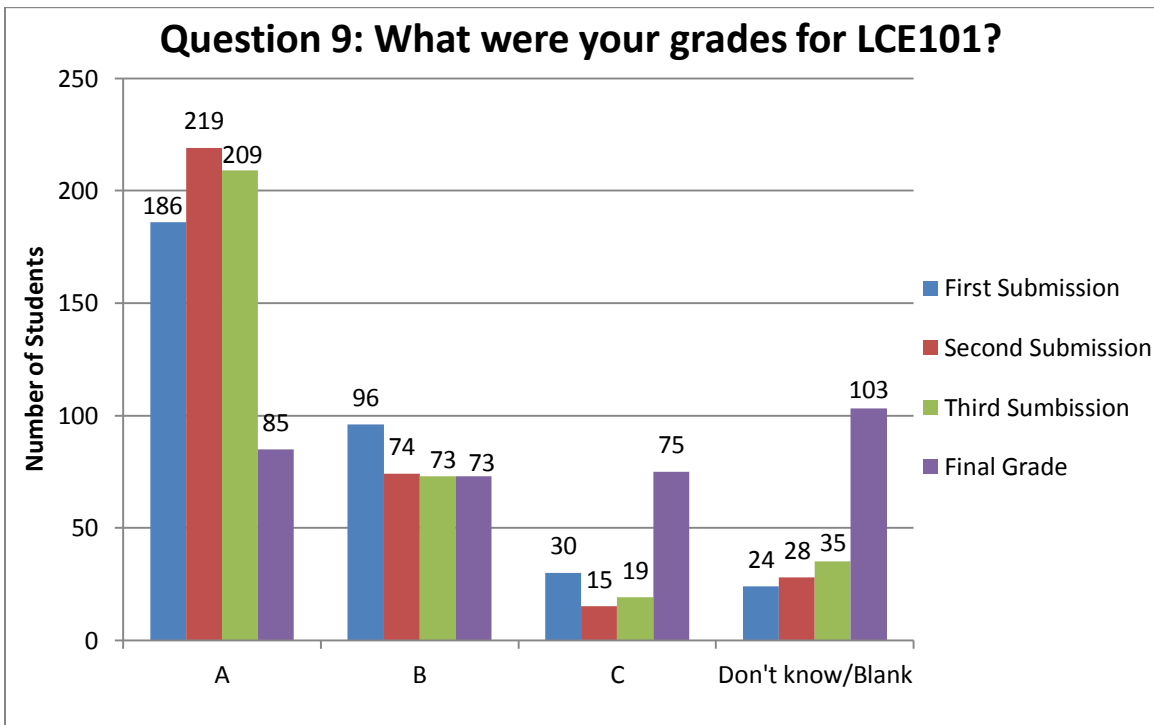
Figure 4.17 - LCE 101 Grades for View Submissions and Final Course Grade

The investigation also studied the relationship between the grade students received and the benefits that they perceived from the use of e-portfolios. The grade used in this correlation was an average of the students' three e-portfolio submission grades and did not include the final grade. Figure 4.18 describes the way students with average grades of A, B, and C perceive the benefits of using e-portfolios for Independent Learning. The average grade for each student's submissions was calculated by the macro using a Grade Point Average. A 4.0 scale was used to determine the GPA where an A was worth 4.0 points, a B was worth 3.0 points, and a C was worth 2.0 points.
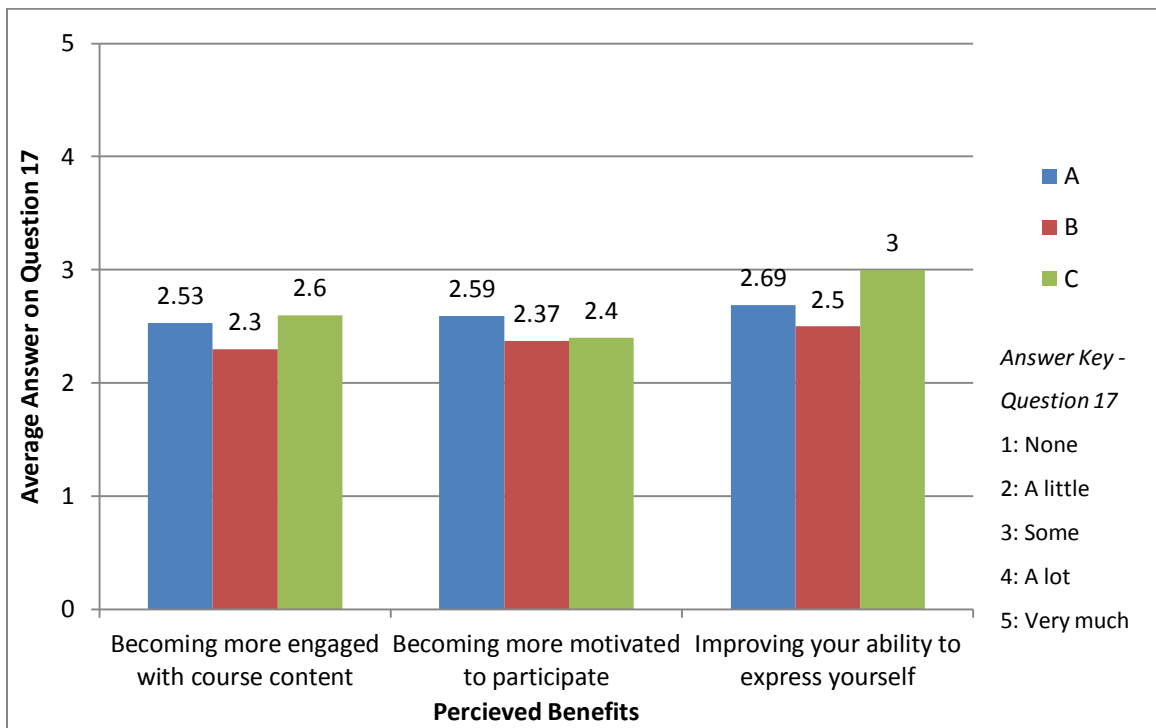
Figure 4.18 - LCE 101 E-portfolio Submission Grades versus to Perceived E-portfolio Benefits

4.2.6 Technical Support for E-portfolios

Since Mahara e-portfolios were a new addition to the Lingnan University curriculum in the fall of 2010, many students required help and assistance in adjusting to the use of the technology. The team assessed students' use of the help available to them through Self Access Centre (SAC) sessions, in-class demonstrations of the software, visiting teachers' office hours, and asking their friends. Figure 4.19 displays students' ranking of how much help they received from each source. In general, students reported to seek "some" help when creating e-portfolios.
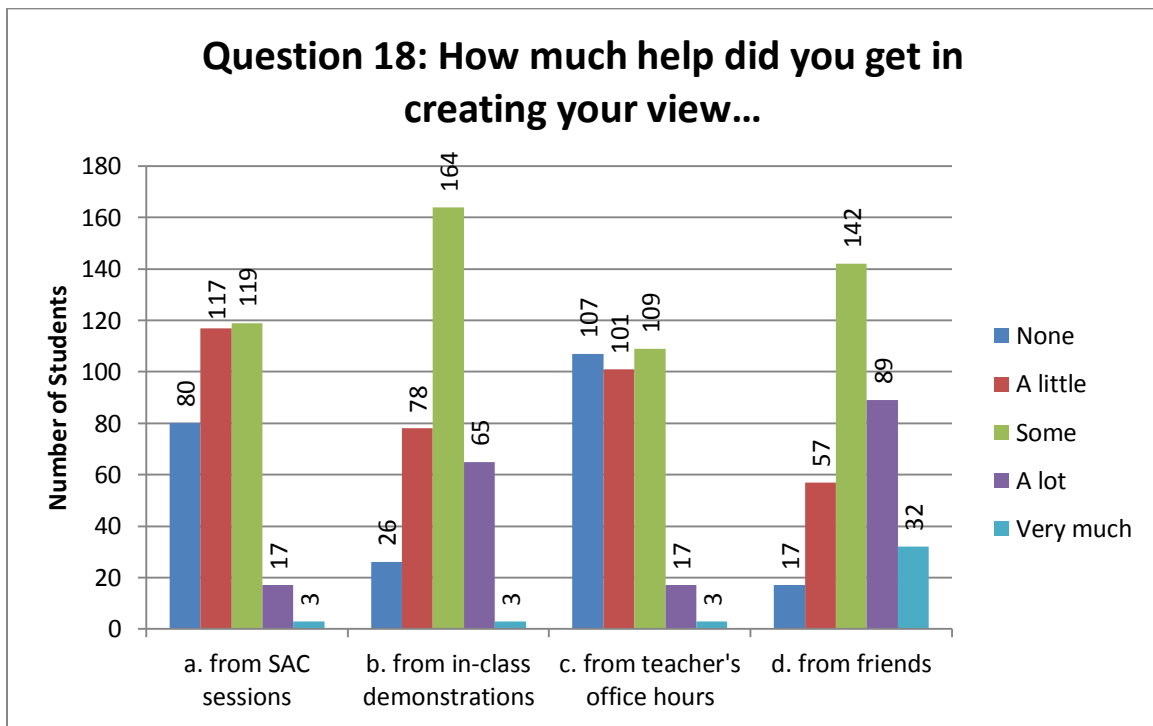
Figure 4.19 - Help Utilized by Students (n=337)

The team also compared the weighted average of the amount of help students received from each of the possible resources. Students ranked the help they received from 1, "none", to 5, "very much." The number of students who selected each ranking were multiplied by the ranking itself, and then the sum was divided by the total number of students who answered that question. Figure 4.20 displays the result of this weighted average calculation. Students, on average, received help mostly from friend and in-class demonstrations.
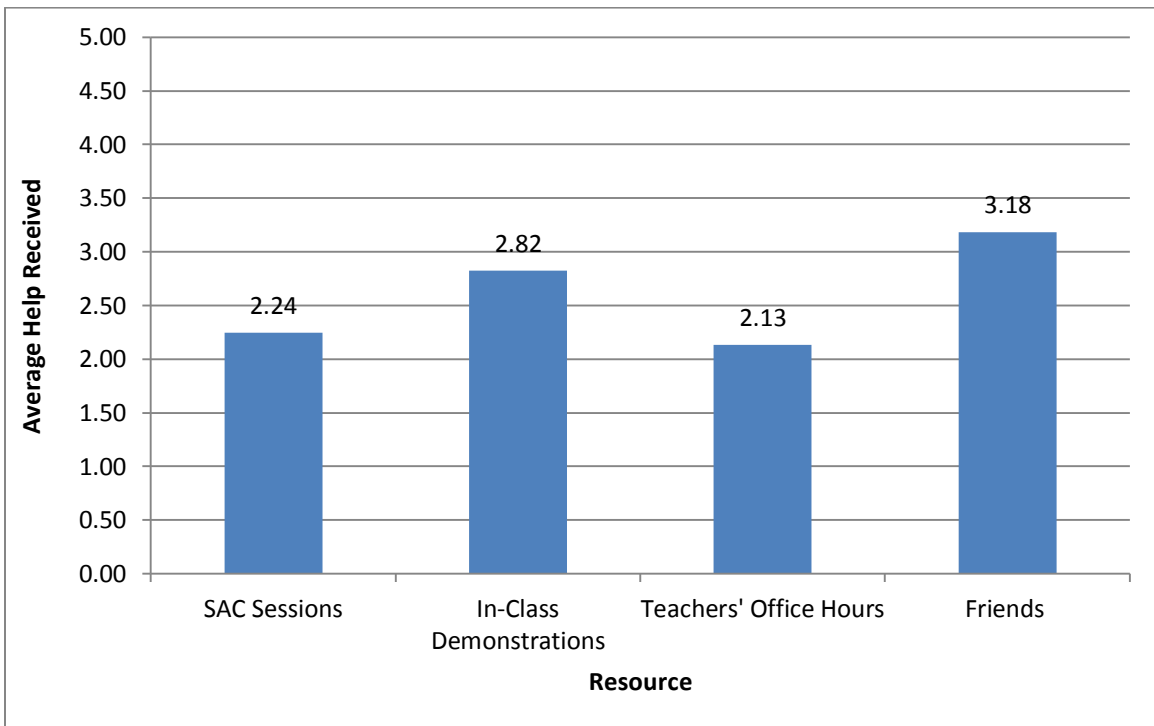
Figure 4.20 - Weighted Average of Help Received from Each Resource

The macro determined the relationship between how much help students received and their overall opinion of e-portfolios. By grouping students with the same level of preference for e-portfolios (Question 4), Figure 4.21 depicts on average how much help those students received. The Figure shows an upward trend between students who ranked their opinion of e-portfolios as "hate it" and students who ranked it "okay." This trend can be observed specifically with the use of SAC sessions, friends, and, most drastically, the use of in-class demonstrations. Students who expressed that they liked or loved e-portfolios did not follow this trend, however there were fewer students who selected the most positive responses as seen in Figure 4.4 in Section 4.1.2. Essentially, students' opinions improved as they received more help on e-portfolios.
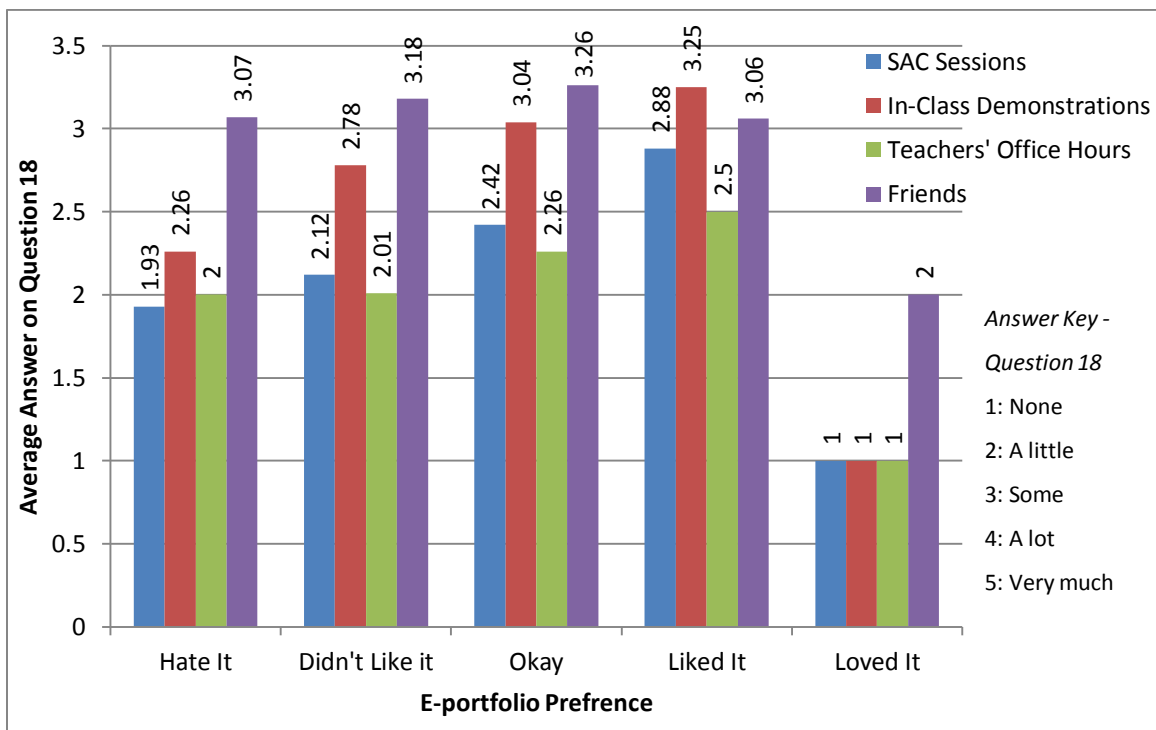
Figure 4.21 - Help Received versus to E-portfolio Preferences

4.2.7 Determining Learning Style Preference

Using the Felder-Silverman Model, the next step in the analysis focused on visual versus auditory learners, the input dimension, and on active verses reflective learners, or the processing dimension. Students' responses to the six learning style questions on the questionnaire were used to determine their learning preferences in the input and processing dimensions. It is important to note that the six questions regarding learning styles did not exclude students who did not take LCE 101 in the fall 2010 semester.

The survey contained three questions for each learning style dimension that were used to determine whether the student was a visual or auditory learner and an active or reflective learner. The odd number of questions for each dimension ensured that students would only belong to one learning style. The Excel macro first determined which students selected answers corresponding to a learning style within a dimension. The results for the input dimension are displayed in Figure F.7 in Appendix F, determined by questions 11, 12 and 16 from the survey. The results for the processing dimension are displayed in Figure F.9 in Appendix F, denoted by questions 13, 14 and 15. Next, the macro determined each student's learning styles. For example, a student was a visual learner if that student checked the answer "a" for two or more of the three questions. If not, then the student was an auditory learner and must have checked the answer "b" for two or more of the questions.

4.2.8 Relating Learning Styles to E-portfolio Use

Students' responses to the input dimension questions are represented in Figures 4.22-4.24. Option "a" for each question corresponds to visual learning, and "b" denotes auditory learning. It is clear that Lingnan students have a stronger preference towards visual learning.

Question 11: I prefer to get new information in…

Auditory
30%

Visual
70%

- a. Pictures, diagrams, or maps
- b. Written directions or verbal information
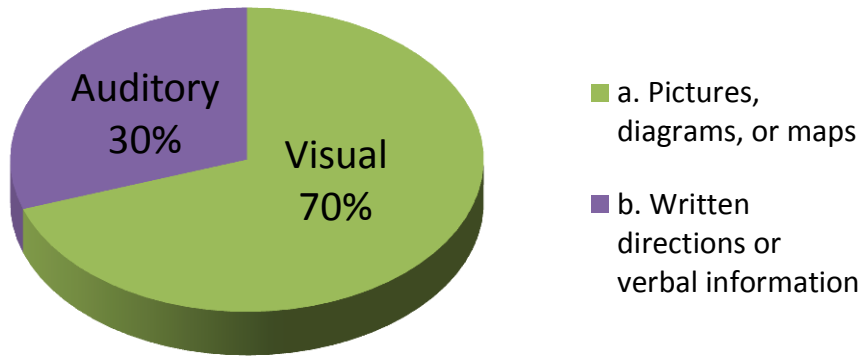
Figure 4.22 - First Question for the Input Dimension (n=370)

Question 12: I remember best…

Auditory
19%

Visual
81%

- a. What I see
- b. What I hear
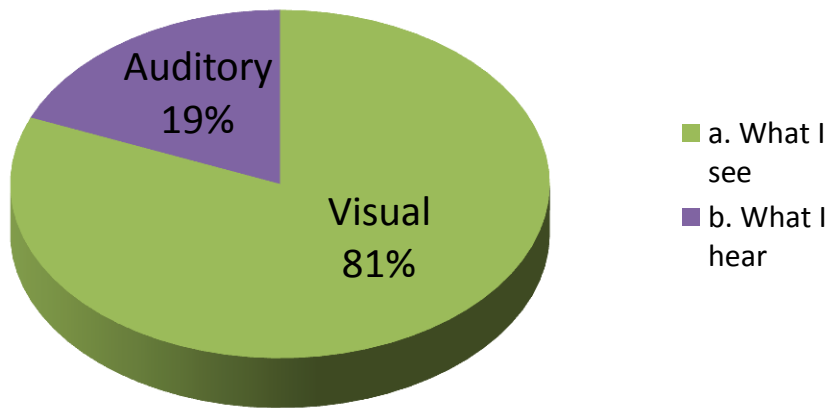
Figure 4.23 - Second Question for the Input Dimension (n=373)
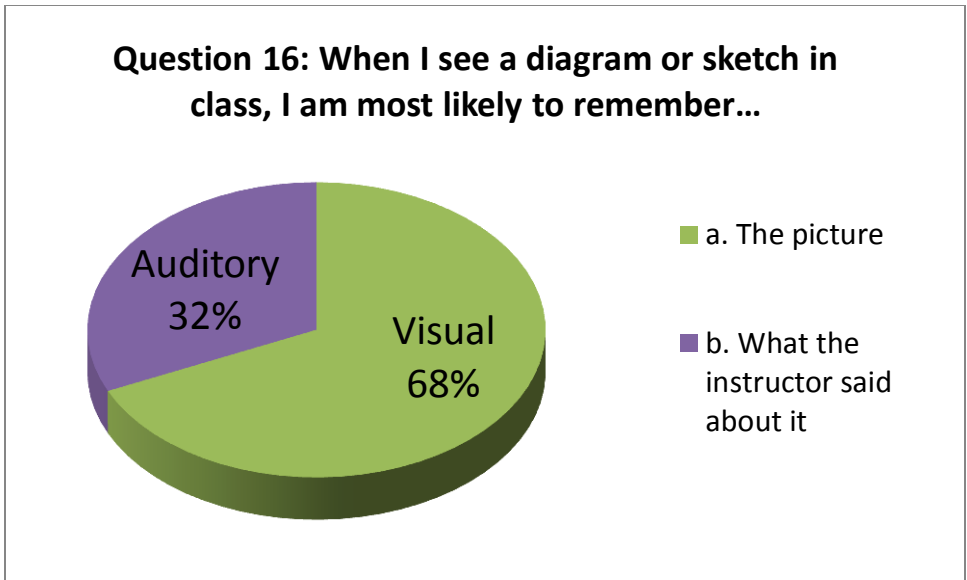
Figure 4.24 - Third Question for the Input Dimension (n=374)

The next step involved examining the processing dimension. Students' responses to these questions are represented in Figures 4.25-4.27. Students generally had a preference for the reflective leaning style at Lingnan University. For the following three questions, option "a" corresponds to active learning, and "b" represents reflective learning.
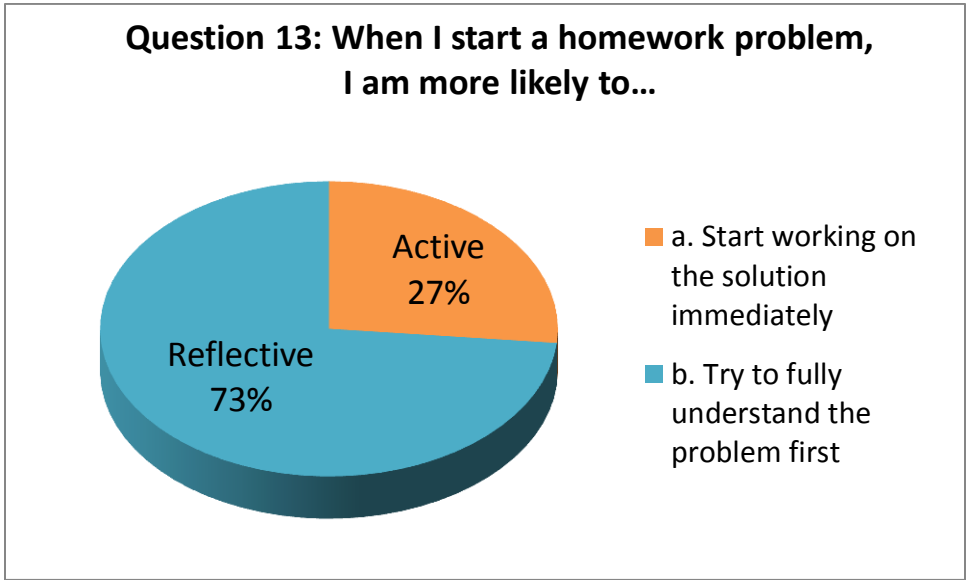
Figure 4.25 - First Question for the Processing Dimension (n=373)

Question 14: I more easily remember…

Reflective 44%

Active 56%

- a. Something I have done
- b. Something I have thought a lot about

Question 15: In a study group working on difficult material, I am more likely to…

Reflective 57%

Active 43%

- a. Jump in and contribute ideas
- b. Sit back and listen

This investigation looked at the correlations between learning styles of students and their impressions of using e-portfolios. Using the results from students' perceived benefits from using e-portfolios, the macro compared each learning style dimension. As shown in Figure 4.28, visual learners are more likely to become engaged, motivated and expressive through using e-portfolios

to display their language learning. In the processing dimension, more reflective learners

perceive benefits from e-portfolios, as seen in Figure 4.29.
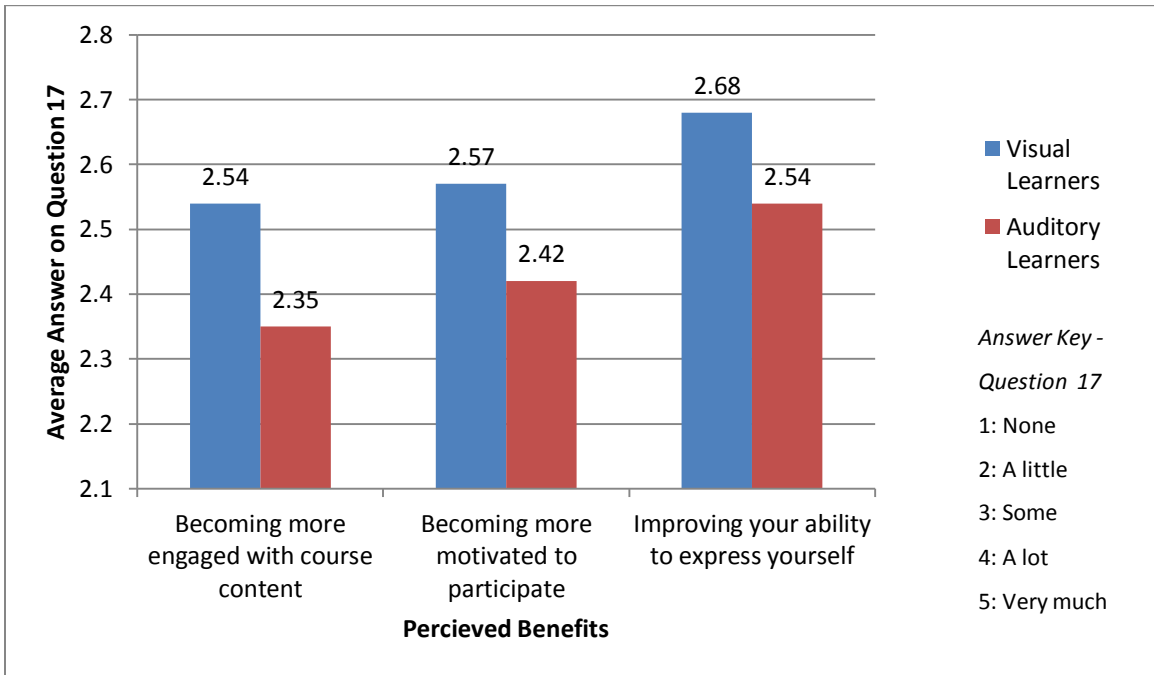
Figure 4.28 - Visual and Auditory Learners' Perceptions of E-portfolios
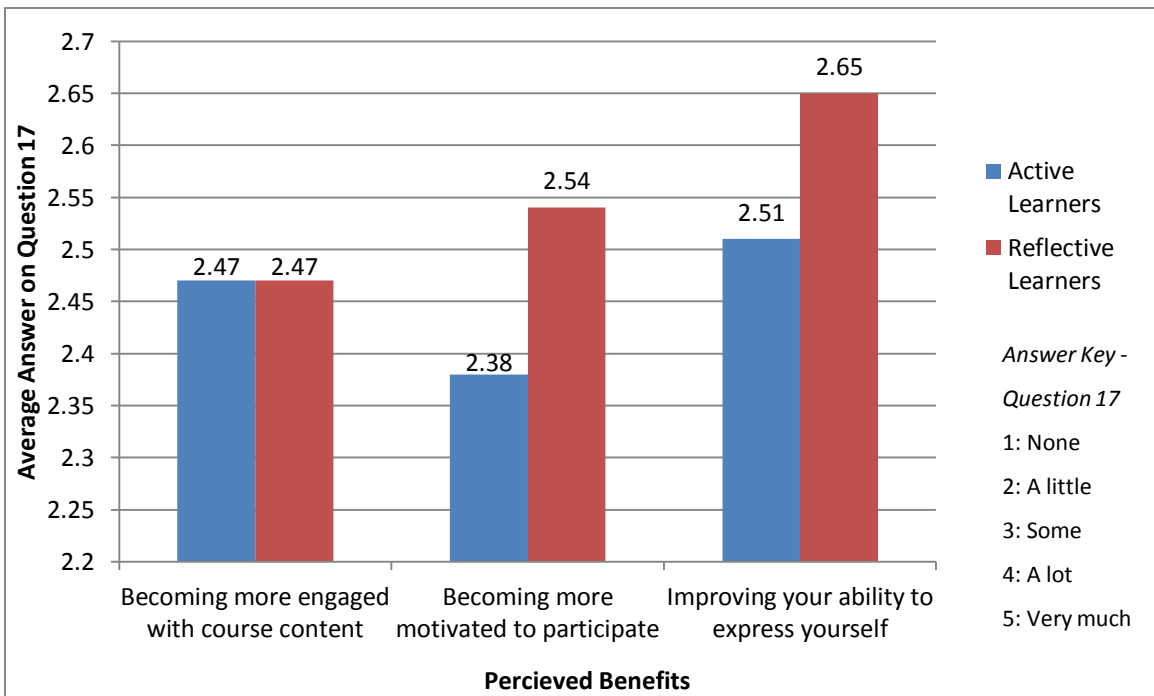
Figure 4.29 - Active and Reflective Learners' Perceptions of E-portfolios

