

CHAPTER ONE

INTRODUCTION

The study explores EFL (English as a Foreign Language) students' perceptions of peer assessment in e-portfolios for learning English. In this chapter, the background of the study will be introduced first, followed by a description of the motivation to conduct this study. Next, the purpose of the study, research questions, and the significance of the study will be explained. Finally, several terms closely related to this study will be defined to help clarify their meanings.

1.1 Background of the Study

Assessment of student learning has been a heated issue in the pedagogical fields for a long time. It has generally been implemented as either formative or summative assessment. In traditional EFL learning contexts, summative assessment, which is mainly based on a grade or mark for deciding what to award to different students (Alastair, 2007), has been extensively applied to judging students' performance (Wynne, 2007). Summative assessment has been criticized as placing too much emphasis on exams, encouraging surface learning instead of deep learning, and being prejudiced by the teachers' perspective (Alastair, 2007). Therefore, educators have started to promote formative assessment over the past decade (Frankland, 2007).

Formative assessment, as defined by Alastair (2007), refers to an activity or a task which produces comments rather than a grade for students concerning their learning. It is a potentially powerful tool to facilitate student learning as it is acknowledged to motivate students to strengthen their knowledge (Sadler, 1998), to promote the process of independent learning (Black & Wiliam, 1998), and to facilitate reflective learning (Alastair, 2007). Moreover, it is especially helpful to low achievers by specifying their weaknesses and problems and providing constructive suggestions for improvement (Black & Wiliam, 1998). Formative assessment is extensively applied to studies of teacher assessment and student assessment. To overcome the limits of teacher assessment, alternative approaches such as self and peer assessments deriving from student assessments have attracted researchers' attention in the field of education (Hargreaves, Earl, & Schmidt, 2002).

As a type of formative assessment, peer assessment is significant in providing learners with a sense of ownership during the assessing procedure, which enhances their learning motivation as well as encourages them to be responsible for their own learning (Bostock, 2000; Race, 1998). Moreover, peer assessment promotes deep instead of surface learning (Bostock, 2000; Race, 1998). In such a learning context, students are stimulated to reflect more on portfolio entries and gain different perspectives on a theme or a subject through discussing, negotiating, and clarifying

meaning with their peers. Furthermore, peer assessment extends the manner of learning from being personal to more public: one to one or one to more peers (Liu & Carless, 2006). It is vital for people to learn by means of uttering and expressing their ideas to others, through which they build the comprehension of growing complexity of a theme or concept (Liu & Carless, 2006).

As a tool to conduct formative assessment, portfolios have been applied to the educational field for more than 2 decades. A learning portfolio has been recognized as a valid and valuable vehicle for assessment (Zimmerman et al., 1996, cited by Chang et al., 2011). It can be used to offer tangible evidence of students' learning process and progress and to evaluate the results of student learning (Barrett, 2005), which functions as a "multi-dimensional assessment" (Burch, 1999, p.1307). Research shows that portfolio use has positive impacts on the language skills and knowledge of EFL learners (e.g., Barootchi & Keshavarz, 2002; Burksaitiene & Tereseviciene, 2008; Chang & Chang, 2003; Chen, 2006a; Lan, 2008; Paesani, 2006). Furthermore, empirical studies acknowledge students' positive attitudes toward peer assessment in portfolio projects and the perceived effects of peer assessment in developing language proficiency, such as improving reading and writing skills (e.g., Chang, 2003; B. L. Chen, 2004; Lo, 2008). As Barootchi and Keshavarz (2002) put it,

[Portfolio assessments] tell students and their instructors how well they are

developing their skills and knowledge and what they need to do to develop them further. Thus portfolio assessment serves as a diagnostic tool, which provides students with profiles of their emerging skills to help them become increasingly independent. (p.281)

With advances in technology and personal computers, traditional paper-based portfolios can be digitalized and transformed into electronic formats (Huang & Hung, 2010). The advantages of e-portfolios have been identified by a number of researchers (e.g., Abrami & Barrett, 2005; Acker, 2005; Ahn, 2004; Buzzetto-More, 2006; Heath, 2005; Kahtani, 1999). E-portfolios are increasingly accepted not only because they offer multimedia display (e.g., in the form of images, video clips and sound files) and provide an alternative to assessment for school and work contexts, but also because it is possible to scaffold knowledge construction with them (Abrami & Barrett, 2005). Ahn (2004) argued that e-portfolios are the most effective device to stimulate students to reflect on their own learning processes and for instructors and peers to provide feedback, which could lead to the creation of a language learning community. Accordingly, e-portfolios have become a useful way to present student progress, promote better student involvement during the learning process, display work samples, and provide learning results evaluation and curriculum assessment (Buzzetto-More, 2006).

1.2 Motivation of the Study

Though the application of portfolio assessment is conducive to language education (Brown, 2007), most of the language learning settings in Taiwan tend to implement traditional paper-and-pencil tests. There have been relatively fewer language classrooms practicing portfolio assessment, and even fewer language classrooms have been employing e-portfolio assessment (e.g. Dippold, 2009; Joeh, 2010; Li, 2009).