Finally, the group examined the connection between students' learning style preferences and the grades they received on each e-portfolio submission in LCE 101. The macro calculated the grade point average (GPA) for all students determined to be visual or auditory learners. The team then repeated the correlation with active and reflective learners. This calculation was conducted in the same manner mentioned in Section 4.2.5. The grades for each learning style dimension are plotted for each submission in Figures 4.30 and 4.31. In both dimensions, the possible learning styles followed a similar trend. In general, when students were grouped by visual or auditory learning style, there was an improvement in grades from the first to the second submission. However, when students were clustered as active or reflective learners, there was almost no change in grades across the three submissions.
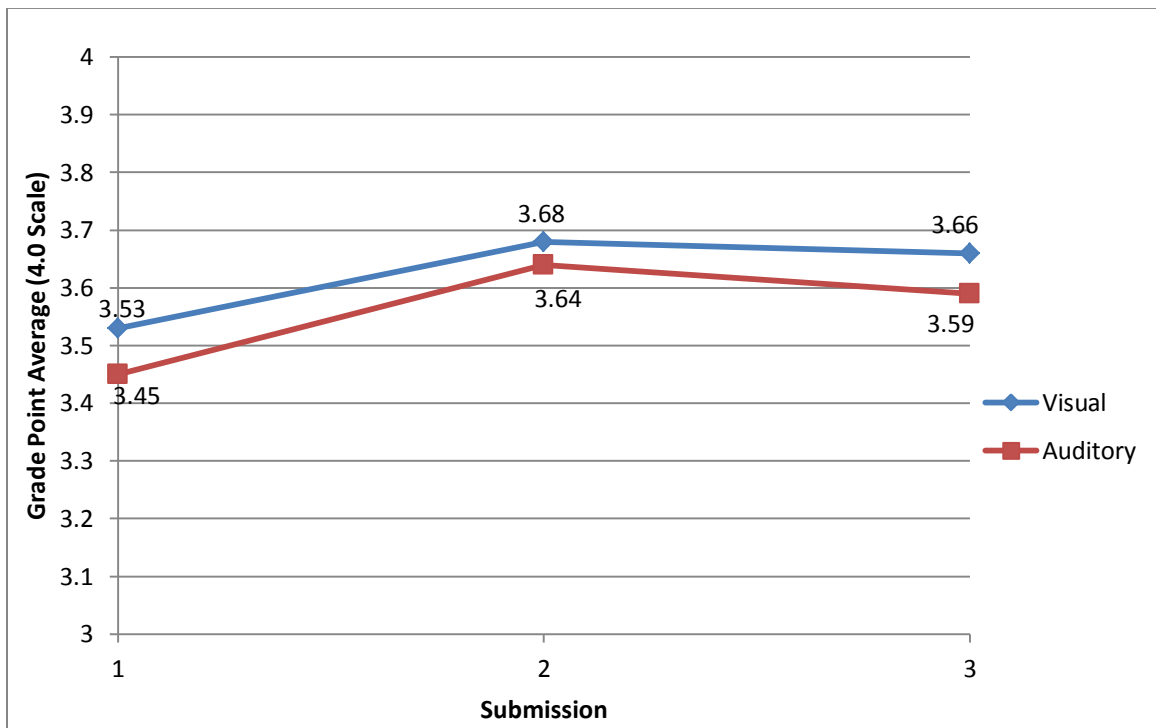
Figure 4.30 - Comparison of Average GPA in the Input Dimension
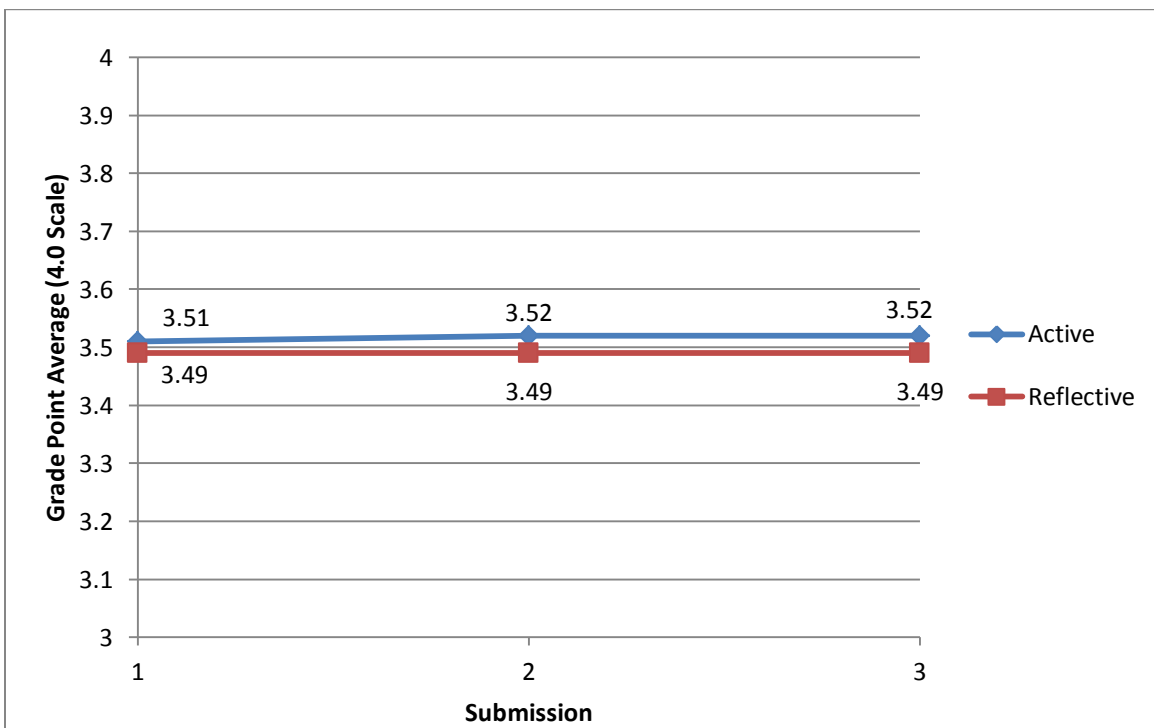
Figure 4.31 - Comparison of Average GPA in the Processing Dimension

4.3 Faculty Interviews

The WPI project team interviewed five faculty members from Lingnan University's Centre for Education and Additional Languages (CEAL) department. Each of these teachers used Mahara for the first time in their fall 2010 LCE 101 class. The faculty members are listed as Faculty A, B, C, D, and E and will be referred to as males in the text to keep their identity confidential. The interview transcripts for the five instructors can be viewed in Appendix H. Table 4.2 gives a brief insight into the categorized responses of the faculty.

Table 4.2 - Faculty Interview Overview

	Faculty A	Faculty B	Faculty C	Faculty D	Faculty E
Current Recording System Used	Excel	Electronic	Some Pen and Paper, Mostly Excel	Excel	Pen and Paper, Then Excel
Current Use of Moodle Gradebook	No	No	No	No, but will in the future	No
Grading View Layout Qaulity	Against Grading	Against Grading	Against Grading	For Grading	Currently Not Practical
Does Bad View Hurt Students Grade	Inadvertently Yes	No	No	As Long as Teacher Can Understand Student Work, No	Inadvertently Yes
Feelings on students keeping their views	Is important	Not needed	Not needed	Is important	Not needed
Teachers' Benefits to Keeping Old Student Views	For Teachers to See	Will Help with Plagiarism	Teachers Can Learn From	No Benefit	For Good Examples
Feelings towards plagiarism and cheating	Hard to Detect	Hard to Detect	Worried About It	No Tolerance	Follows Protocol When Detected

4.3.1 Grading Methods for LCE 101

Table 4.2 previews the interview results and shows similarities and differences between faculty members' answers. All of the teachers used Excel at one point in their grading process of LCE 101. The university requires all grades from core classes to be submitted in an Excel spreadsheet following a strict format. Therefore, the teachers did not have any interest in using electronic grading methods other than Excel in order to avoid redundant work. Faculty E used paper based scoring for in-class grading because the classroom in which he taught was only equipped with a computer directly connected to the projection screen. Faculty E also voiced his concerns about the human errors associated with transferring grades from paper score sheets to electronic ones and moving the data electronically. This faculty member stated that having a single system to input grades would be helpful. He had not personally used the Moodle grade book before but he is not against the technology. Faculty D agreed with Faculty E in that the current method of recording grades is "silly and stupid." He hasn't used the Moodle grade book before but will be using it in a spring 2011 elective class. Faculty D stated that he uses Excel spreadsheets for core classes because he must submit grades in the Excel templates according to the University's rules. Faculty C said he is not familiar with Moodle's grade book. He stated, "We post our grades in another master spreadsheet for statistics purposes. Using the Moodle grade book would be extra work." He did not want to enter the grades twice. Faculty B was unsure of what the Moodle grade book is. He said that the grading system used for LCE 101 was completely new to the faculty. He would like more training before the school switches over to grading using Moodle's grade book.

4.3.2 Common Challenges

The project team found that all five of the teachers interviewed agreed on a common challenge when grading a student's portfolio view. The instructors found grading to be most difficult when students put too many links into their views. This forced teachers to click on each link, which downloaded a file and opened a new window. This caused the teachers' grading time to increase considerably. The faculty members preferred views that could be easily followed and visible on one screen of the browser window.

4.3.3 Well Presented E-portfolio Views

The five instructors all had different perspectives on what contributes to a well-presented e-portfolio view. Every faculty member had a different suggestion on the best technique for displaying a view; however, none of their answers were contradictory. Faculty B and C thought an ideal e-portfolio view should be nicely organized, clearly presented, and attractive to the observer. Faculty C explained that for him a well-presented view must have three parts: "a before, a during and an after study". Faculty D wanted students to reflect inward to criticize themselves. The view had to clearly show how the student found their own faults and how they planned on improving them. In addition, the view should contain a full reflection of each step. Faculty A wanted a variety of postings and the view to be readable. He stated that a model view creates a positive impression on the observer.

4.3.4 Poorly Presented E-portfolio Views

Conversely, a poorly-presented view is one that contains multiple files that need to be downloaded individually. Faculty D said that a poorly-presented view had no personality. He believed that students must put time and effort into the work they hand in. Faculty D taught his students how to present a properly laid-out and appealing view so that when they don't, he can

easily see their lack of effort. Faculty members A and C didn't like cluttered e-portfolio views. Having multiple views for the same task or irrelevant information in the views would be difficult to access.

4.3.5 Grading an E-portfolio View

Currently, Lingnan University grades students' e-portfolio submissions for LCE courses in 5 point increments out of a total 20 points. Therefore, an A is 20 points, a B is 15 points, a C is 10 points, and zero points results in a failing grade. Students were presented with the grading scheme at the beginning of each course and it was also listed in the student course book that CEAL required for LCE courses. None of the five teachers said that they particularly liked the current grading scheme. Faculty B stated, he did not like the current grading scheme. He said that students put a lot of irrelevant information, or "junk," into the views. The grading system focuses too much on the quantity of Independent Learning activities instead of the quality of the activities. Faculty member A explained in his interview that a contractor was hired to implement Mahara and create the e-portfolio grading system. The grading scheme is a continuous discussion but currently it evaluates the completion of stages and relevant objectives. The grading system does not take into account the presentation of the e-portfolio view.

Most teachers' initial response was negative when asked their feelings on grading e-portfolio view's layout. However, Faculty D felt strongly that view layouts should be graded. He suggested awarding at least 5% of the grade to the way the e-portfolio is presented. Faculty member D talked about how the content of a disorderly view does not look professional. Students should learn that in the real world information must be presented in a neat and orderly fashion. Poor layouts reflect greatly on the content that is being presented. Although the other instructors understood the benefits to grading the view, they also had numerous apprehensions.

Faculty B was against grading portfolio layouts since he did not think it was fair to penalize the students for their lack of IT skills. However, Faculty E informed the research group during his interview that LCE 102 and LCE 101 course objectives were changed in 2011 to include the development of students' IT skills through Independent Learning. Faculty E felt that at some point student's e-portfolio views should be graded on their layouts, but at the current time he believed that it was impractical to do so. Faculty C expressed concern over the workload that grading would cause faculty. He also felt giving a grade for view presentation would not motivate students to develop a well presented view. This faculty member thought that students should inspire themselves to create a good view. In order for this to happen, he believed more technical support should be given to the students.

The faculty member's opinions were divided when asked if a student's grade suffered because of a poorly presented e-portfolio view. Some faculty felt that a poor view would result in a lower grade while other faculty felt this would not happen. Faculty members B, C and D said that as long as they could understand the student's work, the presentation would not affect the grade. They stated that sometimes a poorly presented view could take a very long time to grade. Faculty members A and E stated that a bad view could aggravate the grader and inadvertently result in a lower mark. Instructors A and E realized that the marking scheme did not include view layout and presentation, but regardless, a disorderly view could result in a slightly lower grade. Faculty member D argued that since the grading scheme is so simple; it should be easy to tell the difference between an A, B, C or F grade view.

4.3.6 Accessing Old Student E-portfolio View's

Currently Lingnan University deletes the students Mahara views at the end of the LCE classes. Among the faculty, there are several arguments on how they feel about letting the students keep their views and the ability a faculty would have to access them.

The faculty members have two common opinions about the students keeping their views. The first opinion was that students should be able to keep their views. The argument is that students work hard on their views and by the end of the semester they are deleted. According to Faculty A, this sends the wrong message to their students, indicating that all the time they spend working on their views is wasted. This also discourages students from looking back to previous semesters, reflecting on what they worked on and making further improvements.

Keeping the students views has its valid points. Although, most of the teachers felt that there is no urgent need for the students to keep their views on the schools servers. Faculty C added that this could lead to more trouble with plagiarism. Additionally, he believed that by allowing the students to start fresh with their e-portfolios every semester their creativity would not be limited by what they had done in the past.

On the other side of the spectrum, teachers have their own opinions about the access they have of students' old views. Faculty E strongly believed that teachers should be able to access students' old views for the purpose of allowing teachers to practice their grading and allow CEAL faculty to standardize the grading methods for e-portfolios in LCE courses. He also believed that teachers could create exemplars from these views for students to model their views. Faculty C and Faculty D mostly agreed with Faculty E regarding the standardization of grading, because the new teachers will learn quicker to grade the views. Additionally, Faculty C strongly disagreed with the creation of exemplar views. He believed that giving students models to follow

will cause the students to imitate what they see, which limits their creativity. Faculty A said that teachers' access to the students views should be allowed only if students permit it but agreed that it will be helpful overall for the teachers to see students' old views. Faculty B said that keeping students' views could help with eliminating plagiarism, which he believes is a big problem with e-portfolios.

4.3.7 Plagiarism

Plagiarism is not allowed by Lingnan University's code of conduct. However, Faculty A believed that the combination of the use of e-portfolios and the way LCE 102 is structured increased the chance of students cheating. Both LCE 101 and LCE 102 have the same requirements for the three Mahara views submissions. By the end of the semester the student had to have submitted three views on learning from speaking, reading and listening. The order in which they are submitted does not matter. For example, a student can submit the learning through speaking view on their first submission, the listening view as their second and the reading view as the third while another student can submit it the opposite way. The students can truly have worked on their first submission but can easily swap views with a friend for the second deadline.

Faculty E added that students go as far as submitting their own work from the first semester as work for the second. Though this is not technically plagiarism since a student is not submitting someone else's work, it is still not an acceptable behavior. Faculty D and Faculty E had no tolerance for this behavior and the student is failed if plagiarism is confirmed. Faculty D added a suggestion on how to help with the situation; he tells the students that teachers can easily find out if they have not submitted new work. He said that this strategy of "putting the fear into them" worked in his classes in the past.

4.4 Student Interviews

The team interviewed a total of nine Lingnan students who took LCE 101 during the fall of 2010. The questions of the interview revolved around the topic of improving the use of e-portfolios. The idea behind the questions was that e-portfolios are going to be part of the curriculum and the team needed to know if there was anything that could be done to increase its likeability by making changes and improvements.

Among the students who were interviewed by the team, the majority disliked the implementation of e-portfolios. Students' reasoning for this was that the workload was too large and it took a long time for the students to complete their assignments. Some of the students added that designing the e-portfolio view took away time they could have used to learn English. When the students were asked what could be done to improve this, they shared interesting suggestions. Student A and Student B agreed that the submission topics available were too broad and open-ended and it took them time to make a decision. They suggested making submission requirements rigid with more limitations. Student F suggested that knowledgeable tutors for Mahara should be easily accessible and publicized to students.

When the group asked the students how they felt about the resources currently available to them for e-portfolios, a larger portion of them said they were satisfied. However, the team asked if there were any resources that they thought would be better than the ones available. Students D, E and F suggested the use of video tutorials for support on how to create a view. Student E also suggested having YouTube tutorials to help them when uploading their videos. Finally, student H commented that he would like the teachers to do more in-class demonstrations.

The research group, attempting to measure the level of knowledge of Mahara that the interviewees had, asked them what they found easy and difficult while using e-portfolios. The students agreed that adding content to their views was simple. The difficult part of the assignment was to organize the content once it was in the view to make it easily readable by the instructor. They also mentioned some technical difficulties that occurred but did not provide useful details.

As part of the teams' survey, students were asked if they would like to be awarded points for the way that their view layout looked. With the results of the survey at hand saying that students did not like the idea, the group decided to get more in-depth information about the manner from the student interviews. Each student had their own reasoning for being for or against the idea. Students A, B, D and G strongly disagreed with grading the presentation of the view, saying that it was not really beneficial. Their argument stated that if a student knew enough about Mahara they could get a good grade just because their view was well-presented. The rest of the students did not mind having their layout graded. However, Student F strongly agreed with the idea, saying that students will not put much effort into making a well-presented view if there is no benefit from doing so.

5. Discussion and Recommendations

This chapter analyzes the results from Chapter 4 and provides recommendations. The research team was interested in measuring the significance of the results found from the survey. Mr. Knutzen provided help by introducing the team to a statistician who works for the Teaching and Learning Centre (TLC). Since 64% of students who took LCE 101 were surveyed, the team was informed by a statistician it was unnecessary to spend time performing any statistical significance tests and that any results are statistically significant. Therefore, all recommendations based on the survey are strongly supported by reliable results. The results clearly show that a majority of students have a negative opinion of e-portfolios. Students also believe they spent too much time working on their submissions and indicated strongly that they didn't want to be graded on the layout of their views. This is why the team focused on providing recommendations for improving students' experience using e-portfolios.

5.1 Learning Styles

Using the Excel macro, the data was analyzed in order to determine the learning style of each student. The team wanted to analyze the effects of a student's learning styles on their experience in LCE 101. Once the learning styles of each student were determined, they were correlated to how students benefitted from the LCE 101 classes and the grades they received in the course.

The data analysis establishes that visual learners perceived more benefits from using e-portfolios than auditory learners. After using e-portfolios, visual learners felt they became more engaged in the course contents, more motivated to participate and their ability to express themselves improved further than auditory learners did.

The results yielded differences between the experiences of reflective and active learners as well. The team concluded that reflective learners perceived more benefits from using e-portfolios than active learners. The survey analysis established that reflective learners felt equally engaged with the course content as active learners. Reflective learners became more motivated to participate and improved their ability to express themselves further than active learners.

5.2 Improving the Layout of Students' Views

One of the major conclusions from this project is that students taking LCE courses have trouble with the layout of their e-portfolio views. This section recommends improvements Lingnan University could implement to enhance student experience when creating e-portfolio views.

5.2.1 Grades and Incentives

This study allowed the group to reach conclusions regarding students' and faculty members' opinions on grading the presentation of an e-portfolio view. The team hypothesized that students would be more likely to produce a well-organized view if they were given a grade for the presentation of their submission. By taking these opinions into account, the group was able to formulate recommendations on this issue.

Question 4 of the survey asked students how much they liked e-portfolios in their English language learning courses. When compared to Question 8, students' opinions on grading the layout of their view, there was a strong upward trend with a coefficient of determination (R^2) of .97. R^2 is the coefficient of determination which indicates that the trend is 97% accurate and was obtained from the Excel graph. Students are more likely to accept having the presentation of their views graded when they become more familiar with the use of e-portfolios.

Next, the cross-correlation of Question 8 with Question 7 was used to determine if students spending more time on the presentation and layout of their views were increasingly interested in receiving marks for their efforts. The resultant R^2 value of 0.88 means the students putting in time and effort to assure that their view is well-organized and well-presented want recognition for that hard work. To investigate further, during both student and faculty interviews, the team asked how the interviewee felt about grading the presentation of the view. In general, there was a negative attitude towards making this change. Most teachers believed that instructors as a whole did not have a sufficient understanding of e-portfolios to fairly grade the presentation and layout. Students' largest concern was that other students who were more technically savvy would receive higher grades even if their English skills were not as proficient. Despite this, as mentioned above, students would like to be rewarded for taking the time to arrange their view in a well-presented manner.

Based on these conclusions, this study recommends that the Centre for English and Additional Languages (CEAL) department consider rewarding students for submitting views that meet teachers' expectations for being well-presented and organized. Since there was such strong objection amongst faculty and students about receiving academic credit for the view presentation, the team does not recommend that marks be given towards the view layout at this time. However, assessing the presentation of the view should remain an option for CEAL in the future when both students and teachers' become more proficient with the e-portfolio program. This investigation did not examine other possible rewards for submitting a well-presented view. Thus, the team suggests that CEAL survey the students about what would motivate them to organize the layouts of their views clearly. Teachers should also be polled about possible rewards they would be comfortable giving to students for a well-presented view.

5.2.2 Improvements to E-Portfolio Learning

Based upon Chapter 4's results, the research team deduced that students need help with the organization of their e-portfolio views. The survey showed that students received more help from their friends and in-class demonstrations than from the Self Access Centre (SAC) or teachers' office hours. Results from the student interviews indicate that students would like to have more in-class demonstrations of e-portfolios. In addition, teachers stated that a poorly-structured view takes a very long time to grade and caused aggravation to the instructors. By utilizing more in-class demonstrations, teachers could educate the students on how to construct an easily-gradable and well-presented view. Furthermore, students stated that designing the view took time away from their English learning. The primary focus of LCE 101 and LCE 102 is English learning. Students need to learn how to make an acceptable e-portfolio view so they can efficiently portray their Independent Learning assignment in an e-portfolio view. After looking at the synopsis of these conclusions, the WPI project team is recommending that instructors give more in-class demonstrations on the use and presentation of e-portfolios.

In addition, the data from Questions 4 and 18b of the survey show that the more help students received from in-class demonstration the more they liked e-portfolios. This can be concluded because of the research team's large sample size of 340 students and the positive trend line's R^2 value of 0.95. Lingnan University should redesign the curriculum to enable teachers to provide more in-class demonstrations since it will improve students' feelings toward e-portfolios.

5.2.3 Implementation of Long-Term "Tech Tutors"

The WPI project team was first introduced to Lingnan University's Centre for English and Additional Languages Centre (CEAL) faculty members as "tech tutors". The faculty members were thrilled to have technical support for e-portfolios. The project team discovered

through the student interviews that students want more technical support as well. Therefore, the WPI project team recommends that Lingnan University hire long-term "tech tutors". These "tech tutors" would need to be knowledgeable about Mahara e-portfolios and be available to students and faculty. The "tech tutors" could be Lingnan students who excelled at e-portfolios in LCE 101 and LCE 102. The project team discovered that Lingnan students get help from their friends the most. Therefore, if Lingnan hired current students as "tech tutors" Lingnan students would utilize the tutors more than other help resources available to them. The students serving as "tech tutors" could get credit or some other form of compensation. Another option would be to hire permanent staff to be "tech tutors." These staff members would need to have a solid understanding of instructors' expectation from their students and guidelines from the instructors on acceptable e-portfolio views. If Lingnan does not want to hire additional staff, they could train the current SAC employees to be more equipped to help with e-portfolio technical issues. With the implementation of any of these options, the "tech tutors" could visit LCE 101 class sections to give in-class demonstrations on how to use and setup an e-portfolio. These sessions could be a supplement to the teacher's demonstrations on e-portfolios. With this scheme, each section would receive the same training from a technical perspective regardless of the teacher's level of comfort with e-portfolios. This is especially important to Lingnan University since they grade their students with a standardized grading scheme for all class sections.

In addition, the "tech tutors" could be available in the SAC each day to assist students with their views. They could advertise their services during their in-class demonstrations. The results show that students obtained help from the CEAL Self Access Centre less than they received help from their friends or from in-class demonstrations. However, students who received more help from the SAC liked e-portfolios more. An R^2 correlation value of 0.96

showed a strong positive trend between the amount of help received from the SAC and the students' opinion of e-portfolios. By encouraging more students to go to the CEAL SAC and get help with their e-portfolios, the students' opinions of e-portfolios will become more positive. The WPI project team recommends that Lingnan University hire or train "tech tutors" to perform in-class demonstrations, SAC help sessions, and teacher e-portfolio support sessions.

5.3 Addressing Plagiarism

While conducting this investigation, the WPI student team discovered an issue that affected students and faculty alike. From the student interviews, the team concluded that plagiarism played a part in the dislike that students felt towards e-portfolios. The faculty also expressed their concerns on the topic during their interviews. Both sides agreed that the use of e-portfolios in their current system made cheating possible. With the ability to look at both sides of the problem, the group developed some possible solutions.

The requirements of LCE 101 and LCE 102 e-portfolio assignments are identical. In the current practice, students can select the order in which they submit their reading, speaking and listening assignments. This gives students the freedom to have a choice on their workload. However, this also gives them the ability to copy each other's work and submit it as their own. To avoid this problem, the team suggests having a more structured assignment submission plan. All reading, speaking and listening assignments should have a fixed deadline through the semester for all of the sections. An example would be if the reading assignment was due first, followed by the speaking and finally the listening submission. With this structure, students will not be able to submit someone else's work as their own without being detected by their instructor. The team also recommends that LCE 101 and LCE 102 have different requirements to prevent students from summiting work done in LCE 101 as a LCE 102 assignment.

Mahara e-portfolios have a feature that allows users to download and save a copy of a view if the author permits it. This feature added to the problem of plagiarism since saving someone's work and submitting it as one's own is a simple task. The team recommends removing this capability from the students' feature list or simply applying a watermark to the views once they are submitted. By removing the ability to download a view, the feasibility of plagiarism could be reduced. A digital watermark applied to the views would discourage students from using the download feature inappropriately and a teacher can easily identify a view that had been submitted before.

Finally, the team looked at the policy of deleting the students' e-portfolio views at the end of each semester. From our objective observational perspective, the benefits of keeping the views appear to outweigh the drawbacks. The first point is, as pointed out by the faculty, keeping students' views sends the students a message that their work is valuable. Students can also look back at their previous work and learn from their mistakes. Keeping the views would also be helpful to faculty by allowing them to practice the grading of e-portfolio views and contribute to improving standardized grading among the teachers. This would be especially valuable for faculty who are new to using e-portfolios. The views should be kept available to the students at least for a year, which is the combined duration of LCE 101 and LCE 102. Students should only be able to access their own views, as a measure to deter plagiarism, and any view that a teacher classifies as an exemplar.

6. Conclusion

With students using more technology in their daily lives, colleges and universities all over the world have begun incorporating technology into education. Hong Kong's Lingnan University implemented e-portfolios into English language learning courses. However, this implementation brought many challenges and obstacles to the University. The methodology of this project focused on evaluating the use of e-portfolios from a student and faculty perspective. The results and recommendations in this study provide Lingnan with an opportunity to improve the students' experience with e-portfolios.

The focus of the background research for this project was on technologies used in language learning, including e-portfolios, Second Life, and Moodle. Research on various learning style models also provided insight into the way that students learn and respond to various teaching styles. Most importantly, our background research included a case study of Rosny College which implemented e-portfolios and met with challenges similar to those at Lingnan University.

The main methods of this project were interviews and student surveys. The survey focused on students' opinions of e-portfolios, the time and effort associated, and the benefits that students felt they gained from using the technology. Additionally, the survey was used to approximate students' learning styles in two of the dimensions outlined by the Felder-Silverman model. Interviews with students allowed the team to delve deeper into the results from the survey and ask students about ideas they had for improving the use of e-portfolios in their English courses. Faculty interviews, on the other hand, looked closely at two issues surrounding e-portfolios: grading and plagiarism. These methods gave the team significant data that was used to form results and recommendations for improvement.

The results of this study obtained from the student survey indicated that students at Lingnan University did not like the addition of e-portfolios into the curriculum. However, correlations showed that students who received more help and students who applied more effort had more positive responses to the e-portfolio program. These findings, as well as suggestions given to the team through interviews with students and faculty, were used to formulate recommendations. Lingnan University can use these recommendations to improve student and faculty attitudes as well as the effectiveness of e-portfolios for English language learning.

We would like to thank Lingnan University for giving our team the opportunity to work with their students and faculty regarding e-portfolios. We believe that our results and recommendations will benefit Lingnan's implementation of e-portfolios and will allow room for growth and improvement in the future. E-portfolios have great potential for language learning applications, and this study will aid Lingnan in developing that potential.

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Appendix A: Lingnan University

     Lingnan University (2010) is a small liberal arts institution that was founded in 1967 and located in Hong Kong, China. Lingnan's Vision Statement states that it seeks "to excel as an internationally recognized liberal arts university distinguished by outstanding teaching and the highest standards of scholarship" (Vision and Mission Statement). Its Mission shows that Lingnan is constantly seeking dynamic improvements for the betterment of the University: "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, act responsibly in the changing circumstances of Hong Kong, the region and the world" (Vision and Mission Statement). Some of the key goals associated with this mission include improving the language skills of students, integrating community service into learning, and interacting with the Hong Kong community. Since 1991, Lingnan University has been a public institution that receives its funding from the Hong Kong government. More specifically, the funding is determined by the government's University and Polytechnic Grants Committee (UPGC).

     Currently, there are 2,410 undergraduate students at the University, as well as 59 post-graduate students, where 65% are female and 35% are male (2010). Table A.1 below shows the number of students in each undergraduate major. In each of the three Academic Units, there are a total of 226 professors with 87 Arts Programs faculty, 51 Business faculty, 32 Social Science Programs faculty, as well as 56 others. Additionally, there are a total of 390 non-academic employees who are comprised of administrative and support staff.

Major	Number of Students
Chinese	236
Contemporary English Studies	101
Contemporary English Studies and Education	30
Cultural Studies	114
History	100
Philosophy	108
Translation	211
Visual Studies	92
Social Science	564
Business Administration	854
Total	**2410**

Lingnan University (2010) is organized into three governing bodies, the duties and powers of which are outlined in the Lingnan University Ordinance. The three governing bodies are the Council, the Court, and the Senate, and each has a separate role in the development and operations of the University. Additionally, there is a President and Vice-President of the University who are appointed by both the Council and Court, and they have separate functions in addition to serving as members of Lingnan's governance. The Chancellor of Lingnan University acts as the Chief Executive and is responsible for selecting the appointed members of the three governing bodies.

The Council is the highest governing body at Lingnan University (2010) and is comprised of members nominated by the Chancellor, members nominated by the Council and the Senate, the President and Vice-President of the University, and the President of the Student Union. From the members, a Chairman, Deputy Chairman, and Treasurer are appointed by the Chancellor. The Council has the ability to create committees, and these committees do not include members of the Council. There are currently twelve committees that were established, and each is charged with a different goal for the University. Some of the committees include the

Academic Staff Review Committee, the Health and Safety Committee, and the Teaching, Learning and Information Services Management Board. These committees are led by a Chairperson who is selected by the Council. The Council exists to make all major decisions for the University such as purchasing land, investing money, and making capital improvements to the campus.

The next governing body at Lingnan (2010) is the Court, which is made up of members appointed by the Chancellor, members elected by the Council and the Senate, the President and Vice President, the President of the Student Union, a graduate student, and elected members of the staff. The Court exists mainly to make decisions about yearly budgeting for Lingnan. They also have the power to make and discuss motions regarding changes and additions to any University Policy.

The President and Vice President are appointed by the Council and Court to oversee all academic activity at the University (Lingnan University, 2010, Ordinance). They work most closely with the Senate, which is the body concerned with all academic issues and improvements to Lingnan. In addition to regulating academic policies, they also have the ability to discuss and affect academic programs, degree requirements, and admissions standards for the University. The three Academic Units at Lingnan University, Arts Programming, Social Science Programming, and Business, all have advisory boards for each of their respective departments and operate under the Senate. These advisory boards consist of faculty members from that department. There are ten different departmental programs at Lingnan University, ranging from Chinese to English Studies to Business.

Lingnan University (2010) has an affiliation with the JUCC, or Joint Universities Computer Center. The JUCC is comprised of members of all eight of the universities in Hong

Kong, and exists "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." The organization works with the education community to assist in the development of technology in Hong Kong Universities. Representatives from Lingnan's Information Technology Services Center work with JUCC to accomplish this objective and make improvements to the technology used in education.

Additionally, Lingnan University (2010) developed a Strategic Plan for the years ranging from 2009 to 2016. This plan highlights the goals of the institution during that time period. A key point mentioned in the strategic plan is that the University would like to further develop students' knowledge and understanding of technologies. The plan also encourages the Information Technology Services Center to grow and expand to provide further technology to students.

The Teaching and Learning Centre, TLC, at Lingnan University (2010) serves the University through providing technological support for teachers for use in their courses. David Kennedy is the director of the Centre, and he works along with nine other employees such as consultants, research assistants, and educational development officers. The TLC offers seminars and resources for the faculty of Lingnan University to assist the integration of technology into classrooms.

Appendix B: Student Survey

1. First Draft:

Lingnan 嶺南大學
University

Survey
Your experience with ePortfolios

This survey is anonymous.
這項調查是匿名的.

A. Did you take LCE101 last semester?
☐ Yes   ☐ No

B. What is your gender?
☐ Female   ☐ Male
☐ Don't want to say

C. Would you like more English classes to use ePortfolios?
☐ Yes   ☐ No

D. What is your opinion of using ePortfolios for LCE101?
☐ 1 : Hated it
☐ 2 : Didn't like it
☐ 3 : Okay
☐ 4 : Liked it
☐ 5 : Loved it

E. How much did ePortfolios help you learning English?
☐ 1 : None at all
☐ 2 : A little bit
☐ 3 : Some
☐ 4 : A lot
☐ 5 : Very much

F. How much time did you work on your ePortfolio per submission?
☐ 0 – 2h
☐ 2h – 4h
☐ 4h – 6h
☐ 6h – 8h
☐ 8h+

G. What was your final grade in LCE101?
☐ A ☐ B ☐ C ☐ D ☐ F
☐ Don't want to say

H. How difficult or easy was it to perform these tasks? (1 = very easy, 5 = very hard)

	1	2	3	4	5
Create a text box					
Insert an image					
Insert a YouTube video					
Change the size of an image or video					
Change the number of columns					
Change the column width					
Create titles for the sections of a view					
Create and submit a view					

If you need help with your ePortfolios, you can come see us Monday through Friday at the SAC from 10:30 to 12:30.

2. Second Draft:

Lingnan 嶺南大學 University

Survey
Your experience with ePortfolios

This survey is anonymous.
這項調查是匿名的.

1. Did you take LCE101 last semester?
☐ Yes   ☐ No

2. What is your gender?
☐ Female   ☐ Male

3. Would you like more classes to use ePortfolios?
☐ Yes   ☐ No

4. What is your opinion of using ePortfolios for LCE101?
☐ 1 : Hated it
☐ 2 : Didn't like it
☐ 3 : Okay
☐ 4 : Liked it
☐ 5 : Loved it

5. Is an ePortfolio a good way to provide evidence of independent learning?
☐ 1 : Not at all
☐ 2 : A little bit
☐ 3 : Some
☐ 4 : A lot
☐ 5 : Very much

6. I more easily remember...
☐ Something I have done
☐ Something I have thought a lot about

7. How much time did you work on your ePortfolio for each upload?
☐ 0 – 2h
☐ 2h – 4h
☐ 4h – 6h
☐ 6h – 8h
☐ 8h+

8. How do you feel about the time you worked on your ePortfolio uploads?
☐ 1 : Too much time
☐ 2 : Some time
☐ 3 : It was okay
☐ 4 : A little time
☐ 5 : No time

9. What was your final grade in LCE101?
☐ A ☐ B ☐ C ☐ D ☐ F
☐ Don't want to say

10. In a study group working on difficult material, I am more likely to...
☐ Jump in and contribute ideas
☐ Sit back and listen

11. When I see a diagram or sketch in class, I am most likely to remember...
☐ The picture
☐ What the instructor said about it

If you need help with your ePortfolios, you can come see us Monday through Friday at the SAC from 13:30 to 15:30.

12. I prefer to get new information in...
☐ Pictures, diagrams, graphs or maps
☐ Written directions or verbal information

13. I remember best...
☐ What I see
☐ What I hear

14. When I start a homework problem, I am more likely to...
☐ Start working on the solution immediately
☐ Try to fully understand the problem first

15. How would you feel if part of your grade was based on the time and effort you put into the layout of your view?
☐ 1 : Hate it
☐ 2 : Don't like it
☐ 3 : Okay
☐ 4 : Like it
☐ 5 : Love it

16. How much has using ePortfolio's helped you to...

	None	A little	Some	A lot	Very much
a. become more engaged with the course content and concepts					
b. become more motivated to participate in independent learning					
c. improve your ability to express yourself					

If you need help with your ePortfolios, you can come see us Monday through Friday at the SAC from 13:30 to 15:30.

3. Final Draft:

Lingnan 嶺南大學
University

Survey
Your experience with ePortfolios

This survey is anonymous.
這項調查是匿名的.

1. Did you take LCE101 last semester?
☐ Yes   ☐ No

2. What is your gender?
☐ Female   ☐ Male

3. Would you like more classes to use ePortfolios?
☐ Yes   ☐ No

4. What is your opinion of using e-portfolios for LCE101?
☐ 1 : Hated it
☐ 2 : Didn't like it
☐ 3 : Okay
☐ 4 : Liked it
☐ 5 : Loved it

5. Is an e-portfolio a good way to provide evidence of independent learning?
☐ 1 : Not at all
☐ 2 : A little bit
☐ 3 : Some
☐ 4 : A lot
☐ 5 : Very much

6. How much time did you work on the layout of your view per submission?
☐ 1 : 0 – 2h
☐ 2 : 2h – 4h
☐ 3 : 4h – 6h
☐ 4 : 6h – 8h
☐ 5 : 8h+

7. How much effort did you put into your views per submission?
☐ 1 : Too much
☐ 2 : A lot
☐ 3 : Some
☐ 4 : A little
☐ 5 : None

8. How would you feel if part of your grade was based on the time and effort you put into the layout of your view?
☐ 1 : Hate it
☐ 2 : Don't like it
☐ 3 : Okay
☐ 4 : Like it
☐ 5 : Love it

9. What were your grades for LCE101?

	A	B	C	D	F	Don't know
a. ePortfolio submission 1				■		
b. ePortfolio submission 2				■		
c. ePortfolio submission 3				■		
d. Final grade						

If you need help with your ePortfolios, you can come see us Monday through Friday at the SAC from 13:30 to 15:30.

10. Have you ever used e-portfolios before taking LCE101?

☐ Yes   ☐ No

11. I prefer to get new information in…

☐ a. Pictures, diagrams, graphs or maps
☐ b. Written directions or verbal information

12. I remember best…

☐ a. What I see
☐ b. What I hear

13. When I start a homework problem, I am more likely to…

☐ a. Start working on the solution immediately
☐ b. Try to fully understand the problem first

14. I more easily remember…

☐ a. Something I have done
☐ b. Something I have thought a lot about

15. In a study group working on difficult material, I am more likely to…

☐ a. Jump in and contribute ideas
☐ b. Sit back and listen

16. When I see a diagram or sketch in class, I am most likely to remember…

☐ a. The picture
☐ b. What the instructor said about it

17. How much has using e-portfolio's helped you to…

	None	A little	Some	A lot	Very much
a. become more engaged with the course content and concepts					
b. become more motivated to participate in independent learning					
c. improve your ability to express yourself					

18. How much help did you get creating your view…

	None	A little	Some	A lot	Very much
a. From the SAC sessions					
b. From in-class demonstrations					
c. From your teacher's office hours					
d. From your friends					

If you need help with your ePortfolios, you can come see us Monday through Friday at the SAC from 13:30 to 15:30.

Appendix C: Faculty Interview Questions

1. **First Draft:**

1. What type of grade book do you use to grade your classes?

    a. How exactly do you use this method?

2. Have you used Moodle grade book before?

    a. If yes, what do you think of it?

3. What are some of the challenges and difficulties you face when grading Mahara submissions?

4. Do you think there would be benefits/drawbacks to giving points towards the way the students set up their view?

5. If a student produced a really bad layout that takes a long time to grade, would their overall submission grade be affected?

6. In your mind what is an example of a bad view?

7. What is an example of a good view?

8. What do you need to receive a good grade for the submission?

9. If you suspect a student is using an old view to cheat what would you do?

    a. How do you verify the student is cheating?

    b. Do you have any suggestions to make this process easier for you or improved in general?

10. Do you know what the current process of view storage is?

11. If not we explain. If yes, what are your thoughts on the current way the views are stored and managed?

2. Final Draft:

1. What strategies do you use to record the grades for your classes?

    a. How does this impact on your workload?

2. Have you considered using the Moodle grade book?

    a. If yes, what do you think of it?

    b. If no, what would encourage or support you to use the system?

3. What are some of the challenges and difficulties you face when grading student work presented in a portfolio format?

4. Do you think there would be benefits/drawbacks to giving points towards the way the students set up their view?

5. If a student produced a really poorly presented or difficult to read layout that takes a long time to grade, do you think their overall grade would be affected?

    a. What comments would you give the student?

6. In your mind what is an example of a poorly presented portfolio view?

7. In your mind what is an example of a well presented portfolio view?

8. What does a student need to do to receive a good grade for their submission and how is this communicated to the student and when?

9. After the completion of a course, do you think there is a need for students to keep their views?

10. After the completion of a course, do you think there is a benefit for teachers to be able to access old student's views?

11. If you suspect a student is using an old view what would you do?

    a. How would you verify the student used an old view?

b. Do you have any suggestions to make this process easier for you or improved in

general?

Appendix D: Focus Group/Student Interview Questions

1. Focus Group Questions, Draft 1:

1. The survey results so far show that many of the students who have taken LCE 101 do not like E-portfolios. Despite this they are here to stay. We want to talk about improvements that can be made so that people will not hate e-portfolios as much. What are your thoughts?

2. What type of resource, currently available or nonexistent, would benefit you the most when learning how to use E-portfolios?

3. What are some of the challenges and difficulties you face when work presenting your work in a portfolio view format?

4. How would you feel if a small part of your grade was based on the how your view looks?

Topic Change

5. Right now no teachers grade the layout of the views. But what if you produced a really poorly presented or difficult to read layout. Do you think your overall grade would be affected?

6. In your mind what is an example of a poorly presented portfolio view?

7. In your mind what is an example of a well presented portfolio view?

Topic Change

8. Currently after the completion of a course all of the views stored on the server are deleted. Anyone can download their view and save it to their computer but must do so

before these files are deleted. Do you think there is a need for you to keep your views

after the completion of a course?

9. Do you think the current way is working or can you think of an alternative way for

   student views to be handled after the completion of a course?

Topic Change

10. Currently the format for LCE 101 and LCE 102 are identical and the view assignments

    can be submitted in any order. This makes it very easy for students for students to share

    and use each other's work. Have you used another student's view or have you heard of

    anyone who used someone else's view for their own submission?

11. Can you think of a way to prevent this from happening?

2. Focus Group Questions, Draft 2:

1. How do you feel about e-portfolios?

   a. If you like it: What did you like?

   b. If you didn't like it:

      i. What did you not like?

      ii. What could be improved?

2. What type of resource, currently available or nonexistent, would benefit you the most

   when learning how to use E-portfolios?

3. Do you face any challenges and difficulties when presenting your work in a portfolio

   view format

   a. If yes: What are these challenges and difficulties?

4. How would you feel if a small part of your grade was based on the presentation of your

   portfolio view?

Topic Change

5. In your mind what is an example of a poorly presented portfolio view?

6. In your mind what is an example of a well presented portfolio view?

7. Do you think your overall grade is affected based on the presentation of your e-portfolio view?

   a. If you think your grade is not affected: Explain that research has shown that poorly presented views are graded lower. Then ask students: How do you believe teachers can grade a nicely presented portfolio view and a poorly presented view at the same level.

Topic Change

8. Do you think there is a need for you to keep your views after the completion of a course?

   a. Currently after the completion of a course all of the views stored on the server are deleted. Anyone can download their view and save it to their computer but must do so before these files are deleted: Do you feel this is a sufficient way for students to save their views for future reference?

Topic Change

9. Currently the format for LCE 101 and LCE 102 are identical and the view assignments can be submitted in any order.

10. How do you feel about this format?

11. Are you aware that some students submit other student's e-portfolios views as their own?

12. Can you think of a way to prevent cheating from happening?

13. Do you think cheating on an e-portfolio view helps or hurts your English learning?

   a. Why do you feel this way?

3. Focus Group Questions Final, Draft 3:

1. How do you feel about e-portfolios as part of LCE 101?

    a. Impression: Positive / neutral / negative

    b. What did you like about them?

    c. What did you dislike about them?

    d. How could they be improved?

2. How do you feel about the resources available to help you learn to use e-portfolios?

    a. Impression: Positive / neutral / negative

    b. What type of resource helped you the most?

    c. Can you suggest a better resource?

3. When you presented your work in an e-portfolio view:

    a. What was easy to do?

    b. What was hard?

4. How would you feel if a small part of your grade was based on the presentation of your portfolio view? ("presentation": does the instructor find it attractive, or easy to use?)

    a. Impression: Positive / neutral / negative

Topic Change

5. Can you think of an example of a poorly presented portfolio view?

    a. Yes : example / No

    b. Why is it bad?

6. Can you think of an example of a well presented portfolio view?

    a. Yes: example / No

    b. Why is it good?

7. Do you think the presentation of your e-portfolio view affects your grade?

   a. Impression: Yes / maybe / no

   b. If no: Explain that research has shown that poorly presented views are graded lower. Then ask students: Can teachers grade a nicely presented portfolio view and a poorly presented view at the same level?   Yes / maybe / no

   c. Would the view affect <u>your</u> grading if you were a teacher? Yes / maybe / no

Topic Change

8. Do you think there is a need for you to keep your views after the completion of a course?

   a. Impression: Yes / maybe / no

   b. Currently after the completion of a course all of the views stored on the server are deleted. Anyone can download their view and save it to their computer but must do so before these files are deleted: Do you feel that this method is good enough? Yes / maybe / no

   c. Can you suggest a better way?

Topic Change

9. Currently the format for LCE 101 and LCE 102 are identical and the view assignments can be submitted in any order.

   a. How do you feel about this format?   Impression: Positive / neutral / negative

10. Do you think plagiarism of e-portfolios is an issue in LCE 101/102?

    a. Impression: Yes / maybe / no

    b. If some students submit other student's e-portfolios views as their own, is that plagiarism?   Yes / maybe / no

    c. Can you think of a way to prevent this cheating from happening?

11. Do you think cheating on an e-portfolio view affects your English learning?

    a. Impression: Yes / maybe / no

    b. Why?

4. Student Interviews, Final Draft:

1.) Did you like or dislike using e-portfolios in LCE 101? [L v N v D)

    a. Why do you feel this way?

    b. Can you suggest any Improvements?

2.) How do you feel about the resources available to help you learn to use e-portfolios?

    a. Can you suggest a better resource?

3.) When you presented your work in an e-portfolio view:

    a. What was easy?

    b. What was hard?

4.) How would you feel if a small part of your grade was based on the layout of your

portfolio view?

5. Excel Data Entre Spreadsheet:

Students	1.) Did you like or dislike using e-portfolios in LCE 101? [L v N v D)	a.) Why…	b.) Improvements	2.) How do you feel about the resources available to help you learn to use e-portfolios?	a.) Can you suggest a better resource?	3.) When you presented your work in an e-portfolio view: a. What was easy to do?	b. What was hard?	4.) How would you feel if a small part of your grade was based on the layout of your portfolio view?
A								
B								
C								
D								
E								
F								
G								
H								
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J								
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S								
T								
U								
V								

Appendix E: Self Access Centre Visitation Data

Date	Name	English Name	Year	Department	Reason for Visit	Helped By	Time
1/24/2011	Lei Si Yang	Bill	2	Social Science	Irrelevant	n/a	3:00 PM
1/24/2011	Han Jeohyguen	Della	Exchange	n/a	Never used Mahara	Reuben Gutierrez	1:15 PM
1/24/2011	Law Lok Yin	David	2	Marketing	Never used Mahara	Lauren Ketschke	1:30 PM
1/25/2011	Kong Kan Hu	Garbie	3	Social Science	Uploading a Video	Lauren Ketschke	2:51 PM
1/25/2011	Chunkit Yeung	Angus	1	Arts	Adding pictures. text/video	Reuben Gutierrez	2:50 PM
1/26/2011	Han Chun Man	Raymond	1	Philosophy	Irrelevant	n/a	2:10 PM
1/26/2011	Han Jeongeun	Della	Exchange	n/a	Irrelevant	n/a	3:30 PM
1/27/2011	On Ching Yee	Denise	1	Chinese	Irrelevant	n/a	12:40 PM

Appendix F: Excel Macro Screenshots

Most of the results were computed by the Excel macro designed by the team. It correlated a piece of information to another in order to give a meaning to the data.