In addition, teachers are still the major assessors in EFL education in Taiwan. Teachers generally have the sole responsibility for evaluation, whereas students are rarely empowered to evaluate their own English learning. Owing to the aforementioned benefits of peer assessment (see page 2), it is worthwhile to examine whether peer assessment is applicable in Taiwan.

Moreover, in recent years, researchers have begun to investigate the integration of peer assessment into e-portfolio projects as well as gauge learner perspectives on performing peer assessment in e-portfolios. Many studies have explored students' English learning experiences through compiling paper-based portfolios (e.g., Aydin, 2010; Caner, 2010; Lam & Lee, 2009). Among these studies, however, only a handful of them have integrated peer assessment into portfolio projects (e.g., Chang, 2003; Chen, 2006a; Lin, 2009), or further examined the influence of e-portfolios with peer

assessment on EFL education from the learner's perspective (e.g., Hung & Huang, 2010; Joeh, 2010; Li, 2009). Most findings in these e-portfolio studies have reported ESL/EFL students' favorable attitudes toward peer assessment (e.g., Grez et al., 2010; Joeh, 2010; Li, 2009; Pinkman, 2005; Yang, 2004) and the perceived advantages of peer assessment (e.g., Dippold, 2009; Huang, 2003; Ko, 2010; Li, 2009; Pinkman, 2005). Empirical studies have demonstrated the positive effects of peer assessment on EFL students' learning attitudes and development of language learning skills (e.g., K. C. Chen, 2004; Joeh, 2010; Ko, 2010; Li, 2009).

Additionally, most previous studies were conducted by teacher-researchers in their own classrooms. They might not have received authentic responses from the students, despite questionnaires, interviews, or other instruments used to compile relevant data (Bryan, 1995). Furthermore, the researchers might subconsciously hold subjective attitudes toward their student participants, which were essential variables to influence the objectivity of the research findings (Bryan, 1995).

Given the pedagogical concerns and literature gaps, this study was conducted to scrutinize EFL students' perceptions of peer assessment as well as the influence of peer assessment on their English learning in an e-portfolio project. Moreover, the researcher served as an outsider-researcher in the classroom, resulting in more objective and unbiased student perspective.

1.3 Purpose of the Study and Research Questions

The present study aims to explore how EFL students perceive peer assessment in an e-portfolio context. According to the research purposes, this study addresses the following questions:

1. What are EFL students' perceptions of peer assessment in an e-portfolio project?
2. What concerns and difficulties do EFL students encounter in the peer-assessment experience?

1.4 Significance of the Study

This study is significant for both the research and pedagogical fields. For the research field, this study examines the influence of peer assessment within an e-portfolio context on EFL students' learning, which was seldom documented in the literature. Moreover, to cope with the concerns about teacher-researchers in previous studies, the researcher compiles data independently by serving as an outsider-researcher in the course. Pedagogically, this study can be helpful in providing an example of how to conduct peer assessment for non-English majors and how to benefit students by performing this type of evaluation method. For instance, this study hopes to raise students' interest in learning English by creating a pleasant learning atmosphere.

1.5 Definition of Terms

1. Portfolio: A portfolio is a purposeful compilation of student work that displays student endeavors, progress, and attainment in given areas (Brown, 2007).
2. E-portfolio: E-portfolio is the abbreviation of electronic portfolio. An electronic portfolio is a digital container able to hoard visual and auditory content involving images, text, sound and video (Abrami & Barrett, 2005). An electronic portfolio may also be a learning vehicle because it organizes content as well as being designed to support varying pedagogical processes and assessment purposes (Abrami & Barrett, 2005). In the study, the e-portfolio is used to compile students' learning artifacts and online peer feedback.
3. Peer assessment: Peer assessment is defined as an arrangement in which people consider the level, amount, worth, value, success or quality of the artifact or results of peer learning of akin status (Topping, 1998). It is a process in which students use criteria to judge the work of their peers and offer them remarks and/or grades (Bryant & Carless, 2010). In this study, the participants assess their peers by giving them grades and both oral and written feedback across groups or by individuals.
4. Peer feedback: According to Liu and Carless (2006), peer feedback refers to “a communication process through which learners enter into dialogues related to

performance and standards” (p. 280). Carlson (1979) argued that feedback is authoritative information that learners receive which stimulates or amends learners’ responses to the teaching and directs them to achieve the objectives of the course more efficiently. In this study, peer feedback is synonymous with peer comments, which were embedded in peer assessment. Peer feedback refers to oral or written opinions as well as peers’ suggestions.

5. Perception: According to the definition of Oxford Dictionary, perception refers to an idea, a belief or an image one has as a result of how one sees or understands something. In the study, students become aware of their attitudes toward and perspectives on peer assessment through participation in peer assessment activities in the e-portfolio project.