Figure F.1 - First Page of the Virtual Questionnaire

Figure F.2 - Second Page of the Virtual Questionnaire

Figure F.4 shows the statistics page of the macro. This section of the interface contained a large amount of information, which was computed from the survey data. A "Refresh" button in the bottom right corner allowed the user to update the statistics. This button was created because it took time for the program to perform the update, and updating systematically would slow data entry down and prevent a comfortable use. A box in the upper area displayed basic information:

that is the number of students; the number of females and males; and a graph representing the percentage of females versus the percentage of males among the students. The rest of the information was sorted and organized in a set of tab pages. The particular tab page displayed in Figure F.4 depicts results from a simple data correlation. Any result in that tab page of the statistic section only takes into account data from students who have checked "yes" for question 1 of the survey.
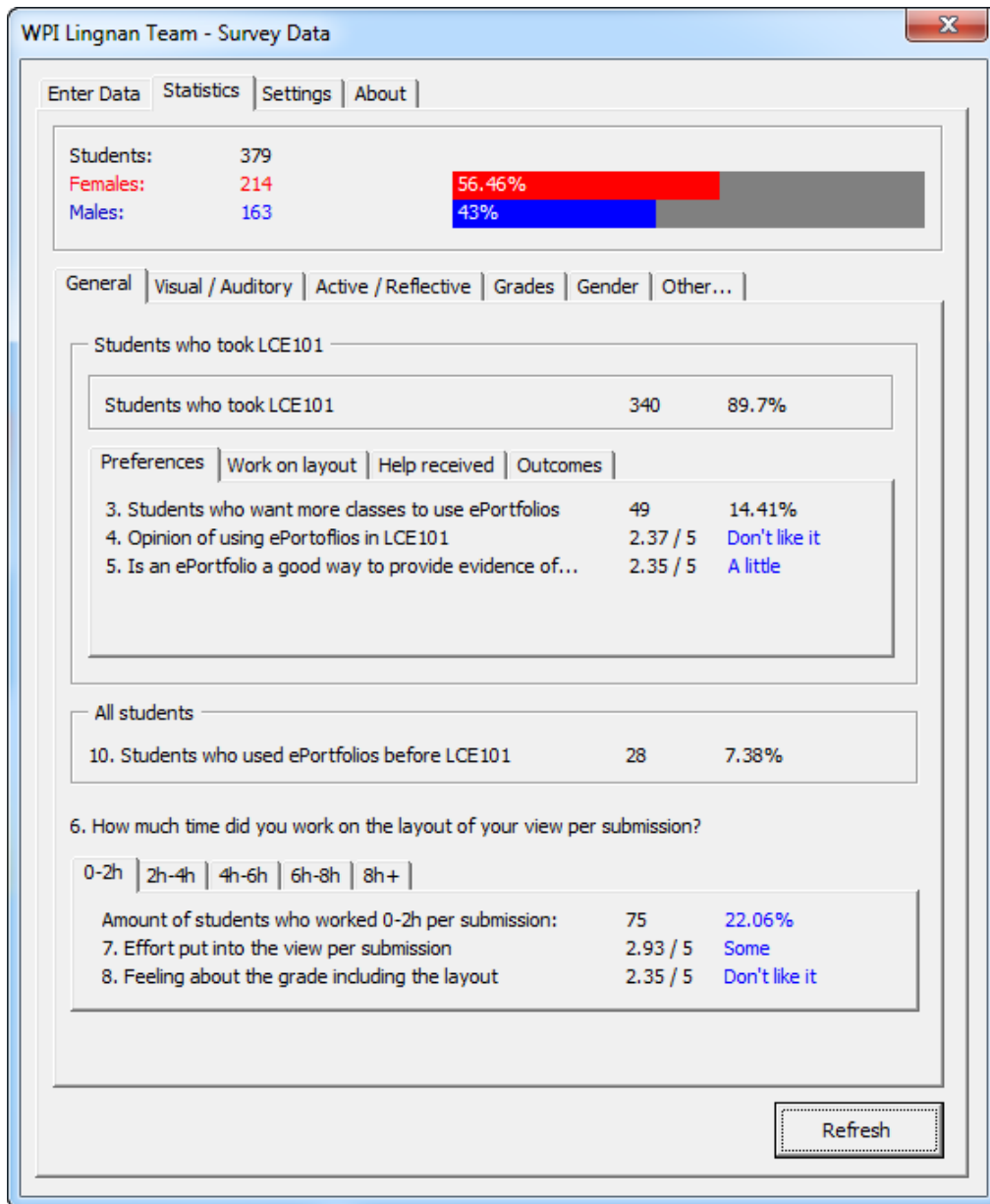
Figure F.4 - "General" Tab Page of the Statistics Pages

Preferences | Work on layout | Help received | Outcomes

3. Students who want more classes to use ePortfolios   49   14.41%
4. Opinion of using ePortoflios in LCE101   2.37 / 5   Don't like it
5. Is an ePortfolio a good way to provide evidence of...   2.35 / 5   A little

Preferences | Work on layout | Help received | Outcomes

6. Time spent working on the view   2.49 / 5   2h-4h
7. Effort put into the view per submission   2.45 / 5   A lot
8. Feeling about the grade including the layout   2.72 / 5   Okay

Preferences | Work on layout | Help received | Outcomes

18. How much help did you get creating your view from...
    a) SAC sessions (English writing help)   2.25 / 5   A little
    b) in-class demonstrations   2.83 / 5   Some
    c) your teacher's office hours   2.13 / 5   A little
    d) your friends   3.19 / 5   Some

Preferences | Work on layout | Help received | Outcomes

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.47 / 5   A little
    b) become more motivated to participate in IL   2.51 / 5   Some
    c) improve your ability to express yourself   2.62 / 5   Some

Figure F.5 - Tab Pages Relating to Students Who Took LCE 101

```
0-2h | 2h-4h | 4h-6h | 6h-8h | 8h+ |

    Amount of students who worked 0-2h per submission:      75        22.06%
    7. Effort put into the view per submission               2.93 / 5  Some
    8. Feeling about the grade including the layout           2.35 / 5  Don't like it


0-2h | 2h-4h | 4h-6h | 6h-8h | 8h+ |

    Amount of students who worked 0-2h per submission:      109       32.06%
    7. Effort put into the view per submission               2.41 / 5  A lot
    8. Feeling about the grade including the layout           2.68 / 5  Okay


0-2h | 2h-4h | 4h-6h | 6h-8h | 8h+ |

    Amount of students who worked 0-2h per submission:      91        26.76%
    7. Effort put into the view per submission               2.41 / 5  A lot
    8. Feeling about the grade including the layout           2.85 / 5  Okay


0-2h | 2h-4h | 4h-6h | 6h-8h | 8h+ |

    Amount of students who worked 0-2h per submission:      44        12.94%
    7. Effort put into the view per submission               2.11 / 5  A lot
    8. Feeling about the grade including the layout           3.12 / 5  Okay


0-2h | 2h-4h | 4h-6h | 6h-8h | 8h+ |

    Amount of students who worked 0-2h per submission:      21        6.18%
    7. Effort put into the view per submission               1.81 / 5  A lot
    8. Feeling about the grade including the layout           3.05 / 5  Okay
```

Figure F.6 - Correlation Between Time Spent on Each Submission and Answers to Questions 7 and 8
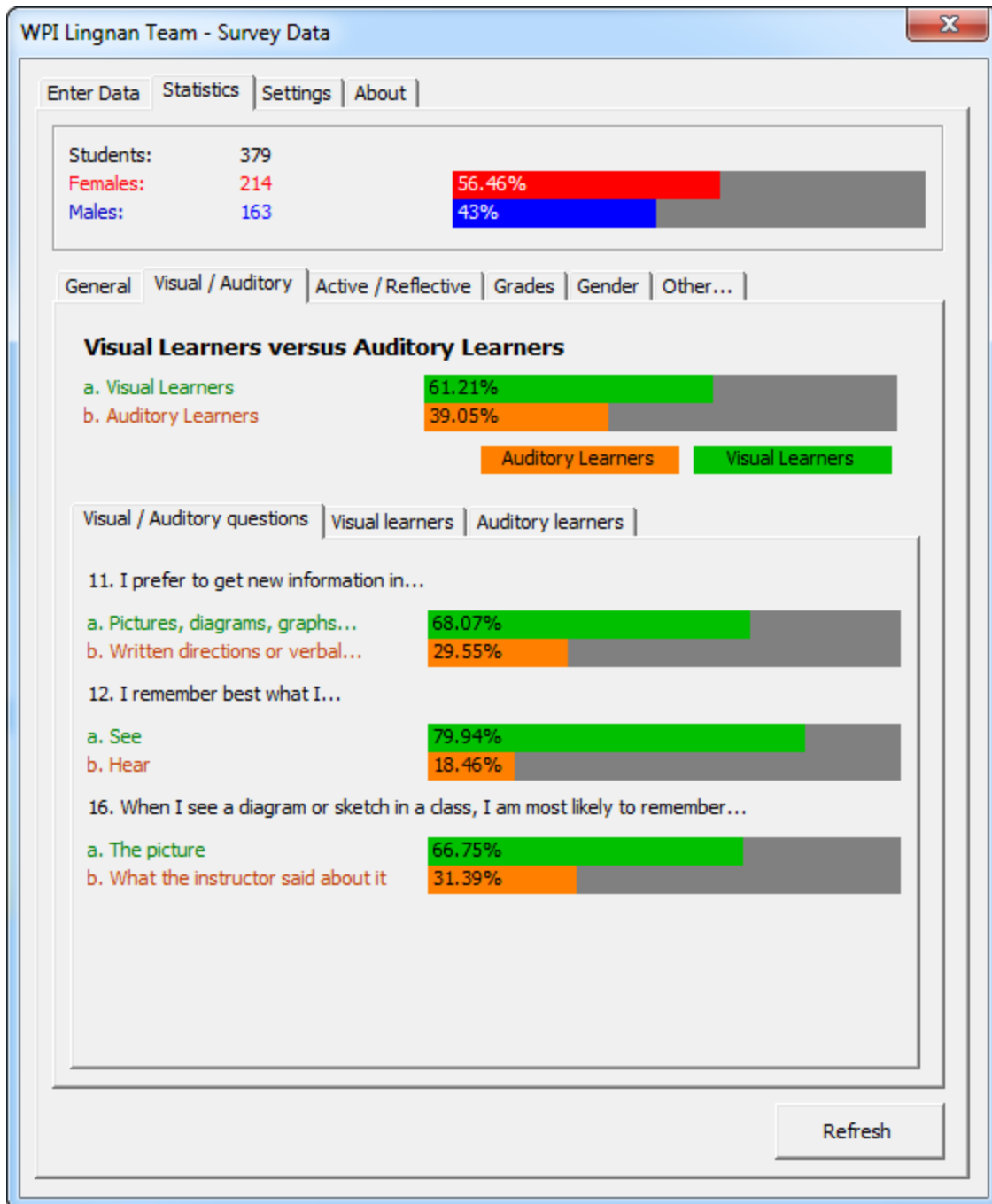
Figure F.7 - "Visual / Auditory" Learning Styles Tab Page

Visual / Auditory questions	Visual learners	Auditory learners

8. Feeling about the grade including the layout   2.74 / 5   Okay

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.54 / 5   Some
    b) become more motivated to participate in IL   2.57 / 5   Some
    c) improve your ability to express yourself   2.68 / 5   Some

Visual / Auditory questions	Visual learners	Auditory learners

8. Feeling about the grade including the layout   2.71 / 5   Okay

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.35 / 5   A little
    b) become more motivated to participate in IL   2.42 / 5   A little
    c) improve your ability to express yourself   2.54 / 5   Some

Figure F. 8 - Correlations Between Learning Style and Answers to Questions 8 and 17
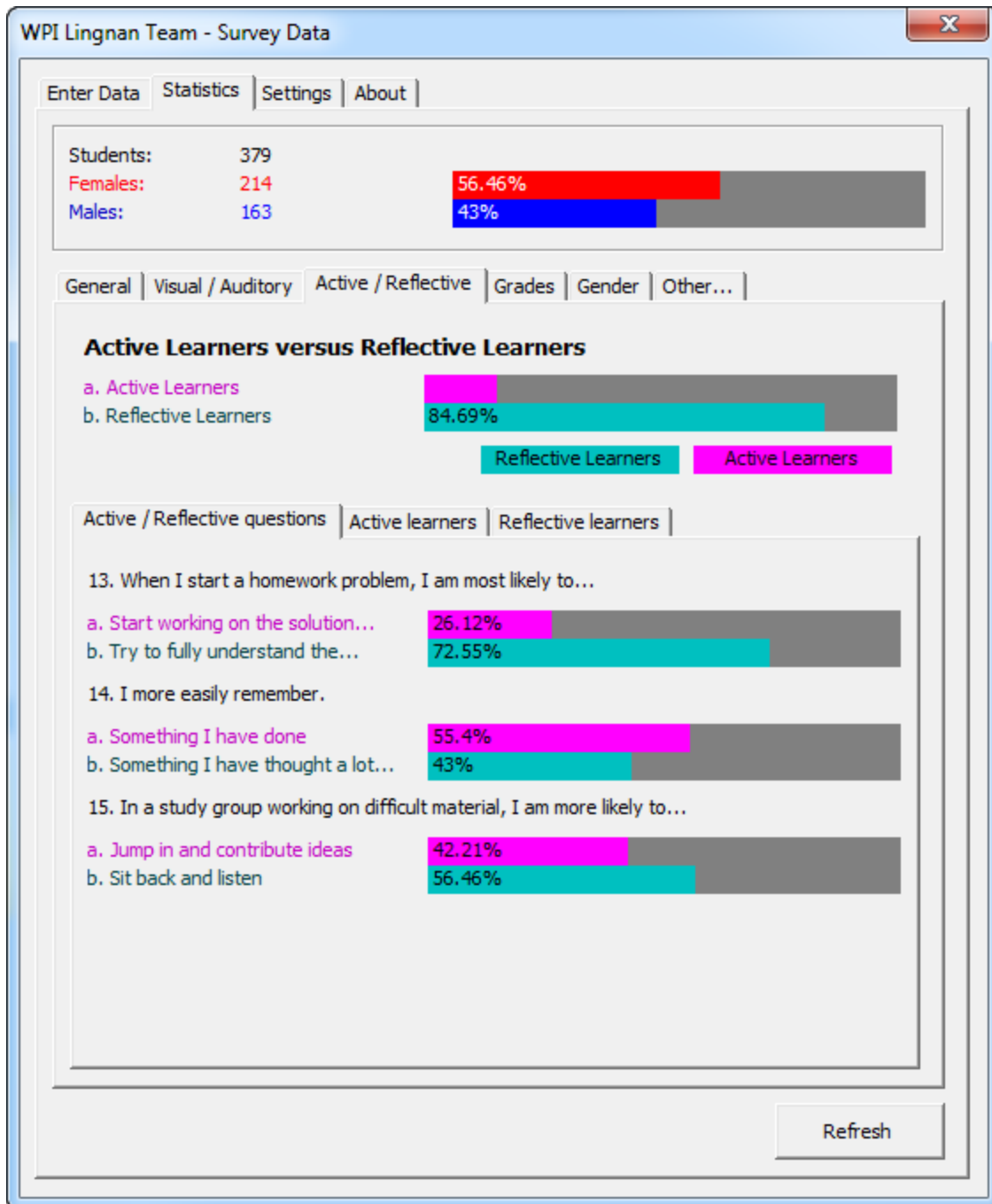
Figure F.9 - "Active / Reflective" Learning Styles Tab Page

Active / Reflective questions | **Active learners** | Reflective learners

8. Feeling about the grade including the layout   2.7 / 5   Okay

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.47 / 5   A little
    b) become more motivated to participate in IL   2.38 / 5   A little
    c) improve your ability to express yourself   2.51 / 5   Some

---

Active / Reflective questions | Active learners | **Reflective learners**

8. Feeling about the grade including the layout   2.73 / 5   Okay

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.47 / 5   A little
    b) become more motivated to participate in IL   2.54 / 5   Some
    c) improve your ability to express yourself   2.65 / 5   Some

Figure F.10 - Correlation Between Learning Style and Answers to Questions 8 and 17

WPI Lingnan Team - Survey Data

Enter Data | Statistics | Settings | About

Students: 379
Females: 214   56.46%
Males: 163   43%

General | Visual / Auditory | Active / Reflective | **Grades** | Gender | Other...

Average grades

Submission 1	3.5	/ 4	A
Submission 2	3.66	/ 4	A
Submission 3	3.63	/ 4	A
Overall	3.6	/ 4	A
Final course grade	2.98	/ 4	B

Students who took LCE101 and provided grades: 311   91.47%

Visual Learners | Auditory Learners | Reflective Learners | Active Learners

Submission 1	3.53	/ 4	A
Submission 2	3.68	/ 4	A
Submission 3	3.66	/ 4	A
Overall	3.62	/ 4	A
Final course grade	3.03	/ 4	B

A | B | C

Amount of students with an A average: 208   61.18%

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.53 / 5   Some
    b) become more motivated to participate in IL   2.59 / 5   Some
    c) improve your ability to express yourself   2.69 / 5   Some

Refresh

Figure F.11 - "Grades" Tab Page

Visual Learners	Auditory Learners	Reflective Learners	Active Learners		
	Submission 1	3.53	/ 4	A	
	Submission 2	3.68	/ 4	A	
	Submission 3	3.66	/ 4	A	
	Overall	3.62	/ 4	A	
	Final course grade	3.03	/ 4	B	

Visual Learners	Auditory Learners	Reflective Learners	Active Learners		
	Submission 1	3.45	/ 4	B	
	Submission 2	3.64	/ 4	A	
	Submission 3	3.59	/ 4	A	
	Overall	3.56	/ 4	A	
	Final course grade	2.9	/ 4	B	

Visual Learners	Auditory Learners	Reflective Learners	Active Learners		
	Submission 1	3.49	/ 4	B	
	Submission 2	3.49	/ 4	B	
	Submission 3	3.49	/ 4	B	
	Overall	3.59	/ 4	A	
	Final course grade	2.93	/ 4	B	

Visual Learners	Auditory Learners	Reflective Learners	Active Learners		
	Submission 1	3.51	/ 4	A	
	Submission 2	3.52	/ 4	A	
	Submission 3	3.52	/ 4	A	
	Overall	3.61	/ 4	A	
	Final course grade	3.26	/ 4	B	

Figure F.12 - Correlation Between Learning Style and Grades

A | B | C |

Amount of students with an A average: 208   61.18%

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.53 / 5   Some
    b) become more motivated to participate in IL   2.59 / 5   Some
    c) improve your ability to express yourself   2.69 / 5   Some

A | B | C |

Amount of students with a B average: 98   28.82%

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.3 / 5   A little
    b) become more motivated to participate in IL   2.37 / 5   A little
    c) improve your ability to express yourself   2.5 / 5   A little

A | B | C |

Amount of students with a C average: 5   1.47%

17. How much has using ePortfolio's helped you to...
    a) become more engaged with the course content...   2.6 / 5   Some
    b) become more motivated to participate in IL   2.4 / 5   A little
    c) improve your ability to express yourself   3 / 5   Some

Figure F.13 - Correlation Between Grade Point Average and Answers to Question 17

WPI Lingnan Team - Survey Data

Enter Data | Statistics | Settings | About

Students: 379
Females: 214   56.46%
Males: 163   43%

General | Visual / Auditory | Active / Reflective | Grades | Gender | Other...

Females | Males

5. Is an ePortfolio a good way to provide evidence of...   2.36 / 5   A little
17. How much has using ePortfolio's helped you to...
    a. Become more engaged with the course contents...   2.53 / 5   Some
    b. Become more motivated to participate in IL   2.55 / 5   Some
    c. Improve your ability to express yourself   2.68 / 5   Some

Visual Learners   133   62.14%
Auditory Learners   81   37.85%
Active Learners   39   18.22%
Reflective Learners   175   81.77%

Refresh

Figure F.14 - "Gender" Tab Page

120

Females | Males

5. Is an ePortfolio a good way to provide evidence of...			2.36 / 5	A little
17. How much has using ePortfolio's helped you to...				
a. Become more engaged with the course contents...			2.53 / 5	Some
b. Become more motivated to participate in IL			2.55 / 5	Some
c. Improve your ability to express yourself			2.68 / 5	Some

Visual Learners	133	62.14%
Auditory Learners	81	37.85%
Active Learners	39	18.22%
Reflective Learners	175	81.77%

Females | **Males**

5. Is an ePortfolio a good way to provide evidence of...			2.34 / 5	A little
17. How much has using ePortfolio's helped you to...				
a. Become more engaged with the course contents...			2.39 / 5	A little
b. Become more motivated to participate in IL			2.48 / 5	A little
c. Improve your ability to express yourself			2.57 / 5	Some

Visual Learners	98	60.12%
Auditory Learners	65	39.87%
Active Learners	19	
Reflective Learners	144	88.34%

Figure F.15 - Correlation Between Gender, Learning Styles and Answers to Questions 5 and 17

WPI Lingnan Team - Survey Data

Enter Data | Statistics | Settings | About

Students: 379
Females: 214   56.46%
Males: 163   43%

General | Visual / Auditory | Active / Reflective | Grades | Gender | Other...

4. What is your opinion of using e-portfolios for LCE101?

Hated it | Didn't like it | Okay | Liked it | Loved it

Amount of students who hated e-portfolios:	46	13.53%
5. Is an ePortfolio a good way to provide evidence of...	1.5 / 5	A little
8. Feeling about the grade including the layout	2.13 / 5	A little
18. How much help did you get creating your view from...		
a) SAC sessions (English writing help)	1.93 / 5	A little
b) in-class demonstrations	2.26 / 5	A little
c) your teacher's office hours	2 / 5	A little
d) your friends	3.07 / 5	Some

7. How much effort did you put into your views per submission?

Too much | A lot | Some | A little | None

Amount of students who put "too much" effort:	31	9.12%
8. Feeling about the grade including the layout	3.03 / 5	Some

Refresh

Figure F.16 - "Other" Tab Page

Hated it | Didn't like it | Okay | Liked it | Loved it

Amount of students who hated e-portfolios:	46	13.53%
5. Is an ePortfolio a good way to provide evidence of...	1.5 / 5	A little
8. Feeling about the grade including the layout	2.13 / 5	A little
18. How much help did you get creating your view from...		
a) SAC sessions (English writing help)	1.93 / 5	A little
b) in-class demonstrations	2.26 / 5	A little
c) your teacher's office hours	2 / 5	A little
d) your friends	3.07 / 5	Some

Hated it | **Didn't like it** | Okay | Liked it | Loved it

Amount of students who didn't like e-portfolios:	141	41.47%
5. Is an ePortfolio a good way to provide evidence of...	2.09 / 5	A little
8. Feeling about the grade including the layout	2.61 / 5	Some
18. How much help did you get creating your view from...		
a) SAC sessions (English writing help)	2.12 / 5	A little
b) in-class demonstrations	2.78 / 5	Some
c) your teacher's office hours	2.01 / 5	A little
d) your friends	3.18 / 5	Some

Hated it | Didn't like it | **Okay** | Liked it | Loved it

Amount of students who found e-portfolios okay:	136	40%
5. Is an ePortfolio a good way to provide evidence of...	2.76 / 5	Some
8. Feeling about the grade including the layout	2.99 / 5	Some
18. How much help did you get creating your view from...		
a) SAC sessions (English writing help)	2.42 / 5	A little
b) in-class demonstrations	3.04 / 5	Some
c) your teacher's office hours	2.26 / 5	A little
d) your friends	3.26 / 5	Some

Hated it | Didn't like it | Okay | **Liked it** | Loved it

Amount of students who liked e-portfolios:	16	4.71%
5. Is an ePortfolio a good way to provide evidence of...	3.44 / 5	Some
8. Feeling about the grade including the layout	3.25 / 5	Some
18. How much help did you get creating your view from...		
a) SAC sessions (English writing help)	2.88 / 5	Some
b) in-class demonstrations	3.25 / 5	Some
c) your teacher's office hours	2.5 / 5	A little
d) your friends	3.06 / 5	Some

Figure F.17 - Correlation Between Opinion on Layout Grading and Answers to Questions 5, 8 and 18

Hated it	Didn't like it	Okay	Liked it	Loved it

Amount of students who loved e-portfolios:	1	0.29%
5. Is an ePortfolio a good way to provide evidence of...	5 / 5	Very much
8. Feeling about the grade including the layout	4 / 5	A lot
18. How much help did you get creating your view from...		
a) SAC sessions (English writing help)	1 / 5	None
b) in-class demonstrations	1 / 5	None
c) your teacher's office hours	1 / 5	None
d) your friends	2 / 5	A little

Figure F.18 - Correlation Between Layout Grading and Answers to Questions 5, 8 and 18

Too much	A lot	Some	A little	None

Amount of students who put "too much" effort:	31	9.12%
8. Feeling about the grade including the layout	3.03 / 5	Some

Too much	A lot	Some	A little	None

Amount of students who put "a lot" of effort:	162	47.65%
8. Feeling about the grade including the layout	2.85 / 5	Some

Too much	A lot	Some	A little	None

Amount of students who put "some" effort:	113	33.24%
8. Feeling about the grade including the layout	2.64 / 5	Some

Too much	A lot	Some	A little	None

Amount of students who put "a little" effort:	31	9.12%
8. Feeling about the grade including the layout	2.26 / 5	A little

Too much	A lot	Some	A little	None

Amount of students who put "no" effort:	3	0.88%
8. Feeling about the grade including the layout	1 / 5	None

Figure F.19 - Correlation Between Efforts Put into View Layout and Answers to Question 8

Appendix G: Excel Macro Source Code

```
Dim Letters(1 To 26) As String
Dim Students As Integer
Dim RowOffset As Integer

Public Function letterToGrade(ByVal letter As String) As Integer
    If letter = "A" Or letter = "a" Then letterToGrade = 4
    If letter = "B" Or letter = "b" Then letterToGrade = 3
    If letter = "C" Or letter = "c" Then letterToGrade = 2
    If letter = "D" Or letter = "d" Then letterToGrade = 1
    If letter = "F" Or letter = "f" Then letterToGrade = 0
End Function

Public Function gradeToLetter(ByVal grade As String) As String
    If Round(grade) = 4 Then gradeToLetter = "A"
    If Round(grade) = 3 Then gradeToLetter = "B"
    If Round(grade) = 2 Then gradeToLetter = "C"
    If Round(grade) = 1 Then gradeToLetter = "D"
    If Round(grade) = 0 Then gradeToLetter = "F"
End Function

Public Function switchEffortMSG(ByVal value As Double) As String
    Dim MSG As String
    Select Case Round(value)
    Case 1
        MSG = "Too much"
    Case 2
        MSG = "A lot"
    Case 3
        MSG = "Some"
    Case 4
        MSG = "A little"
    Case 5
        MSG = "None"
    End Select

switchEffortMSG = MSG
End Function

Public Function switchAmountMSG(ByVal value As Double) As String
    Dim MSG As String
    Select Case Round(value)
    Case 1
        MSG = "None"
    Case 2
        MSG = "A little"
    Case 3
        MSG = "Some"
    Case 4
        MSG = "A lot"
    Case 5
        MSG = "Very much"
    End Select

switchAmountMSG = MSG
End Function

Public Function switchPrefPastMSG(ByVal value As Double) As String
    Dim MSG As String
    Select Case Round(value)
    Case 1
        MSG = "Hated it"
    Case 2
        MSG = "Didn't like it"
    Case 3
        MSG = "Okay"
    Case 4
```

```
            MSG = "Liked it"
        Case 5
            MSG = "Loved it"
        End Select

switchPrefPastMSG = MSG
End Function

Public Function switchPrefMSG(ByVal value As Double) As String
    Dim MSG As String
    Select Case Round(value)
    Case 1
        MSG = "Hate it"
    Case 2
        MSG = "Don't like it"
    Case 3
        MSG = "Okay"
    Case 4
        MSG = "Like it"
    Case 5
        MSG = "Love it"
    End Select

switchPrefMSG = MSG
End Function

Private Sub CommandButton11_Click()
    ActiveWorkbook.Save
End Sub

Private Sub CommandButton12_Click()
    'Count students
    studentCount2.Caption = countStudents

    'Setup variables
    Dim i, Females, Males, wantMore, usedBefore, LCE 101, opinion, indepLearn, time, effort, _
feelGrade, q11aC, q11bC, q12aC, q12bC, q13aC, q13bC, q14aC, q14bC, q15aC, q15bC, q16aC, _
    q16bC, active, reflective, visual, auditory, sub1, sub1C, sub2, sub2C, sub3, sub3C, allsub, _
allsubC, course, courseC, grade, sub1Visual, sub1CVisual, sub2Visual, sub2CVisual, _
    sub3Visual, sub3CVisual, allsubVisual, allsubCVisual, courseVisual, courseCVisual, _
    sub1Audio, sub1CAudio, sub2Audio, sub2CAudio, sub3Audio, sub3CAudio, allsubAudio, _
allsubCAudio, courseAudio, courseCAudio, sub1Reflect, sub1CReflect, sub2Reflect, sub2CReflect,
sub3Reflect, sub3CReflect, allsubReflect, _
allsubCReflect, courseReflect, courseCReflect, sub1Active, sub1CActive, sub2Active, sub2CActive,
sub3Active, sub3CActive, allsubActive, _
allsubCActive, courseActive, courseCActive, _
visualM, visualF, audioM, audioF, reflectM, reflectF, activeM, activeF, _
    q18a, q18aC, q18b, q18bC, q18c, q18cC, q18d, q18dC, q17a, q17aC, q17b, q17bC, q17c, q17cC,
femaleEvidence, femaleEvidenceC, maleEvidence, maleEvidenceC, F17a, F17aC, F17b, F17bC, F17c,
F17cC, M17a, M17aC, M17b, M17bC, M17c, M17cC, V8, V8C, V17a, V17aC, V17b, V17bC, V17c, V17cC, A8,
A8C, A17a, A17aC, A17b, A17bC, A17c, A17cC, C8, C8C, C17a, C17aC, C17b, C17bC, C17c, C17cC, R8,
R8C, R17a, R17aC, R17b, R17bC, R17c, R17cC, Ag17a, Ag17aC, Ag17b, Ag17bC, Ag17c, Ag17cC, Bg17a,
Bg17aC, Bg17b, Bg17bC, Bg17c, Bg17cC, Cg17a, Cg17aC, Cg17b, Cg17bC, Cg17c, Cg17cC, Dg17a, Dg17aC,
Dg17b, Dg17bC, Dg17c, Dg17cC, Fg17a, Fg17aC, Fg17b, Fg17bC, Fg17c, Fg17cC, thisGPA, thisGPAC, _
    w1C, w1q7, w1q7C, w1q8, w1q8C, w2C, w2q7, w2q7C, w2q8, w2q8C, w3C, w3q7, w3q7C, w3q8, w3q8C,
w4C, w4q7, w4q7C, w4q8, w4q8C, w5C, w5q7, w5q7C, w5q8, w5q8C, _
    o1C, o1q5, o1q5C, o1q8, o1q8C, o2C, o2q5, o2q5C, o2q8, o2q8C, o3C, o3q5, o3q5C, o3q8, o3q8C,
o4C, o4q5, o4q5C, o4q8, o4q8C, o5C, o5q5, o5q5C, o5q8, o5q8C, _
    o1q18a, o1q18aC, o1q18b, o1q18bC, o1q18c, o1q18cC, o1q18d, o1q18dC, _
    o2q18a, o2q18aC, o2q18b, o2q18bC, o2q18c, o2q18cC, o2q18d, o2q18dC, _
    o3q18a, o3q18aC, o3q18b, o3q18bC, o3q18c, o3q18cC, o3q18d, o3q18dC, _
    o4q18a, o4q18aC, o4q18b, o4q18bC, o4q18c, o4q18cC, o4q18d, o4q18dC, _
    e1C, e1q8, e1q8C, e2C, e2q8, e2q8C, e3C, e3q8, e3q8C, e4C, e4q8, e4q8C, e5C, e5q8, e5q8C _
    As Integer

    'Visual     : V
    'Auditory   : A
    'Active     : C
'Reflective : R

    Dim thisActive, thisVisual, thisAuditory, thisReflective, thisMale, thisFemale As Boolean
```

```
    Males = 0
    Females = 0
wantMore = 0
usedBefore = 0
    LCE 101 = 0
opinion = 0
indepLearn = 0
time = 0
effort = 0
feelGrade = 0
    q11aC = 0
    q11bC = 0
    q12aC = 0
    q12bC = 0
    q13aC = 0
    q13bC = 0
    q14aC = 0
    q14bC = 0
    q15aC = 0
    q15bC = 0
    q16aC = 0
    q16bC = 0
    q17a = 0
    q17aC = 0
    q17b = 0
    q17bC = 0
    q17c = 0
    q17cC = 0
    q18a = 0
    q18aC = 0
    q18b = 0
    q18bC = 0
    q18c = 0
    q18cC = 0
    q18d = 0
    q18cD = 0
    'Effort correlation
    e1C = 0
    e1q8 = 0
    e1q8C = 0
    e2C = 0
    e2q8 = 0
    e2q8C = 0
    e3C = 0
    e3q8 = 0
    e3q8C = 0
    e4C = 0
    e4q8 = 0
    e4q8C = 0
    e5C = 0
    e5q8 = 0
    e5q8C = 0
    'Opinion correlation
    o1C = 0
    o1q5 = 0
    o1q5C = 0
    o1q8 = 0
    o1q8C = 0
    o2C = 0
    o2q5 = 0
    o2q5C = 0
    o2q8 = 0
    o2q8C = 0
    o3C = 0
    o3q5 = 0
    o3q5C = 0
    o3q8 = 0
    o3q8C = 0
    o4C = 0
    o4q5 = 0
```

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```
o4q5C = 0
o4q8 = 0
o4q8C = 0
o5C = 0
o5q5 = 0
o5q5C = 0
o5q8 = 0
o5q8C = 0
'Time spent correlation
w1C = 0
w1q7 = 0
w1q7C = 0
w1q8 = 0
w1q8C = 0
w2C = 0
w2q7 = 0
w2q7C = 0
w2q8 = 0
w2q8C = 0
w3C = 0
w3q7 = 0
w3q7C = 0
w3q8 = 0
w3q8C = 0
w4C = 0
w4q7 = 0
w4q7C = 0
w4q8 = 0
w4q8C = 0
w5C = 0
w5q7 = 0
w5q7C = 0
w5q8 = 0
w5q8C = 0
'Grades versus outcomes
Ag17a = 0
Ag17aC = 0
Ag17b = 0
Ag17bC = 0
Ag17c = 0
Ag17cC = 0
Bg17a = 0
Bg17aC = 0
Bg17b = 0
Bg17bC = 0
Bg17c = 0
Bg17cC = 0
Cg17a = 0
Cg17aC = 0
Cg17b = 0
Cg17bC = 0
Cg17c = 0
Cg17cC = 0
Fg17a = 0
Fg17aC = 0
Fg17b = 0
Fg17bC = 0
Fg17c = 0
Fg17cC = 0
'V/A/C/R
V8 = 0
V8C = 0
V17a = 0
V17aC = 0
V17b = 0
V17bC = 0
V17c = 0
V17cC = 0
A8 = 0
A8C = 0
A17a = 0
```

```
        A17aC = 0
        A17b = 0
        A17bC = 0
        A17c = 0
        A17cC = 0
        C8 = 0
        C8C = 0
        C17a = 0
        C17aC = 0
        C17b = 0
        C17bC = 0
        C17c = 0
        C17cC = 0
        R8 = 0
        R8C = 0
        R17a = 0
        R17aC = 0
        R17b = 0
        R17bC = 0
        R17c = 0
        R17cC = 0
        'Male/Female experiences
femaleEvidence = 0
femaleEvidenceC = 0
maleEvidence = 0
maleEvidenceC = 0
        'Male/Female learning styles
visualM = 0
visualF = 0
audioM = 0
audioF = 0
reflectM = 0
reflectF = 0
activeM = 0
activeF = 0
        'Learning styles
active = 0
reflective = 0
visual = 0
auditory = 0
        'Grades
        sub1 = 0
        sub1C = 0
        sub2 = 0
        sub2C = 0
        sub3 = 0
        sub3C = 0
allsub = 0
allsubC = 0
course = 0
courseC = 0
        'Visual Learner type grades
        sub1Visual = 0
        sub1CVisual = 0
        sub2Visual = 0
        sub2CVisual = 0
        sub3Visual = 0
        sub3CVisual = 0
allsubVisual = 0
allsubCVisual = 0
courseVisual = 0
courseCVisual = 0
        'Auditory Learner type grades
        sub1Audio = 0
        sub1CAudio = 0
        sub2Audio = 0
        sub2CAudio = 0
        sub3Audio = 0
        sub3CAudio = 0
allsubAudio = 0
allsubCAudio = 0
```

```
courseAudio = 0
courseCAudio = 0
    'Reflective Learner type grades
    sub1Reflect = 0
    sub1CReflect = 0
    sub2Reflect = 0
    sub2CReflect = 0
    sub3Reflect = 0
    sub3CReflect = 0
allsubReflect = 0
allsubCReflect = 0
courseReflect = 0
courseCReflect = 0
    'Active Learner type grades
    sub1Active = 0
    sub1CActive = 0
    sub2Active = 0
    sub2CActive = 0
    sub3Active = 0
    sub3CActive = 0
allsubActive = 0
allsubCActive = 0
courseActive = 0
courseCActive = 0


    '--------------------------------------------------------
' GO THROUGH ENTIRE DATABASE
    '--------------------------------------------------------
    For i = RowOffset To RowOffset + Students

        'Reset markers
thisActive = False
thisVisual = False
thisAuditory = False
thisReflective = False

thisMale = False
thisFemale = False

thisGPA = 0
thisGPAC = 0

        'Count Males vs Females
        If Cells(i, 2) = "F" Then
            Females = Females + 1
thisFemale = True
        Else
            If Cells(i, 2) = "M" Then
                Males = Males + 1
thisMale = True
            End If
        End If

        'Used Mahara before LCE 101
        If Cells(i, 13) = "Y" Then usedBefore = usedBefore + 1
        'Learning Styles
        If Cells(i, 14) = "a" Then q11aC = q11aC + 1 Else If Cells(i, 14) = "b" Then q11bC =
q11bC + 1
        If Cells(i, 15) = "a" Then q12aC = q12aC + 1 Else If Cells(i, 15) = "b" Then q12bC =
q12bC + 1
        If Cells(i, 16) = "a" Then q13aC = q13aC + 1 Else If Cells(i, 16) = "b" Then q13bC =
q13bC + 1
        If Cells(i, 17) = "a" Then q14aC = q14aC + 1 Else If Cells(i, 17) = "b" Then q14bC =
q14bC + 1
        If Cells(i, 18) = "a" Then q15aC = q15aC + 1 Else If Cells(i, 18) = "b" Then q15bC =
q15bC + 1
        If Cells(i, 19) = "a" Then q16aC = q16aC + 1 Else If Cells(i, 19) = "b" Then q16bC =
q16bC + 1

'Visual Learner or Auditory?
        'questions: cells 14, 15 and 19
```

```
        If Cells(i, 14) = "a" And Cells(i, 15) = "a" And Cells(i, 19) = "a" Then
visual = visual + 1
thisVisual = True
            If thisMale Then visualM = visualM + 1 Else If thisFemale Then visualF = visualF + 1
        Else
            If (Cells(i, 14) = "a" And Cells(i, 15) = "a") Or (Cells(i, 15) = "a" And Cells(i,
16) = "a") Or (Cells(i, 15) = "a" And Cells(i, 16) = a) Then
visual = visual + 1
thisVisual = True
                If thisMale Then visualM = visualM + 1 Else If thisFemale Then visualF = visualF
+ 1
            Else
auditory = auditory + 1
thisAuditory = True
                If thisMale Then audioM = audioM + 1 Else If thisFemale Then audioF = audioF + 1
            End If
        End If

'Active Learner or Reflective Learner?
        'questions: cells 16, 17, 18
        If Cells(i, 16) = "a" And Cells(i, 17) = "a" And Cells(i, 18) = "a" Then
active = active + 1
thisActive = True
            If thisMale Then activeM = activeM + 1 Else If thisFemale Then activeF = activeF + 1
        Else
            If (Cells(i, 16) = "a" And Cells(i, 17) = "a") Or (Cells(i, 17) = "a" And Cells(i,
16) = "a") Or (Cells(i, 17) = "a" And Cells(i, 16) = a) Then
active = active + 1
thisActive = True
                If thisMale Then activeM = activeM + 1 Else If thisFemale Then activeF = activeF
+ 1
            Else
reflective = reflective + 1
thisReflective = True
                If thisMale Then reflectM = reflectM + 1 Else If thisFemale Then reflectF =
reflectF + 1
            End If
        End If


'================================================================================================
====
        'Questions for those who took LCE 101

'================================================================================================
====
        If Cells(i, 1) = "Y" Then
            LCE 101 = LCE 101 + 1
opinion = opinion + Cells(i, 4)
indepLearn = indepLearn + Cells(i, 5)
time = time + Cells(i, 6)
effort = effort + Cells(i, 7)
feelGrade = feelGrade + Cells(i, 8)
            If Cells(i, 3) = "Y" Then wantMore = wantMore + 1

            '----------------------------------
            'EFFORT CORRELATION
            '----------------------------------
            Select Case Cells(i, 7)
            Case 1
                e1C = e1C + 1
                If Not Cells(i, 8) = "" Then
                    e1q8 = e1q8 + Cells(i, 8)
                    e1q8C = e1q8C + 1
                End If
            Case 2
                e2C = e2C + 1
                If Not Cells(i, 8) = "" Then
                    e2q8 = e2q8 + Cells(i, 8)
                    e2q8C = e2q8C + 1
                End If
```

```
Case 3
    e3C = e3C + 1
    If Not Cells(i, 8) = "" Then
        e3q8 = e3q8 + Cells(i, 8)
        e3q8C = e3q8C + 1
    End If
Case 4
    e4C = e4C + 1
    If Not Cells(i, 8) = "" Then
        e4q8 = e4q8 + Cells(i, 8)
        e4q8C = e4q8C + 1
    End If
Case 5
    e5C = e5C + 1
    If Not Cells(i, 8) = "" Then
        e5q8 = e5q8 + Cells(i, 8)
        e5q8C = e5q8C + 1
    End If
End Select

'----------------------------------
'OPINION CORRELATION
'----------------------------------
Select Case Cells(i, 4)
Case 1 'hated it
    o1C = o1C + 1
    If Not Cells(i, 5) = "" Then
        o1q5 = o1q5 + Cells(i, 5)
        o1q5C = o1q5C + 1
    End If
    If Not Cells(i, 8) = "" Then
        o1q8 = o1q8 + Cells(i, 8)
        o1q8C = o1q8C + 1
    End If
    'help received
    If Not Cells(i, 23) = "" Then
        o1q18a = o1q18a + Cells(i, 23)
        o1q18aC = o1q18aC + 1
    End If
    If Not Cells(i, 24) = "" Then
        o1q18b = o1q18b + Cells(i, 24)
        o1q18bC = o1q18bC + 1
    End If
    If Not Cells(i, 25) = "" Then
        o1q18c = o1q18c + Cells(i, 25)
        o1q18cC = o1q18cC + 1
    End If
    If Not Cells(i, 26) = "" Then
        o1q18d = o1q18d + Cells(i, 26)
        o1q18dC = o1q18dC + 1
    End If
Case 2 'didnt like it
    o2C = o2C + 1
    If Not Cells(i, 5) = "" Then
        o2q5 = o2q5 + Cells(i, 5)
        o2q5C = o2q5C + 1
    End If
    If Not Cells(i, 8) = "" Then
        o2q8 = o2q8 + Cells(i, 8)
        o2q8C = o2q8C + 1
    End If
    'help received
    If Not Cells(i, 23) = "" Then
        o2q18a = o2q18a + Cells(i, 23)
        o2q18aC = o2q18aC + 1
    End If
    If Not Cells(i, 24) = "" Then
        o2q18b = o2q18b + Cells(i, 24)
        o2q18bC = o2q18bC + 1
    End If
    If Not Cells(i, 25) = "" Then
```

```
                o2q18c = o2q18c + Cells(i, 25)
                o2q18cC = o2q18cC + 1
            End If
            If Not Cells(i, 26) = "" Then
                o2q18d = o2q18d + Cells(i, 26)
                o2q18dC = o2q18dC + 1
            End If
        Case 3 'okay
            o3C = o3C + 1
            If Not Cells(i, 5) = "" Then
                o3q5 = o3q5 + Cells(i, 5)
                o3q5C = o3q5C + 1
            End If
            If Not Cells(i, 8) = "" Then
                o3q8 = o3q8 + Cells(i, 8)
                o3q8C = o3q8C + 1
            End If
            'help received
            If Not Cells(i, 23) = "" Then
                o3q18a = o3q18a + Cells(i, 23)
                o3q18aC = o3q18aC + 1
            End If
            If Not Cells(i, 24) = "" Then
                o3q18b = o3q18b + Cells(i, 24)
                o3q18bC = o3q18bC + 1
            End If
            If Not Cells(i, 25) = "" Then
                o3q18c = o3q18c + Cells(i, 25)
                o3q18cC = o3q18cC + 1
            End If
            If Not Cells(i, 26) = "" Then
                o3q18d = o3q18d + Cells(i, 26)
                o3q18dC = o3q18dC + 1
            End If
        Case 4 'liked it
            o4C = o4C + 1
            If Not Cells(i, 5) = "" Then
                o4q5 = o4q5 + Cells(i, 5)
                o4q5C = o4q5C + 1
            End If
            If Not Cells(i, 8) = "" Then
                o4q8 = o4q8 + Cells(i, 8)
                o4q8C = o4q8C + 1
            End If
            'help received
            If Not Cells(i, 23) = "" Then
                o4q18a = o4q18a + Cells(i, 23)
                o4q18aC = o4q18aC + 1
            End If
            If Not Cells(i, 24) = "" Then
                o4q18b = o4q18b + Cells(i, 24)
                o4q18bC = o4q18bC + 1
            End If
            If Not Cells(i, 25) = "" Then
                o4q18c = o4q18c + Cells(i, 25)
                o4q18cC = o4q18cC + 1
            End If
            If Not Cells(i, 26) = "" Then
                o4q18d = o4q18d + Cells(i, 26)
                o4q18dC = o4q18dC + 1
            End If
        Case 5 'loved it
            o5C = o5C + 1
            If Not Cells(i, 5) = "" Then
                o5q5 = o5q5 + Cells(i, 5)
                o5q5C = o5q5C + 1
            End If
            If Not Cells(i, 8) = "" Then
                o5q8 = o5q8 + Cells(i, 8)
                o5q8C = o5q8C + 1
            End If
```

```
            'help received
            If Not Cells(i, 23) = "" Then
                o5q18a = o5q18a + Cells(i, 23)
                o5q18aC = o5q18aC + 1
            End If
            If Not Cells(i, 24) = "" Then
                o5q18b = o5q18b + Cells(i, 24)
                o5q18bC = o5q18bC + 1
            End If
            If Not Cells(i, 25) = "" Then
                o5q18c = o5q18c + Cells(i, 25)
                o5q18cC = o5q18cC + 1
            End If
            If Not Cells(i, 26) = "" Then
                o5q18d = o5q18d + Cells(i, 26)
                o5q18dC = o5q18dC + 1
            End If
End Select

'----------------------------------
'TIME SPENT CORRELATION
'----------------------------------
Select Case Cells(i, 6)
Case 1 '0-2h
    w1C = w1C + 1
    If Not Cells(i, 7) = "" Then
        w1q7 = w1q7 + Cells(i, 7)
        w1q7C = w1q7C + 1
    End If
    If Not Cells(i, 8) = "" Then
        w1q8 = w1q8 + Cells(i, 8)
        w1q8C = w1q8C + 1
    End If
Case 2 '2h-4h
    w2C = w2C + 1
    If Not Cells(i, 7) = "" Then
        w2q7 = w2q7 + Cells(i, 7)
        w2q7C = w2q7C + 1
    End If
    If Not Cells(i, 8) = "" Then
        w2q8 = w2q8 + Cells(i, 8)
        w2q8C = w2q8C + 1
    End If
Case 3 '4h-6h
    w3C = w3C + 1
    If Not Cells(i, 7) = "" Then
        w3q7 = w3q7 + Cells(i, 7)
        w3q7C = w3q7C + 1
    End If
    If Not Cells(i, 8) = "" Then
        w3q8 = w3q8 + Cells(i, 8)
        w3q8C = w3q8C + 1
    End If
Case 4 '6h-8h
    w4C = w4C + 1
    If Not Cells(i, 7) = "" Then
        w4q7 = w4q7 + Cells(i, 7)
        w4q7C = w4q7C + 1
    End If
    If Not Cells(i, 8) = "" Then
        w4q8 = w4q8 + Cells(i, 8)
        w4q8C = w4q8C + 1
    End If
Case 5 '8h+
    w5C = w5C + 1
    If Not Cells(i, 7) = "" Then
        w5q7 = w5q7 + Cells(i, 7)
        w5q7C = w5q7C + 1
    End If
    If Not Cells(i, 8) = "" Then
        w5q8 = w5q8 + Cells(i, 8)
```

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                    w5q8C = w5q8C + 1
                End If
            End Select

            '-----------------------------------
            'Question 18 (Help received)
            '-----------------------------------
            If Not Cells(i, 23) = "" Then
                q18a = q18a + Cells(i, 23)
                q18aC = q18aC + 1
            End If
            If Not Cells(i, 24) = "" Then
                q18b = q18b + Cells(i, 24)
                q18bC = q18bC + 1
            End If
            If Not Cells(i, 25) = "" Then
                q18c = q18c + Cells(i, 25)
                q18cC = q18cC + 1
            End If
            If Not Cells(i, 26) = "" Then
                q18d = q18d + Cells(i, 26)
                q18dC = q18dC + 1
            End If

            '-----------------------------------
            'Questions for Males/Females
            '-----------------------------------
            If thisFemale Then
                'Evidence
                If Not Cells(i, 5) = "" Then
femaleEvidence = femaleEvidence + Cells(i, 5)
femaleEvidenceC = femaleEvidenceC + 1
                End If
                'Outcomes
                If Not Cells(i, 20) = "" Then
                    F17a = F17a + Cells(i, 20)
                    F17aC = F17aC + 1
                End If
                If Not Cells(i, 21) = "" Then
                    F17b = F17b + Cells(i, 21)
                    F17bC = F17bC + 1
                End If
                If Not Cells(i, 22) = "" Then
                    F17c = F17c + Cells(i, 22)
                    F17cC = F17cC + 1
                End If
            Else
                If thisMale Then
                    'Evidence
                    If Not Cells(i, 5) = "" Then
maleEvidence = maleEvidence + Cells(i, 5)
maleEvidenceC = maleEvidenceC + 1
                    End If
                    'Outcomes
                    If Not Cells(i, 20) = "" Then
                        M17a = M17a + Cells(i, 20)
                        M17aC = M17aC + 1
                    End If
                    If Not Cells(i, 21) = "" Then
                        M17b = M17b + Cells(i, 21)
                        M17bC = M17bC + 1
                    End If
                    If Not Cells(i, 22) = "" Then
                        M17c = M17c + Cells(i, 22)
                        M17cC = M17cC + 1
                    End If
                End If
            End If

            '-------------------------------------------
            'Grades
```

```
            '-------------------------------------------
            If Not Cells(i, 9) = "?" And Not Cells(i, 9) = "" Then
grade = letterToGrade(Cells(i, 9))
                sub1 = sub1 + grade
                sub1C = sub1C + 1
allsub = allsub + grade
allsubC = allsubC + 1
thisGPA = thisGPA + grade
thisGPAC = thisGPAC + 1
                If thisVisual Then
allsubVisual = allsubVisual + grade
allsubCVisual = allsubCVisual + 1
                    sub1Visual = sub1Visual + grade
                    sub1CVisual = sub1CVisual + 1
                End If
                If thisAuditory Then
allsubAudio = allsubAudio + grade
allsubCAudio = allsubCAudio + 1
                    sub1Audio = sub1Audio + grade
                    sub1CAudio = sub1CAudio + 1
                End If
                If thisReflective Then
allsubReflect = allsubReflect + grade
allsubCReflect = allsubCReflect + 1
                    sub1Reflect = sub1Reflect + grade
                    sub1CReflect = sub1CReflect + 1
                End If
                If thisActive Then
allsubActive = allsubActive + grade
allsubCActive = allsubCActive + 1
                    sub1Active = sub1Active + grade
                    sub1CActive = sub1CActive + 1
                End If
            End If
            If Not Cells(i, 10) = "?" And Not Cells(i, 10) = "" Then
grade = letterToGrade(Cells(i, 10))
                sub2 = sub2 + grade
                sub2C = sub2C + 1
allsub = allsub + grade
allsubC = allsubC + 1
thisGPA = thisGPA + grade
thisGPAC = thisGPAC + 1
                If thisVisual Then
allsubVisual = allsubVisual + grade
allsubCVisual = allsubCVisual + 1
                    sub2Visual = sub2Visual + grade
                    sub2CVisual = sub2CVisual + 1
                End If
                If thisAuditory Then
allsubAudio = allsubAudio + grade
allsubCAudio = allsubCAudio + 1
                    sub2Audio = sub2Audio + grade
                    sub2CAudio = sub2CAudio + 1
                End If
                If thisReflective Then
allsubReflect = allsubReflect + grade
allsubCReflect = allsubCReflect + 1
                    sub2Reflect = sub1Reflect + grade
                    sub2CReflect = sub1CReflect + 1
                End If
                If thisActive Then
allsubActive = allsubActive + grade
allsubCActive = allsubCActive + 1
                    sub2Active = sub1Active + grade
                    sub2CActive = sub1CActive + 1
                End If
            End If
            If Not Cells(i, 11) = "?" And Not Cells(i, 11) = "" Then
grade = letterToGrade(Cells(i, 11))
                sub3 = sub3 + grade
                sub3C = sub3C + 1
```

```
allsub = allsub + grade
allsubC = allsubC + 1
thisGPA = thisGPA + grade
thisGPAC = thisGPAC + 1
                If thisVisual Then
allsubVisual = allsubVisual + grade
allsubCVisual = allsubCVisual + 1
                    sub3Visual = sub3Visual + grade
                    sub3CVisual = sub3CVisual + 1
                End If
                If thisAuditory Then
allsubAudio = allsubAudio + grade
allsubCAudio = allsubCAudio + 1
                    sub3Audio = sub3Audio + grade
                    sub3CAudio = sub3CAudio + 1
                End If
                If thisReflective Then
allsubReflect = allsubReflect + grade
allsubCReflect = allsubCReflect + 1
                    sub3Reflect = sub1Reflect + grade
                    sub3CReflect = sub1CReflect + 1
                End If
                If thisActive Then
allsubActive = allsubActive + grade
allsubCActive = allsubCActive + 1
                    sub3Active = sub1Active + grade
                    sub3CActive = sub1CActive + 1
                End If
            End If
            If Not Cells(i, 12) = "?" And Not Cells(i, 12) = "" Then
grade = letterToGrade(Cells(i, 12))
course = course + grade
courseC = courseC + 1
                If thisVisual Then
courseVisual = courseVisual + grade
courseCVisual = courseCVisual + 1
                End If
                If thisAuditory Then
courseAudio = courseAudio + grade
courseCAudio = courseCAudio + 1
                End If
                If thisReflective Then
courseReflect = courseReflect + grade
courseCReflect = courseCReflect + 1
                End If
                If thisActive Then
courseActive = courseActive + grade
courseCActive = courseCActive + 1
                End If
            End If

            '----------------------------------
            'Question 17 (Outcomes)
            '----------------------------------
            If Not Cells(i, 20) = "" Then
                q17a = q17a + Cells(i, 20)
                q17aC = q17aC + 1
                If thisGPAC > 0 Then
                    Select Case Round(thisGPA / thisGPAC)
                    Case 4
                        Ag17a = Ag17a + Cells(i, 20)
                        Ag17aC = Ag17aC + 1
                    Case 3
                        Bg17a = Bg17a + Cells(i, 20)
                        Bg17aC = Bg17aC + 1
                    Case 2
                        Cg17a = Cg17a + Cells(i, 20)
                        Cg17aC = Cg17aC + 1
                    Case 0
                        Fg17a = Fg17a + Cells(i, 20)
                        Fg17aC = Fg17aC + 1
```

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                End Select
            End If
        End If
        If Not Cells(i, 21) = "" Then
            q17b = q17b + Cells(i, 21)
            q17bC = q17bC + 1
            If thisGPAC > 0 Then
                Select Case Round(thisGPA / thisGPAC)
                Case 4
                    Ag17b = Ag17b + Cells(i, 21)
                    Ag17bC = Ag17bC + 1
                Case 3
                    Bg17b = Bg17b + Cells(i, 21)
                    Bg17bC = Bg17bC + 1
                Case 2
                    Cg17b = Cg17b + Cells(i, 21)
                    Cg17bC = Cg17bC + 1
                Case 0
                    Fg17b = Fg17b + Cells(i, 21)
                    Fg17bC = Fg17bC + 1
                End Select
            End If
        End If
        If Not Cells(i, 22) = "" Then
            q17c = q17c + Cells(i, 22)
            q17cC = q17cC + 1
            If thisGPAC > 0 Then
                Select Case Round(thisGPA / thisGPAC)
                Case 4
                    Ag17c = Ag17c + Cells(i, 22)
                    Ag17cC = Ag17cC + 1
                Case 3
                    Bg17c = Bg17c + Cells(i, 22)
                    Bg17cC = Bg17cC + 1
                Case 2
                    Cg17c = Cg17c + Cells(i, 22)
                    Cg17cC = Cg17cC + 1
                Case 0
                    Fg17c = Fg17c + Cells(i, 22)
                    Fg17cC = Fg17cC + 1
                End Select
            End If
        End If