CHPATER TWO

REVIEW OF THE LITERATURE

In this chapter, the literature on peer assessment implemented as a learning tool is described. Studies concerning peer assessment in language education are then reviewed. Finally, concerns and difficulties encountered during peer assessment experiences are examined and discussed. Limited extant studies have investigated student perceptions of peer assessment in using e-portfolios. Therefore, the following research reviewed mainly covers paper-based portfolio and non-portfolio studies.

2.1 Peer Assessment as a Learning Tool

In this section, the characteristics and benefits of peer assessment used as a learning tool are introduced, demonstrating the significance of conducting this evaluating method in the educational field.

2.1.1 Characteristics of Peer Assessment

Peer assessment has been defined as “a process in which students evaluate the performance or achievement of peers” (Topping et al., 2000, p.525). Moreover, Topping (1998) stated that peer assessment is “an arrangement in which individuals consider the amount, level, value, worth, quality or success of the products or outcomes of learning of peers of similar status” (p. 250).

Peer assessment by nature empowers learners to take an active role in managing their own learning processes. It is a type of self-regulated learning which allows students to observe and discern the gaps between peers' and their own performance (Falchikov, 1986) as well as make use of comments coming from external sources to monitor their performance (Butler and Winne, 1995). Moreover, peer assessment promotes student participation in their learning process, hence reducing the teacher-centeredness of education. Furthermore, peer assessment helps learners to pinpoint their strengths and weaknesses in the themes or subjects being evaluated by peers (Falchikov, 2005).

2.1.2 Benefits of Peer Assessment

An array of studies have pointed out that peer assessment greatly influences student learning, enabling students to serve as both assessors and assessees (e.g., Dominick et al., 1997; Peng, 2009; Topping, 1998). Topping (1998) indicated numerous advantages of peer assessment for both assessors and assessees. Advantages for assessors involved strengthening, enhancing, and sharpening the assessors' understanding due to their participation in activities such as summarizing, recognizing and clarifying missing knowledge as well as giving comments to the assessees. According to Cole (1991), the most meaningful quality of peer assessment was its ampleness, as there are usually more students than teachers in a class. The students

are thus capable of providing more prompt and individualized comments than teachers. In addition, the feedback provided by peers can be “confirmatory, suggestive, and corrective” (Topping, 2009, p. 22). Peers served to confirm their classmates’ ideas and offered more ideas as well as rectified mistakes or drawbacks in the work. By the same token, the advantages for assesseees included realizing better what constituted high quality work within a certain context and paying attention to vital aspects of the evaluated work based on the mutually agreed criteria (Topping, 1998). Further, Earl (1986) suggested that peer assessment could function as a socializing force and promote related skills and interpersonal relationships among learner groups. Students were better motivated to do their projects when they had an audience in mind (Fukai et al., 2008; Lowe & Williams, 2004). Apart from the above benefits, peer assessment offers learners the opportunity to take responsibility for analyzing and evaluating aspects of both the learning process and product of their peers (Chen & Warren, 2005).

2.2 Peer Assessment in Language Education

In this section, research on using peer assessment in language education is reviewed based on the effects of conducting peer assessment and ESL/EFL learners’ perceptions of this evaluation method. To avoid repetition, background information on studies reviewed is given only once.

2.2.1 Effects of Conducting Peer Assessment

Most researchers in the literature have identified the positive effects of conducting peer assessment in ESL/EFL settings. They included students' favorable attitudes toward peer assessment and the perceived advantages of peer assessment during the evaluation process.

2.2.1.1 Favorable Attitudes toward Performing Peer Assessment

Through participation in the evaluation of one another, learners increased 1) motivation of performing peer assessment; 2) confidence in evaluating each other; and 3) involvement in their English learning tasks.

Firstly, students were motivated to perform peer assessment because it offers them the ability to learn from their classmates as well as the enjoyment of interacting with peers during the evaluation process (Bryant & Carless, 2010; Chang, 2003; Chen, 2006a; Chen, 2009; Chen, 2010; Grez et al., 2010; Huang, 2004; Lo, 2008; Peng, 2009; Wang, 2002; Yang, 2004). In Yang (2004), thirty-one elementary school students were stimulated to join in the web-based portfolio assessment project for improving their English learning through peer assessment. Yang (2004) found that most children considered the activities advantageous to the production of e-portfolios. Further, students were motivated to surf on the Net to learn as well as to evaluate their classmates. In addition, participants in Peng (2009) became much more positive

toward peer assessment after experiencing this evaluation method. Around 85% of the undergraduates in Peng (2009) regarded the experience of peer assessment as successful. Furthermore, many of them felt that peer assessment made the course more interesting. Reasons for positively changing attitudes encompassed enhancement of motives and participation in the course as well as student enjoyment of making comments to others. Similarly, Chang's (2003) participants favored the experience of peer assessment. The researcher conducted a portfolio assessment project involving 76 seventh graders, who were requested to finish the class assignments and worksheets and store them in paper-based portfolios. The results showed that the students held favorable attitudes toward peer assessment in that 58% of them enjoyed attending English classes where they performed assessment with their classmates. Employing paper-based portfolio assessment with 75 seventh graders in their English classes, Chen (2006a) aimed at improving students' 4 language skills (i.e., speaking, listening, reading and writing). She found that the students held positive perceptions of peer assessment. Most of the students agreed with the survey item describing that peer assessment aided them in learning from others' strengths, thus increasing their motivation to perform this assessment method.