        '-------------------------------------------
' V / A / C / R
        '-------------------------------------------
        If thisVisual Then
            If Not Cells(i, 8) = "" Then
                V8 = V8 + Cells(i, 8)
                V8C = V8C + 1
            End If
            If Not Cells(i, 20) = "" Then
                V17a = V17a + Cells(i, 20)
                V17aC = V17aC + 1
            End If
            If Not Cells(i, 21) = "" Then
                V17b = V17b + Cells(i, 21)
                V17bC = V17bC + 1
            End If
            If Not Cells(i, 22) = "" Then
                V17c = V17c + Cells(i, 22)
                V17cC = V17cC + 1
            End If
        End If
        If thisAuditory Then
            If Not Cells(i, 8) = "" Then
                A8 = A8 + Cells(i, 8)
                A8C = A8C + 1
            End If
            If Not Cells(i, 20) = "" Then
```

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                A17a = A17a + Cells(i, 20)
                A17aC = A17aC + 1
            End If
            If Not Cells(i, 21) = "" Then
                A17b = A17b + Cells(i, 21)
                A17bC = A17bC + 1
            End If
            If Not Cells(i, 22) = "" Then
                A17c = A17c + Cells(i, 22)
                A17cC = A17cC + 1
            End If
        End If
        If thisReflective Then
            If Not Cells(i, 8) = "" Then
                R8 = R8 + Cells(i, 8)
                R8C = R8C + 1
            End If
            If Not Cells(i, 20) = "" Then
                R17a = R17a + Cells(i, 20)
                R17aC = R17aC + 1
            End If
            If Not Cells(i, 21) = "" Then
                R17b = R17b + Cells(i, 21)
                R17bC = R17bC + 1
            End If
            If Not Cells(i, 22) = "" Then
                R17c = R17c + Cells(i, 22)
                R17cC = R17cC + 1
            End If
        End If
        If thisActive Then
            If Not Cells(i, 8) = "" Then
                C8 = C8 + Cells(i, 8)
                C8C = C8C + 1
            End If
            If Not Cells(i, 20) = "" Then
                C17a = C17a + Cells(i, 20)
                C17aC = C17aC + 1
            End If
            If Not Cells(i, 21) = "" Then
                C17b = C17b + Cells(i, 21)
                C17bC = C17bC + 1
            End If
            If Not Cells(i, 22) = "" Then
                C17c = C17c + Cells(i, 22)
                C17cC = C17cC + 1
            End If
        End If
    End If
Next


'=============================================================================================
==========
' PRESENTING THE DATA

'=============================================================================================
==========

    '----------------------------------------------------
    'EFFORT CORRELATIONS
    '----------------------------------------------------

    'TOO MUCH
    q7_1total.Caption = e1C
    q7_1P.Caption = Round(e1C / LCE 101, 4) * 100 & "%"

    q7_1q8.Caption = Round(e1q8 / e1q8C, 2) & " / 5"
    q7_1q8MSG.Caption = switchAmountMSG(e1q8 / e1q8C)

    'A LOT
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```
q7_2total.Caption = e2C
q7_2P.Caption = Round(e2C / LCE 101, 4) * 100 & "%"

q7_2q8.Caption = Round(e2q8 / e2q8C, 2) & " / 5"
q7_2q8MSG.Caption = switchAmountMSG(e2q8 / e2q8C)

'SOME
q7_3total.Caption = e3C
q7_3P.Caption = Round(e3C / LCE 101, 4) * 100 & "%"

q7_3q8.Caption = Round(e3q8 / e3q8C, 2) & " / 5"
q7_3q8MSG.Caption = switchAmountMSG(e3q8 / e3q8C)

'A LITTLE
q7_4total.Caption = e4C
q7_4P.Caption = Round(e4C / LCE 101, 4) * 100 & "%"

q7_4q8.Caption = Round(e4q8 / e4q8C, 2) & " / 5"
q7_4q8MSG.Caption = switchAmountMSG(e4q8 / e4q8C)

'NONE
q7_5total.Caption = e5C
q7_5P.Caption = Round(e5C / LCE 101, 4) * 100 & "%"

q7_5q8.Caption = Round(e5q8 / e5q8C, 2) & " / 5"
q7_5q8MSG.Caption = switchAmountMSG(e5q8 / e5q8C)

'-------------------------------------------------------
'OPINIONS CORRELATIONS
'-------------------------------------------------------

'HATED IT
q4_1total.Caption = o1C
q4_1P.Caption = Round(o1C / LCE 101, 4) * 100 & "%"

q4_1q5.Caption = Round(o1q5 / o1q5C, 2) & " / 5"
q4_1q5MSG.Caption = switchAmountMSG(o1q5 / o1q5C)

q4_1q8.Caption = Round(o1q8 / o1q8C, 2) & " / 5"
q4_1q8MSG.Caption = switchAmountMSG(o1q8 / o1q8C)

'help
q4_1q18a.Caption = Round(o1q18a / o1q18aC, 2) & " / 5"
q4_1q18aMSG.Caption = switchAmountMSG(o1q18a / o1q18aC)
q4_1q18b.Caption = Round(o1q18b / o1q18bC, 2) & " / 5"
q4_1q18bMSG.Caption = switchAmountMSG(o1q18b / o1q18bC)
q4_1q18c.Caption = Round(o1q18c / o1q18cC, 2) & " / 5"
q4_1q18cMSG.Caption = switchAmountMSG(o1q18c / o1q18cC)
q4_1q18d.Caption = Round(o1q18d / o1q18dC, 2) & " / 5"
q4_1q18dMSG.Caption = switchAmountMSG(o1q18d / o1q18dC)

'DIDNT LIKE IT
q4_2total.Caption = o2C
q4_2P.Caption = Round(o2C / LCE 101, 4) * 100 & "%"

q4_2q5.Caption = Round(o2q5 / o2q5C, 2) & " / 5"
q4_2q5MSG.Caption = switchAmountMSG(o2q5 / o2q5C)

q4_2q8.Caption = Round(o2q8 / o2q8C, 2) & " / 5"
q4_2q8MSG.Caption = switchAmountMSG(o2q8 / o2q8C)

'help
q4_2q18a.Caption = Round(o2q18a / o2q18aC, 2) & " / 5"
q4_2q18aMSG.Caption = switchAmountMSG(o2q18a / o2q18aC)
q4_2q18b.Caption = Round(o2q18b / o2q18bC, 2) & " / 5"
q4_2q18bMSG.Caption = switchAmountMSG(o2q18b / o2q18bC)
q4_2q18c.Caption = Round(o2q18c / o2q18cC, 2) & " / 5"
q4_2q18cMSG.Caption = switchAmountMSG(o2q18c / o2q18cC)
q4_2q18d.Caption = Round(o2q18d / o2q18dC, 2) & " / 5"
q4_2q18dMSG.Caption = switchAmountMSG(o2q18d / o2q18dC)
```

```
'OKAY
q4_3total.Caption = o3C
q4_3P.Caption = Round(o3C / LCE 101, 4) * 100 & "%"

q4_3q5.Caption = Round(o3q5 / o3q5C, 2) & " / 5"
q4_3q5MSG.Caption = switchAmountMSG(o3q5 / o3q5C)

q4_3q8.Caption = Round(o3q8 / o3q8C, 2) & " / 5"
q4_3q8MSG.Caption = switchAmountMSG(o3q8 / o3q8C)

'help
q4_3q18a.Caption = Round(o3q18a / o3q18aC, 2) & " / 5"
q4_3q18aMSG.Caption = switchAmountMSG(o3q18a / o3q18aC)
q4_3q18b.Caption = Round(o3q18b / o3q18bC, 2) & " / 5"
q4_3q18bMSG.Caption = switchAmountMSG(o3q18b / o3q18bC)
q4_3q18c.Caption = Round(o3q18c / o3q18cC, 2) & " / 5"
q4_3q18cMSG.Caption = switchAmountMSG(o3q18c / o3q18cC)
q4_3q18d.Caption = Round(o3q18d / o3q18dC, 2) & " / 5"
q4_3q18dMSG.Caption = switchAmountMSG(o3q18d / o3q18dC)

'LIKED IT
q4_4total.Caption = o4C
q4_4P.Caption = Round(o4C / LCE 101, 4) * 100 & "%"

q4_4q5.Caption = Round(o4q5 / o4q5C, 2) & " / 5"
q4_4q5MSG.Caption = switchAmountMSG(o4q5 / o4q5C)

q4_4q8.Caption = Round(o4q8 / o4q8C, 2) & " / 5"
q4_4q8MSG.Caption = switchAmountMSG(o4q8 / o4q8C)

'help
q4_4q18a.Caption = Round(o4q18a / o4q18aC, 2) & " / 5"
q4_4q18aMSG.Caption = switchAmountMSG(o4q18a / o4q18aC)
q4_4q18b.Caption = Round(o4q18b / o4q18bC, 2) & " / 5"
q4_4q18bMSG.Caption = switchAmountMSG(o4q18b / o4q18bC)
q4_4q18c.Caption = Round(o4q18c / o4q18cC, 2) & " / 5"
q4_4q18cMSG.Caption = switchAmountMSG(o4q18c / o4q18cC)
q4_4q18d.Caption = Round(o4q18d / o4q18dC, 2) & " / 5"
q4_4q18dMSG.Caption = switchAmountMSG(o4q18d / o4q18dC)

'LOVED IT
q4_5total.Caption = o5C
q4_5P.Caption = Round(o5C / LCE 101, 4) * 100 & "%"

q4_5q5.Caption = Round(o5q5 / o5q5C, 2) & " / 5"
q4_5q5MSG.Caption = switchAmountMSG(o5q5 / o5q5C)

q4_5q8.Caption = Round(o5q8 / o5q8C, 2) & " / 5"
q4_5q8MSG.Caption = switchAmountMSG(o5q8 / o5q8C)

'help
q4_5q18a.Caption = Round(o5q18a / o5q18aC, 2) & " / 5"
q4_5q18aMSG.Caption = switchAmountMSG(o5q18a / o5q18aC)
q4_5q18b.Caption = Round(o5q18b / o5q18bC, 2) & " / 5"
q4_5q18bMSG.Caption = switchAmountMSG(o5q18b / o5q18bC)
q4_5q18c.Caption = Round(o5q18c / o5q18cC, 2) & " / 5"
q4_5q18cMSG.Caption = switchAmountMSG(o5q18c / o5q18cC)
q4_5q18d.Caption = Round(o5q18d / o5q18dC, 2) & " / 5"
q4_5q18dMSG.Caption = switchAmountMSG(o5q18d / o5q18dC)

'----------------------------------------------------
'TIME SPENT CORRELATIONS
'----------------------------------------------------
'WORK 0-2h
totalWork1.Caption = w1C
totalWork1P.Caption = Round(w1C / LCE 101, 4) * 100 & "%"

work1_7.Caption = Round(w1q7 / w1q7C, 2) & " / 5"
work1_7MSG.Caption = switchEffortMSG(w1q7 / w1q7C)

work1_8.Caption = Round(w1q8 / w1q8C, 2) & " / 5"
```

```
work1_8MSG.Caption = switchPrefMSG(w1q8 / w1q8C)

'WORK 2h-4h
totalWork2.Caption = w2C
totalWork2P.Caption = Round(w2C / LCE 101, 4) * 100 & "%"

work2_7.Caption = Round(w2q7 / w2q7C, 2) & " / 5"
work2_7MSG.Caption = switchEffortMSG(w2q7 / w2q7C)

work2_8.Caption = Round(w2q8 / w2q8C, 2) & " / 5"
work2_8MSG.Caption = switchPrefMSG(w2q8 / w2q8C)

'WORK 4h-6h
totalWork3.Caption = w3C
totalWork3P.Caption = Round(w3C / LCE 101, 4) * 100 & "%"

work3_7.Caption = Round(w3q7 / w3q7C, 2) & " / 5"
work3_7MSG.Caption = switchEffortMSG(w3q7 / w3q7C)

work3_8.Caption = Round(w3q8 / w3q8C, 2) & " / 5"
work3_8MSG.Caption = switchPrefMSG(w3q8 / w3q8C)

'WORK 6h-8h
totalWork4.Caption = w4C
totalWork4P.Caption = Round(w4C / LCE 101, 4) * 100 & "%"

work4_7.Caption = Round(w4q7 / w4q7C, 2) & " / 5"
work4_7MSG.Caption = switchEffortMSG(w4q7 / w4q7C)

work4_8.Caption = Round(w4q8 / w4q8C, 2) & " / 5"
work4_8MSG.Caption = switchPrefMSG(w4q8 / w4q8C)

'WORK 8h+
totalWork5.Caption = w5C
totalWork5P.Caption = Round(w5C / LCE 101, 4) * 100 & "%"

work5_7.Caption = Round(w5q7 / w5q7C, 2) & " / 5"
work5_7MSG.Caption = switchEffortMSG(w5q7 / w5q7C)

work5_8.Caption = Round(w5q8 / w5q8C, 2) & " / 5"
work5_8MSG.Caption = switchPrefMSG(w5q8 / w5q8C)

'----------------------------------------------------
'GRADES VERSUS OUTCOMES
'----------------------------------------------------

'A grades
gA17a.Caption = Round(Ag17a / Ag17aC, 2) & " / 5"
gA17aMSG = switchAmountMSG(Ag17a / Ag17aC)

gA17b.Caption = Round(Ag17b / Ag17bC, 2) & " / 5"
gA17bMSG = switchAmountMSG(Ag17b / Ag17bC)

gA17c.Caption = Round(Ag17c / Ag17cC, 2) & " / 5"
gA17cMSG = switchAmountMSG(Ag17c / Ag17cC)

totalA.Caption = Ag17aC
totalAP.Caption = Round(Ag17aC / LCE 101, 4) * 100 & "%"

'B grades
gB17a.Caption = Round(Bg17a / Bg17aC, 2) & " / 5"
gB17aMSG = switchAmountMSG(Bg17a / Bg17aC)

gB17b.Caption = Round(Bg17b / Bg17bC, 2) & " / 5"
gB17bMSG = switchAmountMSG(Bg17b / Bg17bC)

gB17c.Caption = Round(Bg17c / Bg17cC, 2) & " / 5"
gB17cMSG = switchAmountMSG(Bg17c / Bg17cC)

totalB.Caption = Bg17aC
totalBP.Caption = Round(Bg17aC / LCE 101, 4) * 100 & "%"
```

```
'C grades
gC17a.Caption = Round(Cg17a / Cg17aC, 2) & " / 5"
gC17aMSG = switchAmountMSG(Cg17a / Cg17aC)


gC17b.Caption = Round(Cg17b / Cg17bC, 2) & " / 5"
gC17bMSG = switchAmountMSG(Cg17b / Cg17bC)


gC17c.Caption = Round(Cg17c / Cg17cC, 2) & " / 5"
gC17cMSG = switchAmountMSG(Cg17c / Cg17cC)


totalC.Caption = Cg17aC
totalCP.Caption = Round(Cg17aC / LCE 101, 4) * 100 & "%"


'-------------------------------------------------------
'V / A / C / R - VISUAL
'-------------------------------------------------------

visualLayout.Caption = Round(V8 / V8C, 2) & " / 5"
visualLayoutMSG.Caption = switchPrefMSG(V8 / V8C)

visual17a.Caption = Round(V17a / V17aC, 2) & " / 5"
visual17aMSG.Caption = switchAmountMSG(V17a / V17aC)

visual17b.Caption = Round(V17b / V17bC, 2) & " / 5"
visual17bMSG.Caption = switchAmountMSG(V17b / V17bC)

visual17c.Caption = Round(V17c / V17cC, 2) & " / 5"
visual17cMSG.Caption = switchAmountMSG(V17c / V17cC)


'-------------------------------------------------------
'V / A / C / R - AUDITORY
'-------------------------------------------------------

audioLayout.Caption = Round(A8 / A8C, 2) & " / 5"
audioLayoutMSG.Caption = switchPrefMSG(A8 / A8C)

audio17a.Caption = Round(A17a / A17aC, 2) & " / 5"
audio17aMSG.Caption = switchAmountMSG(A17a / A17aC)

audio17b.Caption = Round(A17b / A17bC, 2) & " / 5"
audio17bMSG.Caption = switchAmountMSG(A17b / A17bC)

audio17c.Caption = Round(A17c / A17cC, 2) & " / 5"
audio17cMSG.Caption = switchAmountMSG(A17c / A17cC)


'-------------------------------------------------------
'V / A / C / R - ACTIVE
'-------------------------------------------------------

activeLayout.Caption = Round(C8 / C8C, 2) & " / 5"
activeLayoutMSG.Caption = switchPrefMSG(C8 / C8C)

active17a.Caption = Round(C17a / C17aC, 2) & " / 5"
active17aMSG.Caption = switchAmountMSG(C17a / C17aC)

active17b.Caption = Round(C17b / C17bC, 2) & " / 5"
active17bMSG.Caption = switchAmountMSG(C17b / C17bC)

active17c.Caption = Round(C17c / C17cC, 2) & " / 5"
active17cMSG.Caption = switchAmountMSG(C17c / C17cC)


'-------------------------------------------------------
'V / A / C / R - REFLECTIVE
'-------------------------------------------------------

reflectLayout.Caption = Round(R8 / R8C, 2) & " / 5"
reflectLayoutMSG.Caption = switchPrefMSG(R8 / R8C)

reflect17a.Caption = Round(R17a / R17aC, 2) & " / 5"
reflect17aMSG.Caption = switchAmountMSG(R17a / R17aC)
```

```
    reflect17b.Caption = Round(R17b / R17bC, 2) & " / 5"
    reflect17bMSG.Caption = switchAmountMSG(R17b / R17bC)

    reflect17c.Caption = Round(R17c / R17cC, 2) & " / 5"
    reflect17cMSG.Caption = switchAmountMSG(R17c / R17cC)


    '--------------------------------------------------------
    'Grades
    '--------------------------------------------------------
    avSub1.Caption = Round(sub1 / sub1C, 2)
    letterSub1.Caption = gradeToLetter(avSub1.Caption)
    avSub2.Caption = Round(sub2 / sub2C, 2)
    letterSub2.Caption = gradeToLetter(avSub2.Caption)
    avSub3.Caption = Round(sub3 / sub3C, 2)
    letterSub3.Caption = gradeToLetter(avSub3.Caption)
    avAll.Caption = Round(allsub / allsubC, 2)
    letterAll.Caption = gradeToLetter(avAll.Caption)
    avCourse.Caption = Round(course / courseC, 2)
    letterCourse.Caption = gradeToLetter(avCourse.Caption)
    submitGrades.Caption = Ag17aC + Bg17aC + Cg17aC
    submitGradesP.Caption = Round(Ag17aC / LCE 101 + Bg17aC / LCE 101 + Cg17aC / LCE 101, 4) *
100 & "%"

    '--------------------------------------------------------
    'Male / Female outcomes
    '--------------------------------------------------------
    'FEMALES

    females17a.Caption = Round(F17a / F17aC, 2) & " / 5"
    females17aMSG.Caption = switchAmountMSG(F17a / F17aC)

    females17b.Caption = Round(F17b / F17bC, 2) & " / 5"
    females17bMSG.Caption = switchAmountMSG(F17b / F17bC)

    females17c.Caption = Round(F17c / F17cC, 2) & " / 5"
    females17cMSG.Caption = switchAmountMSG(F17c / F17cC)


    'MALES

    males17a.Caption = Round(M17a / M17aC, 2) & " / 5"
    males17aMSG.Caption = switchAmountMSG(M17a / M17aC)

    males17b.Caption = Round(M17b / M17bC, 2) & " / 5"
    males17bMSG.Caption = switchAmountMSG(M17b / M17bC)

    males17c.Caption = Round(M17c / M17cC, 2) & " / 5"
    males17cMSG.Caption = switchAmountMSG(M17c / M17cC)

    '--------------------------------------------------------
    'Male / Female evidence
    '--------------------------------------------------------
    evidenceFemales.Caption = Round(femaleEvidence / femaleEvidenceC, 2) & " / 5"
    evidenceFemalesMSG.Caption = switchAmountMSG(femaleEvidence / femaleEvidenceC)

    evidenceMales.Caption = Round(maleEvidence / maleEvidenceC, 2) & " / 5"
    evidenceMalesMSG.Caption = switchAmountMSG(maleEvidence / maleEvidenceC)

    '--------------------------------------------------------
    'Outcomes
    '--------------------------------------------------------
    q17engaged.Caption = Round(q17a / q17aC, 2) & " / 5"
    q17engagedMSG.Caption = switchAmountMSG(q17a / q17aC)

    q17motivated.Caption = Round(q17b / q17bC, 2) & " / 5"
    q17motivatedMSG.Caption = switchAmountMSG(q17b / q17bC)

    q17express.Caption = Round(q17c / q17cC, 2) & " / 5"
    q17expressMSG.Caption = switchAmountMSG(q17c / q17cC)

    '--------------------------------------------------------
```

```vb
    'Help received
    '-------------------------------------------------------
    q18sac.Caption = Round(q18a / q18aC, 2) & " / 5"
    q18sacMSG.Caption = switchAmountMSG(q18a / q18aC)

    q18class.Caption = Round(q18b / q18bC, 2) & " / 5"
    q18classMSG.Caption = switchAmountMSG(q18b / q18bC)

    q18office.Caption = Round(q18c / q18cC, 2) & " / 5"
    q18officeMSG.Caption = switchAmountMSG(q18c / q18cC)

    q18friends.Caption = Round(q18d / q18dC, 2) & " / 5"
    q18friendsMSG.Caption = switchAmountMSG(q18d / q18dC)

    '-------------------------------------------------------
    'Grades VISUAL LEARNERS
    '-------------------------------------------------------
    avVisuSub1.Caption = Round(sub1Visual / sub1CVisual, 2)
    letterVisuSub1.Caption = gradeToLetter(avVisuSub1.Caption)
    If avVisuSub1.Caption > avSub1.Caption Then
        avVisuSub1.ForeColor = vbBlue
    Else
        If avVisuSub1.Caption < avSub1.Caption Then avVisuSub1.ForeColor = vbRed Else
avVisuSub1.ForeColor = vbBlack
    End If

    avVisuSub2.Caption = Round(sub2Visual / sub2CVisual, 2)
    letterVisuSub2.Caption = gradeToLetter(avVisuSub2.Caption)
    If avVisuSub2.Caption > avSub2.Caption Then
        avVisuSub2.ForeColor = vbBlue
    Else
        If avVisuSub2.Caption < avSub2.Caption Then avVisuSub2.ForeColor = vbRed Else
avVisuSub2.ForeColor = vbBlack
    End If

    avVisuSub3.Caption = Round(sub3Visual / sub3CVisual, 2)
    letterVisuSub3.Caption = gradeToLetter(avVisuSub3.Caption)
    If avVisuSub3.Caption > avSub3.Caption Then
        avVisuSub3.ForeColor = vbBlue
    Else
        If avVisuSub3.Caption < avSub3.Caption Then avVisuSub3.ForeColor = vbRed Else
avVisuSub3.ForeColor = vbBlack
    End If

    avVisuAll.Caption = Round(allsubVisual / allsubCVisual, 2)
    letterVisuAll.Caption = gradeToLetter(avVisuAll.Caption)
    If avVisuAll.Caption > avAll.Caption Then
        avVisuAll.ForeColor = vbBlue
    Else
        If avVisuAll.Caption < avAll.Caption Then avVisuAll.ForeColor = vbRed Else
avVisuAll.ForeColor = vbBlack
    End If

    avVisuCourse.Caption = Round(courseVisual / courseCVisual, 2)
    letterVisuCourse.Caption = gradeToLetter(avVisuCourse.Caption)
    If avVisuCourse.Caption > avCourse.Caption Then
        avVisuCourse.ForeColor = vbBlue
    Else
        If avVisuCourse.Caption < avCourse.Caption Then avVisuCourse.ForeColor = vbRed Else
avVisuCourse.ForeColor = vbBlack
    End If

    '-------------------------------------------------------
    'Grades AUDIO LEARNERS
    '-------------------------------------------------------
    avAudioSub1.Caption = Round(sub1Audio / sub1CAudio, 2)
    letterAudioSub1.Caption = gradeToLetter(avAudioSub1.Caption)
    If avAudioSub1.Caption > avSub1.Caption Then
        avAudioSub1.ForeColor = vbBlue
    Else
```

```
        If avAudioSub1.Caption < avSub1.Caption Then avAudioSub1.ForeColor = vbRed Else
avAudioSub1.ForeColor = vbBlack
    End If

    avAudioSub2.Caption = Round(sub2Audio / sub2CAudio, 2)
    letterAudioSub2.Caption = gradeToLetter(avAudioSub2.Caption)
    If avAudioSub2.Caption > avSub2.Caption Then
        avAudioSub2.ForeColor = vbBlue
    Else
        If avAudioSub2.Caption < avSub2.Caption Then avAudioSub2.ForeColor = vbRed Else
avAudioSub2.ForeColor = vbBlack
    End If

    avAudioSub3.Caption = Round(sub3Audio / sub3CAudio, 2)
    letterAudioSub3.Caption = gradeToLetter(avAudioSub3.Caption)
    If avAudioSub3.Caption > avSub3.Caption Then
        avAudioSub3.ForeColor = vbBlue
    Else
        If avAudioSub3.Caption < avSub3.Caption Then avAudioSub3.ForeColor = vbRed Else
avAudioSub3.ForeColor = vbBlack
    End If

    avAudioAll.Caption = Round(allsubAudio / allsubCAudio, 2)
    letterAudioAll.Caption = gradeToLetter(avAudioAll.Caption)
    If avAudioAll.Caption > avAll.Caption Then
        avAudioAll.ForeColor = vbBlue
    Else
        If avAudioAll.Caption < avAll.Caption Then avAudioAll.ForeColor = vbRed Else
avAudioAll.ForeColor = vbBlack
    End If

    avAudioCourse.Caption = Round(courseAudio / courseCAudio, 2)
    letterAudioCourse.Caption = gradeToLetter(avAudioCourse.Caption)
    If avAudioCourse.Caption > avCourse.Caption Then
        avAudioCourse.ForeColor = vbBlue
    Else
        If avAudioCourse.Caption < avCourse.Caption Then avAudioCourse.ForeColor = vbRed Else
avAudioCourse.ForeColor = vbBlack
    End If

    '-------------------------------------------------------
    'Grades REFLECTIVE LEARNERS
    '-------------------------------------------------------
    avReflectSub1.Caption = Round(sub1Reflect / sub1CReflect, 2)
    letterReflectSub1.Caption = gradeToLetter(avReflectSub1.Caption)
    If avReflectSub1.Caption > avSub1.Caption Then
        avReflectSub1.ForeColor = vbBlue
    Else
        If avReflectSub1.Caption < avSub1.Caption Then avReflectSub1.ForeColor = vbRed Else
avReflectSub1.ForeColor = vbBlack
    End If

    avReflectSub2.Caption = Round(sub2Reflect / sub2CReflect, 2)
    letterReflectSub2.Caption = gradeToLetter(avReflectSub2.Caption)
    If avReflectSub2.Caption > avSub2.Caption Then
        avReflectSub2.ForeColor = vbBlue
    Else
        If avReflectSub2.Caption < avSub2.Caption Then avReflectSub2.ForeColor = vbRed Else
avReflectSub2.ForeColor = vbBlack
    End If

    avReflectSub3.Caption = Round(sub3Reflect / sub3CReflect, 2)
    letterReflectSub3.Caption = gradeToLetter(avReflectSub3.Caption)
    If avReflectSub3.Caption > avSub3.Caption Then
        avReflectSub3.ForeColor = vbBlue
    Else
        If avReflectSub3.Caption < avSub3.Caption Then avReflectSub3.ForeColor = vbRed Else
avReflectSub3.ForeColor = vbBlack
    End If

    avReflectAll.Caption = Round(allsubReflect / allsubCReflect, 2)
```

```
    letterReflectAll.Caption = gradeToLetter(avReflectAll.Caption)
    If avReflectAll.Caption > avAll.Caption Then
        avReflectAll.ForeColor = vbBlue
    Else
        If avReflectAll.Caption < avAll.Caption Then avReflectAll.ForeColor = vbRed Else
avReflectAll.ForeColor = vbBlack
    End If

    avReflectCourse.Caption = Round(courseReflect / courseCReflect, 2)
    letterReflectCourse.Caption = gradeToLetter(avReflectCourse.Caption)
    If avReflectCourse.Caption > avCourse.Caption Then
        avReflectCourse.ForeColor = vbBlue
    Else
        If avReflectCourse.Caption < avCourse.Caption Then avReflectCourse.ForeColor = vbRed Else
avReflectCourse.ForeColor = vbBlack
    End If

    '-----------------------------------------------------
    'Grades ACTIVE LEARNERS
    '-----------------------------------------------------
    avActiveSub1.Caption = Round(sub1Active / sub1CActive, 2)
    letterActiveSub1.Caption = gradeToLetter(avActiveSub1.Caption)
    If avActiveSub1.Caption > avSub1.Caption Then
        avActiveSub1.ForeColor = vbBlue
    Else
        If avActiveSub1.Caption < avSub1.Caption Then avActiveSub1.ForeColor = vbRed Else
avActiveSub1.ForeColor = vbBlack
    End If

    avActiveSub2.Caption = Round(sub2Active / sub2CActive, 2)
    letterActiveSub2.Caption = gradeToLetter(avActiveSub2.Caption)
    If avActiveSub2.Caption > avSub2.Caption Then
        avActiveSub2.ForeColor = vbBlue
    Else
        If avActiveSub2.Caption < avSub2.Caption Then avActiveSub2.ForeColor = vbRed Else
avActiveSub2.ForeColor = vbBlack
    End If

    avActiveSub3.Caption = Round(sub3Active / sub3CActive, 2)
    letterActiveSub3.Caption = gradeToLetter(avActiveSub3.Caption)
    If avActiveSub3.Caption > avSub3.Caption Then
        avActiveSub3.ForeColor = vbBlue
    Else
        If avActiveSub3.Caption < avSub3.Caption Then avActiveSub3.ForeColor = vbRed Else
avActiveSub3.ForeColor = vbBlack
    End If

    avActiveAll.Caption = Round(allsubActive / allsubCActive, 2)
    letterActiveAll.Caption = gradeToLetter(avActiveAll.Caption)
    If avActiveAll.Caption > avAll.Caption Then
        avActiveAll.ForeColor = vbBlue
    Else
        If avActiveAll.Caption < avAll.Caption Then avActiveAll.ForeColor = vbRed Else
avActiveAll.ForeColor = vbBlack
    End If

    avActiveCourse.Caption = Round(courseActive / courseCActive, 2)
    letterActiveCourse.Caption = gradeToLetter(avActiveCourse.Caption)
    If avActiveCourse.Caption > avCourse.Caption Then
        avActiveCourse.ForeColor = vbBlue
    Else
        If avActiveCourse.Caption < avCourse.Caption Then avActiveCourse.ForeColor = vbRed Else
avActiveCourse.ForeColor = vbBlack
    End If

    '-----------------------------------------------------
    'Visual VS Auditory
    '-----------------------------------------------------
    visualLearners.Caption = Int(visual / Students * 10000) / 100
    visualLearners.Width = visualLearners.Caption * 2
    visualLearners.Caption = " " & visualLearners.Caption & "%"
```

```
visualMales.Caption = visualM
visualMalesP.Caption = Int(visualM / Males * 10000) / 100
visualMalesP.Width = visualMalesP.Caption * 2
visualMalesP.Caption = " " & visualMalesP.Caption & "%"
visualMalesP.ControlTipText = visualMalesP.Caption
visualFemales.Caption = visualF
visualFemalesP.Caption = Int(visualF / Females * 10000) / 100
visualFemalesP.Width = visualFemalesP.Caption * 2
visualFemalesP.Caption = " " & visualFemalesP.Caption & "%"
visualFemalesP.ControlTipText = visualFemalesP.Caption

auditLearners.Caption = Int(auditory / Students * 10000) / 100
auditLearners.Width = auditLearners.Caption * 2
auditLearners.Caption = " " & auditLearners.Caption & "%"

audioMales.Caption = audioM
audioMalesP.Caption = Int(audioM / Males * 10000) / 100
audioMalesP.Width = audioMalesP.Caption * 2
audioMalesP.Caption = " " & audioMalesP.Caption & "%"
audioMalesP.ControlTipText = audioMalesP.Caption
audioFemales.Caption = audioF
audioFemalesP.Caption = Int(audioF / Females * 10000) / 100
audioFemalesP.Width = audioFemalesP.Caption * 2
audioFemalesP.Caption = " " & audioFemalesP.Caption & "%"
audioFemalesP.ControlTipText = audioFemalesP.Caption

'-------------------------------------------------
'Active VS Reflective
'-------------------------------------------------
activeLearners.Caption = Int(active / Students * 10000) / 100
activeLearners.Width = activeLearners.Caption * 2
activeLearners.Caption = " " & activeLearners.Caption & "%"

activeMales.Caption = activeM
activeMalesP.Caption = Int(activeM / Males * 10000) / 100
activeMalesP.Width = activeMalesP.Caption * 2
activeMalesP.Caption = " " & activeMalesP.Caption & "%"
activeMalesP.ControlTipText = activeMalesP.Caption
activeFemales.Caption = activeF
activeFemalesP.Caption = Int(activeF / Females * 10000) / 100
activeFemalesP.Width = activeFemalesP.Caption * 2
activeFemalesP.Caption = " " & activeFemalesP.Caption & "%"
activeFemalesP.ControlTipText = activeFemalesP.Caption

reflectLearners.Caption = Int(reflective / Students * 10000) / 100
reflectLearners.Width = reflectLearners.Caption * 2
reflectLearners.Caption = " " & reflectLearners.Caption & "%"

reflectMales.Caption = reflectM
reflectMalesP.Caption = Int(reflectM / Males * 10000) / 100
reflectMalesP.Width = reflectMalesP.Caption * 2
reflectMalesP.Caption = " " & reflectMalesP.Caption & "%"
reflectMalesP.ControlTipText = reflectMalesP.Caption
reflectFemales.Caption = reflectF
reflectFemalesP.Caption = Int(reflectF / Females * 10000) / 100
reflectFemalesP.Width = reflectFemalesP.Caption * 2
reflectFemalesP.Caption = " " & reflectFemalesP.Caption & "%"
reflectFemalesP.ControlTipText = reflectFemalesP.Caption

'-------------------------------------------------
'Q11 - 16 Learning styles
'-------------------------------------------------
q11aP.Caption = Int(q11aC / Students * 10000) / 100
q11aP.Width = q11aP.Caption * 2
q11aP.Caption = " " & q11aP.Caption & "%"
q11bP.Caption = Int(q11bC / Students * 10000) / 100
q11bP.Width = q11bP.Caption * 2
q11bP.Caption = " " & q11bP.Caption & "%"

q12aP.Caption = Int(q12aC / Students * 10000) / 100
```

```
q12aP.Width = q12aP.Caption * 2
q12aP.Caption = " " & q12aP.Caption & "%"
q12bP.Caption = Int(q12bC / Students * 10000) / 100
q12bP.Width = q12bP.Caption * 2
q12bP.Caption = " " & q12bP.Caption & "%"

q13aP.Caption = Int(q13aC / Students * 10000) / 100
q13aP.Width = q13aP.Caption * 2
q13aP.Caption = " " & q13aP.Caption & "%"
q13bP.Caption = Int(q13bC / Students * 10000) / 100
q13bP.Width = q13bP.Caption * 2
q13bP.Caption = " " & q13bP.Caption & "%"

q14aP.Caption = Int(q14aC / Students * 10000) / 100
q14aP.Width = q14aP.Caption * 2
q14aP.Caption = " " & q14aP.Caption & "%"
q14bP.Caption = Int(q14bC / Students * 10000) / 100
q14bP.Width = q14bP.Caption * 2
q14bP.Caption = " " & q14bP.Caption & "%"

q15aP.Caption = Int(q15aC / Students * 10000) / 100
q15aP.Width = q15aP.Caption * 2
q15aP.Caption = " " & q15aP.Caption & "%"
q15bP.Caption = Int(q15bC / Students * 10000) / 100
q15bP.Width = q15bP.Caption * 2
q15bP.Caption = " " & q15bP.Caption & "%"

q16aP.Caption = Int(q16aC / Students * 10000) / 100
q16aP.Width = q16aP.Caption * 2
q16aP.Caption = " " & q16aP.Caption & "%"
q16bP.Caption = Int(q16bC / Students * 10000) / 100
q16bP.Width = q16bP.Caption * 2
q16bP.Caption = " " & q16bP.Caption & "%"

'--------------------------------------------------------
'Q6 - TIME SPENT ON MAHARA
'--------------------------------------------------------
timeSpent.Caption = Round(time / LCE 101, 2)
Select Case Round(timeSpent.Caption)
Case 1
    timeMSG.Caption = "0-2h"
Case 2
    timeMSG.Caption = "2h-4h"
Case 3
    timeMSG.Caption = "4h-6h"
Case 4
    timeMSG.Caption = "6h-8h"
Case 5
    timeMSG.Caption = "8h+"
End Select
timeSpent.Caption = timeSpent.Caption &" / 5"

'--------------------------------------------------------
'Q7 - EFFORT PUT INTO VIEWS
'--------------------------------------------------------
effortView.Caption = Round(effort / LCE 101, 2) & " / 5"
effortMSG.Caption = switchEffortMSG(effort / LCE 101)

'--------------------------------------------------------
'Q8 - FEELING ABOUT GRADING THE LAYOUT
'--------------------------------------------------------
gradeLayout.Caption = Round(feelGrade / LCE 101, 2) & " / 5"
layoutMSG.Caption = switchPrefMSG(feelGrade / LCE 101)

'--------------------------------------------------------
'Q4 - FEELING ABOUT GRADING THE LAYOUT
'--------------------------------------------------------
opinionMahara.Caption = Round(opinion / LCE 101, 2) & " / 5"
opinionMSG.Caption = switchPrefMSG(opinion / LCE 101)

'--------------------------------------------------------
```

```
    'Q5 - GOOD WAY TO PROVIDE EVIDENCE OF INDEP. LEARNING
    '-------------------------------------------------
    indepLearning.Caption = Round(indepLearn / LCE 101, 2) & " / 5"
    indepMSG.Caption = switchAmountMSG(indepLearn / LCE 101)

    LCE 101Count.Caption = LCE 101
    LCE 101Percent.Caption = Int(LCE 101 / Students * 10000) / 100
    LCE 101Percent.Caption = LCE 101Percent.Caption & "%"

    wantmoreCount.Caption = wantMore
    wantmorePercent.Caption = Int(wantMore / LCE 101 * 10000) / 100
    wantmorePercent.Caption = wantmorePercent.Caption & "%"

    usedbeforeCount.Caption = usedBefore
    usedbeforePercent.Caption = Int(usedBefore / Students * 10000) / 100
    usedbeforePercent.Caption = usedbeforePercent.Caption & "%"

    '----------------------------------------------------
    'Compute Males/Females
    '----------------------------------------------------
    femaleCount.Caption = Females
    maleCount.Caption = Males
    femalePercent.Caption = Int(Females / Students * 10000) / 100
    malePercent.Caption = Int(Males / Students * 10000) / 100
    femalePercent.Width = femalePercent.Caption * 2
    malePercent.Width = malePercent.Caption * 2
    femalePercent.Caption = " " & femalePercent.Caption & "%"
    malePercent.Caption = " " & malePercent.Caption & "%"


'================================================================================================
===========

End Sub

Private Sub CommandButton2_Click()
    If MsgBox("Are you sure you want to reset the spreadsheet? all data will be erased.",
vbYesNo) = vbYes Then
        Dim hRow As Integer 'header row
hRow = RowOffset - 1
        Dim bool As Boolean 'dummy value

        'Students
        Students = 0

        'Clear entire spreadsheet
Range("1:1000").Select
        With Selection
            'Color background into NOFILL
            With .Interior
                .Pattern = xlSolid
                .PatternColorIndex = xlNone
                .TintAndShade = 0
                .PatternTintAndShade = 0
            End With
            .value = ""                     'Erase text
            .HorizontalAlignment = xlLeft   'Align text to left
            .Font.Bold = False              'Make normal (not bold)
            .Font.Italic = False            'Make normal (not italic)
        End With

        'Create headers (Questions 1 to 8)
        Dim i As Integer
        For i = 1 To 8
Cells(hRow, i).value = "Q" & i
        Next
        For i = 1 To 26
Columns(i).ColumnWidth = 4
        Next

        'Question 9 - 4 subquestions
```

```vba
Cells(hRow, 9).value = "Q9a"
Cells(hRow, 10).value = "Q9b"
Cells(hRow, 11).value = "Q9c"
Cells(hRow, 12).value = "Q9d"

        'Questions 10 to 16
        For i = 13 To 19
            a = i - 3
Cells(hRow, i).value = "Q" & a
        Next

        'Question 17 - 3 subquestions
Cells(hRow, 20).value = "Q17a"
Cells(hRow, 21).value = "Q17b"
Cells(hRow, 22).value = "Q17c"

        'Question 18 - 4 subquestions
Cells(hRow, 23).value = "Q18a"
Cells(hRow, 24).value = "Q18b"
Cells(hRow, 25).value = "Q18c"
Cells(hRow, 26).value = "Q18d"

        'Date and Prof
Cells(hRow, 27) = "Date"
Columns(27).ColumnWidth = 10
Cells(hRow, 28) = "Prof"
Columns(28).ColumnWidth = 15

        'Select all headers
Range("A" & hRow & ":AB" & hRow).Select
        With Selection
            'Color background into yellow
            With .Interior
                .Pattern = xlSolid
                .PatternColorIndex = xlAutomatic
                .Color = vbYellow
                .TintAndShade = 0
                .PatternTintAndShade = 0
            End With
            .HorizontalAlignment = xlCenter 'Align text to center
            .Font.Bold = True               'Make bold
        End With

        'Reset selection
Range("A" & RowOffset).Select

        'Survey number
        surveyNum.value = 1
    End If
End Sub

Private Sub CommandButton3_Click()
enterData
    If autoSave.value Then
        ActiveWorkbook.Save
    End If
End Sub

Private Sub CommandButton4_Click()
    'Cancel previous line
    If Students > 0 Then
        Students = Students - 1
        student_count.Caption = Students
        Dim cRow As Integer
cRow = Students + RowOffset
Rows(cRow).Select
        Selection.value = ""
resetForm
        If Students > 0 Then CommandButton4.Enabled = True Else CommandButton4.Enabled = False
        'Reset selection
Range("A" & RowOffset).Select
```

```
        'Survey number -1
        If surveyNum.value > 0 Then surveyNum.value = surveyNum.value - 1
    End If
End Sub

Private Sub CommandButton5_Click()
    'Column widths
    Dim i As Integer
    For i = 1 To 26
Columns(i).ColumnWidth = 4
    Next
    'Prof and Date
Columns(27).ColumnWidth = 10
Columns(28).ColumnWidth = 15
End Sub

Private Sub CommandButton6_Click()
resetForm
End Sub

Public Function enterData()
    Dim cRow As Integer
cRow = Students + RowOffset

    'Prof
Cells(cRow, 28) = surveyProf.value & " " & surveyNum.value
    surveyNum.value = surveyNum.value + 1
    'Date
Cells(cRow, 27) = surveyDate.value
    'Question 1
    If q1yes.value Then Cells(cRow, 1) = "Y" Else If q1no.value Then Cells(cRow, 1) = "N"
    'Question 2
    If female.value Then Cells(cRow, 2) = "F" Else If male.value Then Cells(cRow, 2) = "M"
    'Question 3
    If q3yes.value Then Cells(cRow, 3) = "Y" Else If q3no.value Then Cells(cRow, 3) = "N"
    'Question 4
    If q4_1.value Then Cells(cRow, 4) = 1
    If q4_2.value Then Cells(cRow, 4) = 2
    If q4_3.value Then Cells(cRow, 4) = 3
    If q4_4.value Then Cells(cRow, 4) = 4
    If q4_5.value Then Cells(cRow, 4) = 5
    'Question 5
    If q5_1.value Then Cells(cRow, 5) = 1
    If q5_2.value Then Cells(cRow, 5) = 2
    If q5_3.value Then Cells(cRow, 5) = 3
    If q5_4.value Then Cells(cRow, 5) = 4
    If q5_5.value Then Cells(cRow, 5) = 5
    'Question 6
    If q6_1.value Then Cells(cRow, 6) = 1
    If q6_2.value Then Cells(cRow, 6) = 2
    If q6_3.value Then Cells(cRow, 6) = 3
    If q6_4.value Then Cells(cRow, 6) = 4
    If q6_5.value Then Cells(cRow, 6) = 5
    'Question 7
    If q7_1.value Then Cells(cRow, 7) = 1
    If q7_2.value Then Cells(cRow, 7) = 2
    If q7_3.value Then Cells(cRow, 7) = 3
    If q7_4.value Then Cells(cRow, 7) = 4
    If q7_5.value Then Cells(cRow, 7) = 5
    'Question 8
    If q8_1.value Then Cells(cRow, 8) = 1
    If q8_2.value Then Cells(cRow, 8) = 2
    If q8_3.value Then Cells(cRow, 8) = 3
    If q8_4.value Then Cells(cRow, 8) = 4
    If q8_5.value Then Cells(cRow, 8) = 5
    'Question 9
    If q9a_a.value Then Cells(cRow, 9) = "A"
    If q9a_b.value Then Cells(cRow, 9) = "B"
    If q9a_c.value Then Cells(cRow, 9) = "C"
    If q9a_f.value Then Cells(cRow, 9) = "F"
    If q9a_n.value Then Cells(cRow, 9) = "?"
```

```
If q9b_a.value Then Cells(cRow, 10) = "A"
If q9b_b.value Then Cells(cRow, 10) = "B"
If q9b_c.value Then Cells(cRow, 10) = "C"
If q9b_f.value Then Cells(cRow, 10) = "F"
If q9b_n.value Then Cells(cRow, 10) = "?"

If q9c_a.value Then Cells(cRow, 11) = "A"
If q9c_b.value Then Cells(cRow, 11) = "B"
If q9c_c.value Then Cells(cRow, 11) = "C"
If q9c_f.value Then Cells(cRow, 11) = "F"
If q9c_n.value Then Cells(cRow, 11) = "?"

If q9d_a.value Then Cells(cRow, 12) = "A"
If q9d_b.value Then Cells(cRow, 12) = "B"
If q9d_c.value Then Cells(cRow, 12) = "C"
If q9d_d.value Then Cells(cRow, 12) = "D"
If q9d_f.value Then Cells(cRow, 12) = "F"
If q9d_n.value Then Cells(cRow, 12) = "?"

'Question 10
If q10yes.value Then Cells(cRow, 13) = "Y" Else If q10no.value Then Cells(cRow, 13) = "N"
'Question 11
If q11a.value Then Cells(cRow, 14) = "a" Else If q11b.value Then Cells(cRow, 14) = "b"
'Question 12
If q12a.value Then Cells(cRow, 15) = "a" Else If q12b.value Then Cells(cRow, 15) = "b"
'Question 13
If q13a.value Then Cells(cRow, 16) = "a" Else If q13b.value Then Cells(cRow, 16) = "b"
'Question 14
If q14a.value Then Cells(cRow, 17) = "a" Else If q14b.value Then Cells(cRow, 17) = "b"
'Question 15
If q15a.value Then Cells(cRow, 18) = "a" Else If q15b.value Then Cells(cRow, 18) = "b"
'Question 16
If q16a.value Then Cells(cRow, 19) = "a" Else If q16b.value Then Cells(cRow, 19) = "b"

'Question 17
If q17a1.value Then Cells(cRow, 20) = "1"
If q17a2.value Then Cells(cRow, 20) = "2"
If q17a3.value Then Cells(cRow, 20) = "3"
If q17a4.value Then Cells(cRow, 20) = "4"
If q17a5.value Then Cells(cRow, 20) = "5"

If q17b1.value Then Cells(cRow, 21) = "1"
If q17b2.value Then Cells(cRow, 21) = "2"
If q17b3.value Then Cells(cRow, 21) = "3"
If q17b4.value Then Cells(cRow, 21) = "4"
If q17b5.value Then Cells(cRow, 21) = "5"

If q17c1.value Then Cells(cRow, 22) = "1"
If q17c2.value Then Cells(cRow, 22) = "2"
If q17c3.value Then Cells(cRow, 22) = "3"
If q17c4.value Then Cells(cRow, 22) = "4"
If q17c5.value Then Cells(cRow, 22) = "5"

'Question 18
If q18a1.value Then Cells(cRow, 23) = "1"
If q18a2.value Then Cells(cRow, 23) = "2"
If q18a3.value Then Cells(cRow, 23) = "3"
If q18a4.value Then Cells(cRow, 23) = "4"
If q18a5.value Then Cells(cRow, 23) = "5"

If q18b1.value Then Cells(cRow, 24) = "1"
If q18b2.value Then Cells(cRow, 24) = "2"
If q18b3.value Then Cells(cRow, 24) = "3"
If q18b4.value Then Cells(cRow, 24) = "4"
If q18b5.value Then Cells(cRow, 24) = "5"

If q18c1.value Then Cells(cRow, 25) = "1"
If q18c2.value Then Cells(cRow, 25) = "2"
If q18c3.value Then Cells(cRow, 25) = "3"
If q18c4.value Then Cells(cRow, 25) = "4"
```

```
    If q18c5.value Then Cells(cRow, 25) = "5"

    If q18d1.value Then Cells(cRow, 26) = "1"
    If q18d2.value Then Cells(cRow, 26) = "2"
    If q18d3.value Then Cells(cRow, 26) = "3"
    If q18d4.value Then Cells(cRow, 26) = "4"
    If q18d5.value Then Cells(cRow, 26) = "5"

    'Increment Students
    Students = Students + 1
    student_count.Caption = Students
    'Reset form
resetForm
    'Delete previous student?
    If Students > 0 Then CommandButton4.Enabled = True Else CommandButton4.Enabled = False
End Function

Public Function resetForm()
    'Go to page 1
    Questionnaire.value = 0

    'Question 1
    q1yes.value = True
    q1no.value = False
    'Question 2
    female.value = False
    male.value = False
    'Question 3
    q3yes.value = False
    q3no.value = False
    'Question 4
    q4_1.value = False
    q4_2.value = False
    q4_3.value = False
    q4_4.value = False
    q4_5.value = False
    'Question 5
    q5_1.value = False
    q5_2.value = False
    q5_3.value = False
    q5_4.value = False
    q5_5.value = False
    'Question 6
    q6_1.value = False
    q6_2.value = False
    q6_3.value = False
    q6_4.value = False
    q6_5.value = False
    'Question 7
    q7_1.value = False
    q7_2.value = False
    q7_3.value = False
    q7_4.value = False
    q7_5.value = False
    'Question 8
    q8_1.value = False
    q8_2.value = False
    q8_3.value = False
    q8_4.value = False
    q8_5.value = False
    'Question 9
    q9a_a.value = False
    q9a_b.value = False
    q9a_c.value = False
    q9a_f.value = False
    q9a_n.value = False

    q9b_a.value = False
    q9b_b.value = False
    q9b_c.value = False
    q9b_f.value = False
```

```
q9b_n.value = False

q9c_a.value = False
q9c_b.value = False
q9c_c.value = False
q9c_f.value = False
q9c_n.value = False

q9d_a.value = False
q9d_b.value = False
q9d_c.value = False
q9d_d.value = False
q9d_f.value = False
q9d_n.value = False
'Question 10
q10yes.value = False
q10no.value = False
'Question 11
q11a.value = False
q11b.value = False
'Question 12
q12a.value = False
q12b.value = False
'Question 13
q13a.value = False
q13b.value = False
'Question 14
q14a.value = False
q14b.value = False
'Question 15
q15a.value = False
q15b.value = False
'Question 16
q16a.value = False
q16b.value = False
'Question 17
q17a1.value = False
q17a2.value = False
q17a3.value = False
q17a4.value = False
q17a5.value = False

q17b1.value = False
q17b2.value = False
q17b3.value = False
q17b4.value = False
q17b5.value = False

q17c1.value = False
q17c2.value = False
q17c3.value = False
q17c4.value = False
q17c5.value = False
'Question 18
q18a1.value = False
q18a2.value = False
q18a3.value = False
q18a4.value = False
q18a5.value = False

q18b1.value = False
q18b2.value = False
q18b3.value = False
q18b4.value = False
q18b5.value = False

q18c1.value = False
q18c2.value = False
q18c3.value = False
q18c4.value = False
q18c5.value = False
```

```
        q18d1.value = False
        q18d2.value = False
        q18d3.value = False
        q18d4.value = False
        q18d5.value = False
End Function

Private Sub CommandButton7_Click()
        'Go to questionnaire page 2
        Questionnaire.value = 1
End Sub

Private Sub CommandButton8_Click()
        ActiveWorkbook.Save
End Sub

Private Sub MultiPage2_Change()

End Sub

Private Sub UserForm_Initialize()
        'Initialize alphabet array
Letters(1) = "A"
Letters(2) = "B"
Letters(3) = "C"
Letters(4) = "D"
Letters(5) = "E"
Letters(6) = "F"
Letters(7) = "G"
Letters(8) = "H"
Letters(9) = "I"
Letters(10) = "J"
Letters(11) = "K"
Letters(12) = "L"
Letters(13) = "M"
Letters(14) = "N"
Letters(15) = "O"
Letters(16) = "P"
Letters(17) = "Q"
Letters(18) = "R"
Letters(19) = "S"
Letters(20) = "T"
Letters(21) = "U"
Letters(22) = "V"
Letters(23) = "W"
Letters(24) = "X"
Letters(25) = "Y"
Letters(26) = "Z"

        'Row Offset
        RowOffset = 11

        'Count students
        Students = countStudents
        student_count.Caption = Students

        'Delete previous student?
        If Students > 0 Then CommandButton4.Enabled = True Else CommandButton4.Enabled = False
End Sub

Public Function countStudents() As Integer
        Dim i As Integer
        Dim done As Boolean
        i = RowOffset
done = False

        Do While done = False
            If Cells(i, 1).value = "" Then
done = True
            Else
```

```
                i = i + 1
            End If
        Loop

    countStudents = i - RowOffset
    End Function
```