Moreover, research demonstrates that students are motivated to perform peer assessment during composition practice (e.g., Bryant & Carless, 2010; Chen, 2009;

Chen, 2010; Lin, 2009; Lo, 2008). Implementing paper-based portfolio assessment to write responses, self-selected topics to the textbook lessons as well as descriptive stories, Lo (2008) identified the reasons why her 33 participants in a Taiwanese senior high school preferred peer assessment. The results showed significant differences in student perceptions of peer assessment before and after the treatment. For example, they became far more supportive of peer ability to pinpoint each others' strengths and weaknesses in English writing. In another aspect, Bryant and Carless (2010) examined how 34 primary school students in Hong Kong conducted peer assessment, finding that how they viewed this assessment method was consistent with the quality of peer comments as well as their English proficiency. For instance, the children held positive attitudes toward peer assessment with regard to learning from one another and being stimulated to take responsibility for their own writing. In addition, Wang (2002) explored 5 Chinese students' perceptions of peer review in mixed ESL classes in American colleges. Data analysis showed that the students were in favor of peer review due to the enjoyment of interacting with peers as well as acquiring useful ideas from the classmates' comments.

Secondly, students became more confident in assessing their peers (e.g., Chen, 2005; Chen & Warren, 1997; Lai, 2004; Yang, 2004). Chen and Warren (1997) gauged 52 university students' attitudes toward peer assessment from an English academic

course. The findings showed that the majority of students originally lacked sufficient comfort and confidence in assessing their classmates, but at the end of the study they became more confident in evaluating their peers. The researchers suggested that offering more opportunities for peer assessment could reduce students' discomfort in evaluating one another. Exploring the effects of peer review on 75 students' English writing, Chen (2005) found that both the peer review group and the control group originally did not consider performing assessment themselves despite their previous experiences of peer assessment in other subjects. However, after the treatment, members in the experimental group were found to be more confident in assessing both peers' and their own writing. Additionally, compared to their counterparts, more students in the experimental group recognized that students should participate in the evaluating process. Likewise, participants in the study of Yang (2004) believed in their ability to perform peer assessment after undergoing a period of web-based portfolio assessment. Over 80% of the students responded in the questionnaire that they had confidence of assigning grades and giving remarks to their classmates. They also believed that peers could evaluate their work appropriately.

Thirdly, students became more involved in completing their English learning tasks after experiencing peer assessment activities (B. L. Chen, 2004; Chen, 2005; Huang, 2003; Peng, 2009; Pinkman, 2005; Yang, 2004). For instance, investigating

how e-portfolios encouraged learner independence among 15 Japanese EFL students, Pinkman (2005) found that more than half of the undergraduates responded in the surveys that through peer assessment, their classmates promoted them to complete assignments in their e-portfolios. The awareness that others would review their work triggered the students to make greater effort in compiling their artifacts. By the same token, the survey findings of Chen (2005) demonstrated that the students developed a sense of real audience. To enable the audience to realize their writing content, the students were stimulated to take more responsibility for composing their own essays. In addition, Peng's (2009) participants reacted in the survey that peer assessment fostered their participation in oral presentation tasks. Furthermore, Huang's (2003) participants remarked in the survey that being conscious of others' reviewing helped them perceive the unclear parts in their drafts.

2.2.1.2 Perceived Advantages of Conducting Peer Assessment

In addition to the aforementioned positive outcomes of employing peer assessment, second/foreign language learners identified the advantages of peer assessment mainly in terms of (1) increasing social interaction, (2) acquiring multidimensional comments, and (3) developing critical thinking ability. First of all, peer assessment was approved as beneficial in fostering social interaction (e.g., Chen, 2005; Lai, 2004; Peng, 2009). For instance, both Chen (2005) and Lai (2004) found

that their participants acknowledged that their social skills were promoted by peer assessment. The 75 students in the study of Chen (2005) increased interactions and developed closer relationships with their peers through participating in peer assessment. Lai (2004) scrutinized how 35 vocational high school students perceived the effects of peer evaluation on their speaking performance. Findings reported that in addition to the benefits identified by Chen (2005), Lai (2004) pointed out that her participants learned to communicate with their peers, help others, and appreciate their classmates' ideas. Similarly, Peng's (2009) participants enhanced interaction and cooperation with others by means of peer assessment. Moreover, Li (2009) implemented blog-integrated peer feedback with a group of 20 students compiling e-portfolios and compared it to 24 students in a traditional writing group. The researcher demonstrated that learners in the e-portfolio group had made sense of dealing with disputes and controversies when taking part in the evaluating process.