Appendix H: Faculty Interviews

1. Faculty A Transcript

Completed January 26, 2011
Interviewer: Thomas Lextrait
Recorder: Matt Rosen

1. **What strategies do you use to record the grades for your classes?**

   He uses the universal template that Lingnan University created. Lingnan requires all of their teachers to use this template which is in Microsoft Excel. This allows him to record student's grades throughout the term for his own record. The grade submission process is quite lengthy and complicated. It involves putting the marks into a 4 page excel sheet with a specified format that must be followed. The Excel sheets are preformatted. The grades must be submitted to a coordinator who checks to make sure the calculation are correct and then the grades are finalized and posted on the university network drive.

   a. **How does this impact on your workload?**

   It doesn't take much time to do. It takes less time than recording on paper and you don't loss the information. You can back it up multiple ways.

2. **Have you considered using Moodle grade book at all?**

   No.

   a. **If yes, what do you think of it?**

   N/A

   b. **If no, what would encourage or support you to use the system?**

   N/A

3. **What are some of the challenges and difficulties you face when grading student work presented in a portfolio format?**

There are disagreements in the CEAL department on whether or not student independent learning (IL) should be graded. Students view it as homework which is not the point or IL but IL wasn't graded students would not do it.

He is torn personally on the issue of grading IL. He says some students don't know what is good for them. They need to be trained to think differently about learning. It is beneficial to them to take the initiative to do IL and reflect upon their experiences. Having IL graded at the moment is not a bad thing but currently it is done with a poor grading scheme. An outside contractor created this scheme. The contractor was not a fan of grading IL either but created the scheme because Lingnan wanted it. The scheme did not go well last term in LCE 101, and the department tried to change it for this term of LCE 102 but there was not enough time. The current scheme that was used for LCE 101 and is going to be used for LCE 102 focuses on the quantity of work and not on the quality. He is not happy with the marking scheme.

The difficulty associated with portfolio grading happens when you have to click in and out and download documents from the views. Giving feedback was much easier. It was less time consuming then before, when everything is in one area.

4. **Do you think there would be benefits/drawbacks to giving points towards the way the students set up their view?**

Everything should look the same way if students go to training sessions, help sessions and whatnot. The teachers are not teaching the way the view looks. The more prescriptive you are with the view layout the less IL occurs. Web CT did have its view layout graded because it needed to be. There were so many more options that could be altered. I told my students to think of it as a job interview and a first impression. A bad layout is like wearing jeans instead of a suit. Mahara is much simpler so there are many less options. It is a solution to the grading issues because basically all of the students work looks similar. I haven't had any layouts impact the way I've looked at a view or marked it.

5. **If a student produced a really poorly presented or difficult to read layout that takes a long time to grade, do you think their overall grade would be affected?**

Sure, a bad view a worse grade. If I had to spend 20 minutes on one student the grade would be affected. I tried not to do this but I'm sure that a bad view impacts the student's grade. It is a subconscious thing, with the more time/worse verse the worse grade.

   a. **What comments would you give the student?**

Go and get some more technical help and go to the help sessions.

6. **In your mind what is an example of a poorly presented portfolio view?**

There are not many possibilities to go wrong in Mahara. One bad thing is creating different views for the same task. Going in and out and clicking on something else is a hassle and takes more time. Very thin columns are bad and headings could be better but are not essential.

7. **In your mind what is an example of a well presented portfolio view?**

Attractive views with a variety of postings are good. Including videos, pictures, and text, some use tables. A good view creates the right impressions. A view must be readable and have the right width of columns. Different colors differentiate things they have done. The layout matters but the aim is in the content. Need to revise marking scheme to focus on the content.

8. **What does a student need to do to receive a good grade for their submission and how is this communicated to the student and when?**

The universal and standardized marking system is used. The contractor did a good job on the Mahara module but didn't come up with a good marking scheme. It now evaluates the completion of stages and relevant objectives. There is an ongoing discussion of the grading scheme. The scheme is in the student's course books.

9. **After the completion of a course, do you think there is a need for students to keep their views?**

Yes, the students should keep their view. It is a terrible thing to have students spend so much time on their views and then to have somebody erase it. Bad signal to the students. It's a disaster. Bad message should be able to add onto their e-portfolio year after year. It would be nice if they could take the e-portfolio away with them after graduation.

10. **After the completion of a course, do you think there is a benefit for teachers to be able to access old student's views?**

Personal piece of work, student should be able to decide what they would like to show or not.

Professors within the department it would be benefit to see the views after the term ends. To be read by other departments would not be good. But among CEAL staff access should be allowed.

11. **If you suspect a student is using an old view what would you do?**

It would be very difficult to detect. LCE 102 opens the door to this issue of plagiarism.

    a. **How would you verify the student used an old view?**

It would be very difficult. There is no way to tell.

    b. **Do you have any suggestions to make this process easier for you or improved in general?**

Change the structure of the course from LCE 101 to LCE 102 so that views could not be taken from one class to another. It maybe could be in a different format in LCE 102 so that views from LCE 101 could not be used. It's a big concern because the format is so similar and all the old views got deleted. A different format is necessary.

2. Faculty B Transcript

Completed January 26, 2011
Interviewer: Lauren Ketschke
Recorder: Reuben Gutierrez

1. **What strategies do you use to record the grades for your classes?**

   Write comments on the views about 200 words per comment. In the past he used paper

   and used to write comment on the margin of the paper which he can't on Mahara. He is

   forced to use Mahara.

   a. **How does this impact on your workload?**

   He likes the paper portfolios better than the e-portfolio. He is really slow to put

   comments on the views and also provides less detailed comments compared to the paper

   portfolio.

2. **Have you considered using Moodle grade book at all?**

   a. **If yes, what do you think of it?**

   N/A

   b. **If no, what would encourage or support you to use the system?**

   Not exactly sure what the grade book is about. The system is completely new to the staff.

   Additionally, Moodle and Mahara were introducing at the same time which cause

   frustrations to the students as well as the staff.

3. **What are some of the challenges and difficulties you face when grading student**

   work presented in a portfolio format?

   The students didn't learn it properly. They just scan pages of their work and post them as

   an attachment which make his has to click every single link to see the image which are

also really hard to read and comment about. Is not easy to see all of them, in paper you can easily see all that you need to see.

4. **Do you think there would be benefits/drawbacks to giving points towards the way the students set up their view?**

It is unfair to penalize the students for their IT skills. After all this is an English course. Comment from one of his students "Using Mahara kill my interest in learning English".

5. **If a student produced a really poorly presented or difficult to read layout that takes a long time to grade, do you think their overall grade would be affected?**

No, there grade will not be affected by how their views are presented, for the best or for the worst.

   a. **What comments would you give the student?**

None. Too much to do and it is not relevant to the course. He is "selfish", he won't teach the students how to properly present their views and then have them leave the class. He will not benefit at all from doing this. Soon new students will come and the cycle will repeat which takes a lot of time. The time that takes to learn Mahara, sometimes, is more than the time spent on learning the material. Using paper is better and easier for the professor but the department determines the grading system.

6. **In your mind what is an example of a poorly presented portfolio view and how does it show evidence of ILO?**

The columns width and everything is in the middle column. Don't have time to tell them to do it again. Students just dump every in there. Scanning workbooks that they have done, he sees no point in doing that.

7. **In your mind what is an example of a well presented portfolio view?**

Clarity of the view and well organize.

8. **What does a student need to do to receive a good grade for their submission and how is this communicated to the student and when?**

They have a marking scheme. But personally, a lot of students put a lot of thing that are not related. It takes a lot time to go through the "junk". He believes in Quality over quantity. You can be fool by the presentation, if it looks nice doesn't mean that the work is there. He has never given a student a full mark but some of his colleges have given it to their entire class and believes that this is due to the nice presentations. "I'm not a package person, I'm a substance person"

9. **After the completion of a course, do you think there is a need for students to keep their views?**

Why would I want to do that?

10. **After the completion of a course, do you think there is a benefit for teachers to be able to access old student's views?**

In terms of plagiarism, that would help but it will take a long time.

11. **If you suspect a student is using an old view what would you do?**

Nothing you can do.

   a. **How would you verify the student used an old view?**

He verified with some student from other sections that they used each other's work to on the second and third submission since they both have the same requirements. But there is nothing you can do even if they old view where available the teacher won't have the time to compare the student view to the other 599 students.

b. Do you have any suggestions to make this process easier for you or improved in general?

The requirements of the submission should change for every semester this will help to prevent plagiarism.

The Mahara forums are good; the students can write their comments on a discussion. The students really like to participate on these discussions.

3. Faculty C Transcript

Completed February 8, 2011
Interviewer: Matt Rosen
Recorder: Thomas Lextrait

1. **What strategies do you use to record the grades for your classes?**

    Wayne uses Excel spreadsheets.

    a. **How does this impact on your workload?**

        "It's pretty easy."

2. **Have you considered using Moodle grade book at all?**

    Wayne is not familiar with the Moodle grade book since he just moved to Moodle. He doesn't use them because he would need to transfer all of it into an Excel spreadsheet afterwards anyway. "We post our grades in another master spreadsheet for statistics purposes." Using the Moodle grade book would be extra work.

    a. **If yes, what do you think of it?**

    b. **If no, what would encourage or support you to use the system?**

3. **What are some of the challenges and difficulties you face when grading student work presented in a portfolio format?**

    The organization of the views is a problem. Sometimes students put a lot of downloads. It can become trivial and time consuming. "Moodle is quite a step forward from WebCT, it is much better." With Facebook now and all the technologies, Moodle is much more appropriate to the current time, in regards to the technologies people use. The biggest problem is students are not familiar with creating views. Mahara is much smoother to use than the previous e-portfolio application.

4. **Do you think there would be benefits/drawbacks to giving points towards the way the students set up their view?**

    "I don't know if that would motivate them. Maybe closer work with the teachers would help. Since its independent learning, students go on their own and don't know what to do.

Also teachers aren't very familiar with the system and don't know what students can do with it. Students in dorms talk a lot, there is peer support and that helps. Tech support is also great. Grading the layout is not necessarily a good idea. The solution is to give more support and give them more support. There is already a lot of marking and grading."

5. **If a student produced a really poorly presented or difficult to read layout that takes a long time to grade, do you think their overall grade would be affected?**

"Our grading is pretty late, in the fact they can all get A's. We don't apply the normal curve in grading this. They will get the mark if they do the work. I won't bring the grade down if the layout is not good; I really look for the content and want students to show they learned something. Sometimes, it's true it takes an hour to mark one."

   a. **What comments would you give the student?**

   "If the layout was bad or if it was long to grade it would be reflected in the comments."

6. **In your mind what is an example of a poorly presented portfolio view?**

"A lot of screenshots of things, movies, media. A lot of download links. Something that doesn't really show evidence of learning. A very cluttered view. I didn't have a lot of bad ones, I gave 60% A's."

7. **In your mind what is an example of a well presented portfolio view?**

"It is nice to have something nicely organized, not too cluttered and obviously attractive. There is also some artistic work. There was a very nice submission but more work was put into the looks than the contents. There needs to be an evidence of the new things learned, not just a bunch of items encountered. There has to be some evidence of critical thinking. Sometimes students come up with objectives and don't go through. Some students might say they will read a newspaper in English every day but obviously they won't. It's mostly bluff, students need to be more realistic. Are you going to read an English newspaper every day?"

8. **What does a student need to do to receive a good grade for their submission and how is this communicated to the student and when?**

"The book has examples of what is expected. The grading rubric is given to the students. Last semester I had students grade each other in class, it was a peer assessment session. I don't like to give them too much structure and examples because they usually converge to that and then all submissions look the same."

9. **After the completion of a course, do you think there is a need for students to keep their views?**

"I don't think so. Students should start new; you never know what group could come up with. If you give students a bunch of models, they will just imitate. Fresh work is best. The ability to cheat would be higher. It could damage creativity. Examples are not that helpful, clear explanations are the most helpful. If views were kept, it would only help cheating."

"After midterms last semester, negativity started among students. One student with a bad experience will easily spread the complaints. It's mostly an anti-homework movement, which is always going to be there. There are always students that think homework's are not necessary."

10. **After the completion of a course, do you think there is a benefit for teachers to be able to access old student's views?**

"Yes it is good to keep some old views for marking. Especially new teachers coming in who are expected to grade the same way as current professors, it would allow them to get started quicker."

11. **If you suspect a student is using an old view what would you do?**

"Indeed the biggest worry is copied work."

   a. **How would you verify the student used an old view?**

"Two students in my class submitted the same work last semester. They made a mistake since they used the same computer and submitted the same file. Both students had named their file very similarly. But what if the student had copied?"

b. **Do you have any suggestions to make this process easier for you or improved in general?**

4. Faculty D Transcript

Completed February 10, 2011
Interviewer: Matt Rosen
Recorder: Reuben Gutierrez

1. **What strategies do you use to record the grades for your classes?**

He stores the grades in Excel spreadsheets for LCE 102 as every teacher should according to the University rules. He would prefer to use Moodle and he does for his other classes that are selective course. The rule only applies to core classes such as LCE 102.

   a. **How does this impact on your workload?**

This method, he believes, is silly and stupid. It takes a really long time to input the grades into the spreadsheets. There is also a high chance of the teacher making an error while doing this.

2. **Have you considered using Moodle grade book at all?**

Yes

   a. **If yes, what do you think of it?**

Moodle is not an official grading system. It is set up but is currently not being used.

   b. **If no, what would encourage or support you to use the system?**

N/A

3. **What are some of the challenges and difficulties you face when grading student work presented in a portfolio format?**

It is hard to be objective when something is submitted sloppy. It is really hard to follow when it is. You can't summit a sloppy view to a company and expect to get a job. The results are poor because the teachers are only demanding of the students 1 out 3 things required for a view to be considered a good: content, presentation and reflection, out of which most teachers only require content.

4. **Do you think there would be benefits/drawbacks to giving points towards the way the students set up their view?**

Yes, it is important that anything you expect students to do should be graded. He believes that at least 5% of the grade should be giving to the student for this purpose.

5. **If a student produced a really poorly presented or difficult to read layout that takes a long time to grade, do you think their overall grade would be affected?**

It depends; you can summit quality work in a poorly presented faction. It is hard to grade but as long as he can make sense out of it the student will get the grade that they deserve. Using the grading scheme is really easy to grade the views because of the 5% gap because the grades. The student can get either 20% for *A*, 15% for *B*, 10% for *C* or 0% for *F*. With this gap between the possible grades it is easier to differentiate between at an *A* view and what is a *B* view.

a. **What comments would you give the student?**

If a student received a poor grade, he gave feedback and by the end of the class everyone got a better grade than in their previous submission. He wants them to be more reflective and that is where his comments were directed to. He wanted his students to get away from the "bullet point" method which is to strictly follow the bullet points given to the students by the teacher and for the students to be more creative and create something that is really a reflection of them.

6. **In your mind what is an example of a poorly presented portfolio view?**

A poorly presented has no personally. In any portfolio view the student has to reflect themselves. It is important to show that you put time and effort into the work done. It is easy to detect when a student didn't do so. He spends time in his classroom to teach students how do so, to personalize their papers and to demonstrate that they really gave thought to the process.

7. **In your mind what is an example of a well presented portfolio view?**

One that is well thought out, reflect inward to criticize his/herself. The view has to clearly show how they found their own faults and how do they plan to improve them. The view has to contain details and a full reflection of each step.

8. **What does a student need to do to receive a good grade for their submission and how is this communicated to the student and when?**

The student has to show to him that they know that they have a weakness; they have identity it, and have planned to improve. The only person that they have to impress is themselves. He proposed a grading system where the students just lose marks if they don't do the view.

9. **After the completion of a course, do you think there is a need for students to keep their views?**

He thinks it really is important to them to keep their views so they can improve on it and reflect on they have done.

10. **After the completion of a course, do you think there is a benefit for teachers to be able to access old student's views?**

No need, no benefit for teacher, the only good that would can from it would be to have good examples for teachers to show to the new students to let them know what they are expected to do.

11. **If you suspect a student is using an old view what would you do?**

Failed them, they get an F for the submission.

   a. **How would you verify the student used an old view?**

Trying to search for selected quotes. Mahara will soon have a feature that will detect if two views are identical. He always tells the students that if they cheat they are only cheating themselves.

   b. **Do you have any suggestions to make this process easier for you or improved in general?**

Put the fear in them, to let them know that they can find out if they are cheating even though they really can't at the moment without doing a lot of extra work. Removing the copy function might be a possible solution or water making the views.

5. Faculty E Transcript

Completed February 8, 2011
Interviewer: Reuben Gutierrez
Recorder: Lauren Ketschke

1. **What strategies do you use to record the grades for your classes?**

   He uses pen and paper for grading. Since many assignments are oral presentations, marking must be done one student at a time during the presentations. Marking is always done according to the marking scheme determined by the department. Additionally, there is no computer in the classroom that allows for grading electronically.

   a. **How does this impact on your workload?**

   He has to transfer all of the handwritten grades into an Excel file. Then those grades are transferred several more times into final grades which are reported to a different online software in the Banner system. The number of times the grades are transferred adds to the workload and creates more errors. He believed that although all instructors are cautious, transferring the grades so many times must lead to a significant error level. Having one system to input grades would be helpful. It would be key for all classrooms to have a computer that is not connected to a monitor that the students can see for grading oral presentations.

2. **Have you considered using Moodle grade book at all?**

   a. **If yes, what do you think of it?**

   He has never used it personally because they have just started using Moodle recently at Lingnan. Web CT used to be used but not for courses and grading but just for the Independent Learning project and for anti-plagiarism software. However, he has used Blackboard grade book before and liked it.

   b. **If no, what would encourage or support you to use the system?**

   N/A

3. **What are some of the challenges and difficulties you face when grading student work presented in a portfolio format?**

If they don't create an open view and he has to download and open all of the files, it become very difficult to grade. Open views really save on marking time. Students across sections, he believed, should be better overall this semester since now students can see what is expected of them in their course book and through exemplars. The marking scheme itself for e-portfolios is very simple (0, 5, 10, 15, 20 percent)

4. **Do you think there would be benefits/drawbacks to giving points towards the way the students set up their view?**

At this stage when Lingnan is just starting off with Mahara, he doesn't think that awarding points based on view layout is practical. Teachers are just starting to get an idea of how the workload can be reduced when a good view is presented. Teachers have to be competent enough to instruct students and have a model-view folder to show students what's expected. Essentially, more learning needs to happen before presentation becomes part of the marking scheme. Additionally, the LCE 102 course objectives were changed this semester to include developing students' IT skills with their Independent Learning.

5. **If a student produced a really poorly presented or difficult to read layout that takes a long time to grade, do you think their overall grade would be affected?**

This is not in the marking scheme, but aggravation could definitely be a factor in grading. The biggest advantage of e-portfolios is that it saves time in grading. He personally warns students that they need to submit a particular kind of view in order for his to mark it. He doesn't believe that this should be imposed department-wide yet until teachers are more confident.

    a. **What comments would you give the student?**

N/A

6. **In your mind what is an example of a poorly presented portfolio view and how does it show evidence of IL?**

Multiple files

7. **In your mind what is an example of a well presented portfolio view?**

Open

A good view presents all three required parts: before, during and after study. Students must develop a plan develop a plan (increase informal vocabulary, for example). They then carry out their plan. Afterwards there is a reflection portion where the student talks about what worked and what didn't work.

8. **What does a student need to do to receive a good grade for their submission and how is this communicated to the student and when?**

He uses the marking scheme to determine the grade for the submission. The marking scheme was developed by the department. The course coordinator for LCE 102 held a meeting where all teachers graded examples of views and student work and compared notes and grades as means of standardizing the grading system. The grading scheme is presented to students at the beginning of each course and it is listed in the students' books.

9. **After the completion of a course, do you think there is a need for students to keep their views?**

No

10. **After the completion of a course, do you think there is a benefit for teachers to be able to access old student's views?**

The only benefit for teachers would be for standardization in grading and for exemplars.

11. **If you suspect a student is using an old view what would you do?**

There is a plagiarism rule that applies and the student would receive a zero. The only way to truly prevent student's copying work is to handwrite something. They have yet to address the issue that of students use their own work from one semester in the second

semester. This is not technically plagiarism since it is still their own work, but it is still not good behavior. He is reluctant to take away students' freedom to select the type of assignment that they do (reading, listening, speaking).

a. **How would you verify the student used an old view?**

N/A

b. **Do you have any suggestions to make this process easier for you or improved in general?**

N/A

Appendix I: Student Interviews

1. Student A Transcript

Completed February 15, 2011
Interviewer and Recorder: Lauren Ketschke
Solicitor: Thomas Lextrait

1.) **Did you like or dislike using e-portfolios in LCE 101? [L v N v D)**

Dislike

    a. **Why do you feel this way?**

It was not an efficient way to learn English; forced to do something formal; learn less

English in this way

    b. **Can you suggest any Improvements?**

It gave more materials to learn; don't let them choose because it is too broad

2.) **How do you feel about the resources available to help you learn to use e-portfolios?**

Enough resources; many resources here; CEAL SAC is helpful; library

    a. **Can you suggest a better resource?**

Nope

3.) **When you presented your work in an e-portfolio view:**

    a. **What was easy?**

The program was user friendly.

    b. **What was hard?**

Prepare a lot of materials

4.) **How would you feel if a small part of your grade was based on the layout of your**

portfolio view?

Not useful; should depend on your writing skills; not fair that some students don't watch movies and still can make a nice looking view

2. Student B Transcript

Completed February 15, 2011
Interviewer and Recorder: Matt Rosen
Solicitor: Thomas Lextrait

1.) Did you like or dislike using e-portfolios in LCE 101? [L v N v D)

Dislike

    a. Why do you feel this way?

Spent a lot of time to type many words

    b. Can you suggest any Improvements?

Agree with student A

2.) How do you feel about the resources available to help you learn to use e-portfolios?

Quite enough resources. Some CEAL, Moodle and in the library too.

    a. Can you suggest a better resource?

Want to read a newspaper, don't have a password to access the newspaper. This system

allows you to access many available newspapers. Don't know how to get the password.

3.) When you presented your work in an e-portfolio view:

    a. What was easy?

The program was user friendly.

    b. What was hard?

Upload YouTube in and can't type link in. Some technical problem is a little bit hard for

me.

4.) How would you feel if a small part of your grade was based on the layout of your

portfolio view?

Not useful, students can cheat and not put in the effort.

3. Student C Transcript

Completed February 15, 2011
Interviewer and Recorder: Matt Rosen
Solicitor: Thomas Lextrait

1.) <u>Did you like or dislike using e-portfolios in LCE 101? [L v N v D)</u>

Like

    a. <u>Why do you feel this way?</u>

The idea or concept behind it is quite good. It is good, but the time between submission 1

and 2 is quite short.

    b. <u>Can you suggest any Improvements?</u>

The time in between submission 1 and 2 can be longer to give more time to work.

2.) <u>How do you feel about the resources available to help you learn to use e-portfolios?</u>

Acceptable.

    a. <u>Can you suggest a better resource?</u>

No, have attended a lot of the speaking tutorial courses, so it is quite good.

3.) <u>When you presented your work in an e-portfolio view:</u>

    a. <u>What was easy?</u>

Imputing texts

    b. <u>What was hard?</u>

Technical problems. Hard to copy some picture or image.

4.) <u>How would you feel if a small part of your grade was based on the layout of your portfolio view?</u>

Want to happen.

4. Student D Transcript

1.) Did you like or dislike using e-portfolios in LCE 101? [L v N v D)

Dislike

    a. Why do you feel this way?

Work load is very heavy. Can't learn English skills for e-portfolio. There is so much

work that's all I do. I don't have time to learn English.

    b. Can you suggest any Improvements?

Just down on homework

2.) How do you feel about the resources available to help you learn to use e-portfolios?

Useful

    a. Can you suggest a better resource?

Teachers can provide more videos or suggest an English game for students to learn.

3.) When you presented your work in an e-portfolio view:

    a. What was easy?

Nothing

    b. What was hard?

Everything, difficulty with finding the resources.

4.) How would you feel if a small part of your grade was based on the layout of your

portfolio view?

Against it.

5. Student E Transcript

Completed February 15, 2011
Interviewer and Recorder: Matt Rosen
Solicitor: Thomas Lextrait

1.) <u>Did you like or dislike using e-portfolios in LCE 101? [L v N v D)</u>

Dislike

    a. <u>Why do you feel this way?</u>

Waste of time. Need to submit two things per semester.

    b. <u>Can you suggest any Improvements?</u>

Have Just 1 goal per semester instead of two

2.) <u>How do you feel about the resources available to help you learn to use e-portfolios?</u>

There are enough resources available.

    a. <u>Can you suggest a better resource?</u>

Help tutorial for YouTube

3.) <u>When you presented your work in an e-portfolio view:</u>

    a. <u>What was easy?</u>

Typing

    b. <u>What was hard?</u>

Finding the evidence to show to the teachers

4.) <u>How would you feel if a small part of your grade was based on the layout of your portfolio view?</u>

For.

6. Student F Transcript

Completed February 15, 2011
Interviewer and Recorder: Lauren Ketschke
Solicitor: Thomas Lextrait

1.) <u>Did you like or dislike using e-portfolios in LCE 101? [L v N v D)</u>

Neutral

    a. <u>Why do you feel this way?</u>

E-portfolios are not really useful

    b. <u>Can you suggest any Improvements?</u>

Add contacts to be clearer about people to go to for help

2.) <u>How do you feel about the resources available to help you learn to use e-portfolios?</u>

Not enough

    a. <u>Can you suggest a better resource?</u>

Internet videos

3.) <u>When you presented your work in an e-portfolio view:</u>

    a. <u>What was easy?</u>

Not sure

    b. <u>What was hard?</u>

Teacher explained too little; no idea how to use the software

4.) <u>How would you feel if a small part of your grade was based on the layout of your portfolio view?</u>

Yes; if you don't get the grade then no one will do the work to make a good view.

7. Student G Transcript

Completed February 15, 2011
Interviewer and Recorder: Lauren Ketschke
Solicitor: Thomas Lextrait

1.) <u>Did you like or dislike using e-portfolios in LCE 101? [L v N v D)</u>

Dislike

    a. <u>Why do you feel this way?</u>

Workload is too heavy; time for doing each submission is too short.

    b. <u>Can you suggest any Improvements?</u>

Use hard copy rather than doing it on the internet

2.) <u>How do you feel about the resources available to help you learn to use e-portfolios?</u>

Not sufficient; don't know where to go for help

    a. <u>Can you suggest a better resource?</u>

To be able to go to the SAC

3.) <u>When you presented your work in an e-portfolio view:</u>

    a. <u>What was easy?</u>

Nothing easy

    b. <u>What was hard?</u>

Designing the layout; don't know how to fix problems

4.) <u>How would you feel if a small part of your grade was based on the layout of your portfolio view?</u>

Strongly disagree; students don't know enough about trying to fix it; SAC tutors don't

know how to fix it.

8. Student H Transcript

Completed February 15, 2011
Interviewer and Recorder: Lauren Ketschke
Solicitor: Thomas Lextrait

5.) Did you like or dislike using e-portfolios in LCE 101? [L v N v D)

Dislike

a. Why do you feel this way?

Computer skills not good; difficult to update information

b. Can you suggest any Improvements?

Teacher should teach how to use them in the classroom

6.) How do you feel about the resources available to help you learn to use e-portfolios?

Attended the Mahara session to learn how to use it but the session mainly focused on the

global classroom. The student would have liked to have the session focus more on

Mahara.

a. Can you suggest a better resource?

More demonstration in the classroom which involve hands on activities.

7.) When you presented your work in an e-portfolio view:

a. What was easy?

Wrote in word file and then copied

b. What was hard?

Make it more beautiful

8.) How would you feel if a small part of your grade was based on the layout of your

portfolio view?

It would be okay.

9. Student I Transcript

Completed February 15, 2011
Interviewer and Recorder: Reuben Gutierrez
Solicitor: Thomas Lextrait

1.) Did you like or dislike using e-portfolios in LCE 101? [L v N v D)

Dislike

    a. Why do you feel this way?

It takes a really long time to upload the views. Organizing the images and videos took 1

hour.

    b. Can you suggest any Improvements?

Not sure.

2.) How do you feel about the resources available to help you learn to use e-portfolios?

Usually ask classmates, they were really helpful, didn't know where SAC was.

    a. Can you suggest a better resource?

N/A

3.) When you presented your work in an e-portfolio view:

    a. What was easy?

Uploading images

    b. What was hard?

Uploading recording files

4.) How would you feel if a small part of your grade was based on the layout of your

portfolio view?

Good, would like to get 1 mark