Apart from the enhancement of social interaction, students learned to view their performance from multidimensional feedback offered by peers (e.g., Chen, 2009; B. L. Chen, 2004; Dippold, 2009; Huang, 2004; Li, 2009). Using blogs for an e-portfolio project to promote peer feedback on writing, Dippold (2009) had tutors to give comments on the drafts of 9 participating students. The researcher found that the learners generally enjoyed receiving comments to improve their writing because they

could view their work from the differing perspectives of both tutors and peers. Additionally, Li (2009) stated that students in the e-portfolio group favored peer feedback as they were widely exposed to a variety of viewpoints and ideas about their writing content, organization, dictation, grammar, and punctuation in the process of peer assessment. In line with Li (2009), Chen (2009) indicated that the 27 students recognized that peer assessment offered them an opportunity to converse and negotiate diverse viewpoints pertaining to their writing content.

Furthermore, students recognized that peer assessment helped them develop critical thinking ability (e.g., Chang, 2003; Chen, 2006a, 2006b; Chen, 2009; Lai, 2004; Li, 2009; Lin, 2009; Lo, 2008). For example, Chen (2009) and Li (2009) indicated their participants' agreements in providing feedback to their peers, which facilitated cultivation of the capability of critical and independent thinking in writing content. By the same token, Chen (2006a) showed that students learned to think critically about their peers' speaking-recorded tasks and rewriting work throughout the process of evaluating others' portfolios.

2.2.2 ESL/EFL Learners' Perceptions of Peer Assessment

The great majority of studies reviewed demonstrated the positive influence of peer assessment on ESL/EFL students' language learning beliefs through creating a beneficial language learning atmosphere and developing language skills.

2.2.2.1 Creating Beneficial Language Learning Atmosphere

As shown in the literature, peer assessment helped create a beneficial language learning atmosphere because student apprehension was reduced and their interest and confidence in language production increased. After undergoing peer assessment activities, student anxiety about writing gradually decreased (e.g., Chen, 2005; Huang, 2004; Li, 2009; Lin, 2009). For example, Li (2009) found that the participants in the e-portfolio group held much more favorable attitudes toward English writing than those in the traditional writing group. The students in the experimental group felt less anxious about compiling their compositions and gradually comprehended that peer feedback was useful in improving their English writing. In addition to decreasing writing apprehension, Lin's (2009) participants gained other positive effects for their English learning. Implementing portfolio assessment for 66 junior high school students to write diaries, Lin (2009) pointed out that peer assessment improved the students' discussion atmosphere about their portfolios, helped them imitate their classmates' advantages, reflected their own evaluation process, and acquired a sense of achievement for completing their work.

Several studies have reported that students increased their interest and confidence in learning English through peer assessment. For instance, the learners were more motivated and became more confident in composing English writing

through discussing the drafts with their peers (e.g., Chang, 2003; Chen, 2005; Huang, 2004; Li, 2009). Moreover, Chen (2006a) reported that more than half of the students recognized their gains from sharing comments on one another's work. For example, the students stated that their confidence in using English was enhanced during the process of providing feedback to their classmates. Furthermore, Lai's (2004) participants also experienced increased confidence in speaking English after a semester of creating and practicing dialogues as well as performing assessment activities with their classmates.

2.2.2.2 Developing Language Skills

Previous studies have found that peer assessment is beneficial to the development of students' language skills in terms of speaking, writing, reading and listening. In speaking, students developed their pronunciation and other speaking skills (e.g., K. C. Chen, 2004; Grez et al., 2010; Ko, 2010; Lai, 2004; Peng, 2009). To begin with, twelve participants in Ko (2010) uploaded 3-minute speaking video clips according to the assigned topics and offered feedback to their peers during the project. The results reported that after finishing their last video clips, students with lower English proficiency improved in intonation as well as developed clearer ideas, better topic sentences, and stronger closing statements. In addition, employing Microsoft FrontPage and Dreamweaver for 34 students to build web pages, K. C. Chen (2004)

had participants recite English chants, record the whole recitation, and upload it to their e-portfolios. Afterwards, the students listened to their peers' productions and evaluated them. Data analysis showed that the students became more conscious of whether their English pronunciation was correct. In addition to the improvement in pronunciation, participants in Lai's (2004) research found that their English speaking benefited. Not only did they reinforce their intonation and speaking fluency, but they understood their own strengths and weaknesses in speaking through learning from their classmates. Moreover, Peng (2009) conducted peer assessment to evaluate 88 participants' oral presentations. After the study, the students recognized that their overall oral performance was enhanced, including the quality of speaking content and delivery as well as accurate and appropriate word usages.

Learners in previous studies have confirmed improvement in writing proficiency via peer assessment (Chang, 2003; Chen, 2009; B. L. Chen, 2004; Chen, 2005; Huang, 2004; Joeh, 2010; Li, 2009; Peng, 2009). For instance, using a weblog on PIXNET as the platform of the e-portfolio project, Joeh (2010) indicated that after the study around 70% of the 33 participants agreed that they had greatly enhanced their writing ability by means of peer assessment. They cited improvement in increasing the amount of vocabulary, fostering grammar knowledge and general English ability. In addition, the experimental group in Chen (2005) improved in writing. After peer

review activities, the experimental group outperformed the control group in its overall writing performance and enhanced its writing content and organization. Moreover, Huang's (2004) participants perceived a vast improvement in writing content and spelling. Additionally, their language use improved after experiencing peers' judgment making and error correction. Forty-nine participants in B. L. Chen (2004) acknowledged their facilitation in language learning from peer comments. The students evaluated their peers' first drafts before receiving teacher assessment. Data analysis showed that the students benefited from peer comments most in grammar and in surface-level aspects of language (e.g., mechanical and lexical problems).

Students developed their reading comprehension ability through the process of assessing other classmates' compositions (e.g., Chang, 2003; Chen, 2005; Joeh, 2010; Li, 2009). Chang (2003) reported that through reading abundant materials, the 76 students gained relevant information to the writing topics as well as reinforced their reading comprehension ability of the portfolio content. In addition, Chen (2005) showed that learning writing skills in content and organization facilitated the students to read articles and answer reading comprehension tests with ease. Furthermore, Joeh (2010) argued that some students were more confident of being able to read hard stories after reviewing their classmates' writings in the peer assessment procedures. Chen's (2009) participants learned to use vocabulary and sentence structures from

their peers through reviewing their writing.

Furthermore, students indicated that they made progress in the listening aspect (e.g., K. C. Chen, 2004; Peng, 2009; Yang, 2004). Students in K. C. Chen (2004) and Yang (2004) compiled their e-portfolios and then assessed their classmates' work online. Yang's (2004) participants said that their listening proficiency was improved as they had to go online to listen to their own or others' works and provided feedback to their classmates. In a similar vein, Peng's (2009) participants found that their listening ability improved after receiving peers' comments and suggestions to improve their oral presentation performance.

2.3 Concerns and Difficulties in Peer Assessment Processes

Prior studies which reveal the challenges and difficulties students encounter in their peer assessment experiences encompassed 5 main themes: (1) uncertainty about the fairness of peer assessment, (2) doubt of peers' or their own ability, (3) negative attitudes toward evaluation, (4) time issues impeding quality assessment, and (5) facility and technical problems.

2.3.1 Uncertainty about the Fairness of Peer Assessment

Students' mistrust of the fairness of peer assessment is commonly reported in the literature (e.g., Chen, 2005; Chen & Warren, 1997; Hung & Huang, 2010; Joeh, 2010; Lai, 2004; Peng, 2009). For example, though Chen and Warren (1997) and Joeh (2010)

indicated that their participants viewed peer assessment positively in general, these students were uncertain about its fairness. Similarly, in Chen and Warren (1997), the majority of participants held uncertain or even negative perspectives on the idea that first year college students were capable of performing peer assessment fairly and responsibly.

The friendship issue and learners' different evaluation criteria were regarded as factors influencing the fairness of peer assessment (e.g., Bryant & Carless, 2010; Chen, 2005; Lai, 2004; Peng, 2009). Peng (2009) found that some participants over-marked their friends because of the guilt of assigning lower grades to them. Similarly, Lai (2004) found that students' friendship with peers influenced the objectivity of peer assessment. For example, students would grade their friends higher and would not assess or offer comments genuinely for fear of breaking their friends' hearts. In another aspect, the familiarity among participants in Chen (2005) caused bias in reviewing classmates' compositions, although she found it helpful in fostering students' discussion with one another. Moreover, Bryant and Carless (2010) pointed out that the most serious tension arising in the process of peer assessment was the over-familiarity among students, which made them wary of peer assessment.

As for learners' different evaluation criteria, Peng (2009) found that several students viewed peers as holding disparate standards about what "good" grades were.

As a result, some felt unsatisfied with the grades they received although they considered that they had performed well. Similarly, Lai (2004) found that a handful of participants argued that some classmates evaluated their peers' performance more strictly than others, which caused unfair results in grading. In addition, Bryant and Carless (2010) revealed that some students felt that feedback they received from peers tended to be too simple and overly positive.

2.3.2 Uncertainty about Peers' or Their Own Ability

Empirical research reviewed in this section showed that students were not confident of peers' or their own ability to conduct peer assessment. Negative views of peers' assessment abilities led to negative beliefs in peer review activity (Bryant & Carless, 2010; Chen, 2009; Dippold, 2009; Hung, 2006; Hung & Huang, 2010; Wang, 2002; Yang, 2011). For example, students in Hung's (2006) study were unsatisfied with the content of peer feedback received. Constructing e-portfolios to reinforce their English writing proficiency, the participants' responses to peer assessment showed that they felt disappointed in the quality of peer comments since they "fell short of being critical and pertinent" (p. 177). In a similar vein, students with higher English proficiency in Bryant and Carless's (2010) study said that their peers with lower English proficiency could not apply comments they provided to their work. In addition, they were incapable of offering useful opinions to the higher achievers. Akin

to the above 2 studies, Hung and Huang (2010), using MySpace as the platform to develop e-portfolios, reported that the participants were not satisfied with their classmates' feedback. The learners' dissatisfaction with the quality of peer feedback resulted from their peers' failure to offer critical remarks on their essays, such as not paying attention to giving comments, superficially marking their classmates' advantages as well as disadvantages, and failing to provide opinions and suggestions during the research.

The other studies showed that students doubted their own assessment ability, considering their English proficiency insufficient to perform peer assessment (Bryant & Carless, 2010; Chen, 2006a; Chen & Warren, 2005; Dippold, 2009; Huang, 2003; Hung, 2006; Lai, 2004; Li, 2009; Peng, 2009). Huang (2004) examined why 27 students were inconsistent in viewing their ability to perform peer assessment in an English writing class. The results indicated that the disparities in their performances in writing and in peer review caused such inconsistent attitudes. In other words, students who were more proficient in English writing had higher confidence in evaluating others' drafts, while less proficient students were skeptical of their own ability to conduct assessment activities. Moreover, Chen and Warren (2005) examined 51 students' attitudes toward peer assessment in terms of 2 assessment criteria — language proficiency and non-language aspects (e.g., organization and content). As

revealed in the survey data analysis, the language proficiency instead of the non-language aspects was the item on which the undergraduates appeared “less comfortable and more uncertain” of their ability to assess their peers (p.109). The assessment difficulty, according to the interview results, was due to their uncertainty of what comprised English proficiency as well as their lack of linguistic competence to evaluate their peers. Additionally, Hung and Huang (2010) indicated that the 3 focal participants expressed insufficient confidence in their English proficiency to evaluate peers. They felt it challenging to perform peer assessment because of their deficient grammatical knowledge. Similarly, participants in Bryant and Carless (2010) felt less comfortable with assessing peers with higher English ability as they were unable to indicate their errors and sometimes merely presumed that their peers were correct.

The learners’ perceived insufficient English proficiency, together with their affective problems, was also reflected in giving peer feedback. Lai (2004) found that some participants wondered if they could offer appropriate or conducive comments to their classmates, while Li (2009) pointed out that the learners did not know how to give concrete suggestions about their peers’ e-portfolio entries. In addition, performing on-line peer-evaluation for enhancing 85 students’ English writing, Huang (2003) revealed that the participants did not prefer giving comments to their peers in

grammar and writing content. Huang's (2003) learners perceived their inability to correct grammatical mistakes. The researcher suggested that the learners' deficient critical thinking ability and indifferent attitudes toward peer evaluation constituted the major reasons for their unfavorable beliefs toward on-line peer evaluation. Dippold's (2009) participants were similarly unwilling to offer comments as they lacked specific assistance on how to provide feedback. Apart from that, their dread of offending others confined quality opinions offered to their peers. The learners stated that preserving their own "face" as well as eschewing menacing others' "face" may result in unsatisfactory offering of peer comments (p.29).

2.3.3 Negative Attitudes toward Evaluation

Some students' negative attitudes toward peer assessment, i.e., passiveness and reluctance to participate in the peer assessment activities, are explored in the literature (e.g., Chen, 2005; Lai, 2004; Li, 2009; Peng, 2009). For example, Peng (2009) reported that a handful of participants complained that peer assessment was too troublesome, for they did not enjoy or realize how to give comments to their peers, which might be due to their inadequate experience in performing peer assessment. Some students in Li (2009) were less collaborative and passive in providing comments. They neither attempted to give helpful feedback nor were they enthusiastic in aiding their peers, who received few comments. In addition, Lai (2004) reported

that a number of participants assessed their classmates recklessly, and some of them even offered no feedback at all. Chen (2005) showed that as the project proceeded, students became tired of giving comments, hence the quality of their feedback decreased. Furthermore, Huang's (2003) students did not consider online peer evaluation helpful to their English learning. Around 36% of them responded that it was a waste of time for them to perform on-line peer evaluation.

2.3.4 Time Issues Impeding Quality Assessment

Lacking time or feeling that peer assessment was time-consuming was a common problem raised by students. For example, some participants in Peng (2009) considered the time to provide remarks for their peers was insufficient. K. C. Chen (2004) demonstrated that approximately 20% of students deemed that the time was inadequate for them to construct e-portfolios.

Regarding the opinions of time-consuming, Pinkman's (2005) students thought that the speaking assignments which needed to be uploaded to individual blogs required much time. They instead preferred to complete these assignments in class. In addition, Hung (2006) demonstrated that around 20% of 39 participating students commented that it took them a large amount of time to develop writing e-portfolios in MySpace, including making their drafts and providing peer feedback. Another case in Ko's (2010) study described undergraduates who completed a video blog project to

promote their speaking proficiency. A number of students thought the project time-consuming as it was difficult for them to overcome their anxiety to talk to the video camera and remember each word about the presentation.

2.3.5 Facility and Technical Concerns

Some research points out that deficient hardware facilities (e.g., K. C. Chen, 2004; Li, 2009) and technical problems (e.g., K. C. Chen, 2004; Hung, 2006; Ko, 2010; Pinkman, 2005) both limited student participation in the peer assessment activities. Pinkman (2005) found that the participants had difficulty using the software which uploaded pictures onto their web sites. Moreover, Ko (2010) indicated that the learners deemed it difficult to set up the video camera as well as process and upload the video files. In accordance with Ko (2010), K. C. Chen (2004) found the students perceived that they had limited ability in building digitalized folders, and the unsteady web server hindered them from completing their tasks. Hung (2006) further suggested that students' different computer skills might be a variable impacting their grades on e-portfolios, i.e., students who were more familiar with operating the computers might get higher scores, whereas students who had limited computer skills might get lower grades.

2.4 Summary

As shown in the above literature review, student perspectives on learning languages through peer assessment and e-portfolios have not been fully explored. Employing paper-based portfolio and non-portfolio assessment, the majority of studies reviewed in this chapter generally displayed affirmative effects in conducting peer assessment and ESL/EFL students' positive perceptions of this evaluation method. As for the affirmative effects of peer assessment, learners not only developed favorable attitudes toward this assessment approach, but also perceived the advantages of evaluating one another. The learners' favorable attitudes were shown in increasing motivation and confidence of peer assessment as well as in greater involvement in their own language learning processes. Additionally, they recognized that peer assessment was conducive in fostering social interaction, acquiring multidimensional feedback, and developing critical thinking ability. In another aspect, ESL/EFL learners acknowledged that this assessment approach helped create a beneficial language learning atmosphere and improve their language skills. Students reduced writing anxiety and increased interest and confidence in using the English language. The students made progress in speaking, writing, reading and listening respectively.

Nevertheless, throughout the peer assessment activities the students confronted problems and difficulties, including: (1) suspicion of the fairness of peer assessment, (2) uncertainty of peers' or their own assessment ability, (3) negative attitudes toward evaluation, (4) time issues impeding quality assessment, and (5) facility and technical problems. To begin with, the students were not sure if peers could evaluate them fairly, which was influenced by friendships with peers and the assessors' inconsistent evaluation criteria. Moreover, the students lacked confidence in evaluating one another. Some of them had affective problems while assessing others. Furthermore, the students' negative attitudes were shown in their passiveness and unwillingness to perform peer-assessment activities. The students also argued that they either lacked enough time or felt it a waste of time to do peer assessment. Finally, defective equipment and technical problems reduced the learners' motivation to participate in the peer assessment processes.

As revealed in the above literature review, research which scrutinizes the employment of peer assessment in e-portfolio projects is lacking. Specifically, in the EFL language education field, few studies have probed learner perceptions of peer assessment in an e-portfolio context. Therefore, to address this gap, the present study investigated how EFL students perceive the use of peer assessment in an e-portfolio context in foreign language learning.

CHAPTER THREE

METHODOLOGY

This chapter presents the methodology of the current study. Research setting and participants are introduced in the first section. Then, data collection methods and procedures are illustrated respectively, followed by the methods of data analysis.

3.1 Setting and Participants

This study collected data from an elective English course entitled *Learning English from Advertisements: An Electronic Portfolio Project*, which was offered to non-English majors at a private university located in central Taiwan. The threshold for entering the course was to pass the Freshman English for Non-Majors (FENM) course, which focused on the 4 language skills: listening, speaking, reading, and writing. Students who passed this program were acknowledged to have at least intermediate level of English proficiency.

Thirty-two students initially enrolled in the course were the potential participants in this study. However, five students did not participate in the study as 1 student often missed classes and another dropped the course in the midst of the study. In addition, the other 3 were unavailable to partake in the interviews, for they were graduate students who were too busy with their study. Finally, twenty-seven students were

recruited in this study. They majored in various disciplines, such as public management and policy (25%), industrial engineering and enterprise information (25%), international business (15.6%), economics (6%), history (3%), hospitality management (3%), mathematics (3%), chemical and materials engineering (3%). Their ages ranged from 19 to 26, with an average of 21.9. There were 4 sophomores, 14 seniors, and 9 above seniors. With regard to gender, there were 15 of males and 12 of females.

3.2 Course Description

The purpose of the course was to scaffold the development of autonomous learning and enable reflection via information technology. No textbooks were used in this course. Instead, students surfed online and collected the materials for their target themes (e.g., entertainment, electronic products, overseas education) throughout the 18-week semester, excluding the midterm and final weeks.

3.2.1 Instructional Design

This e-portfolio project consisted of 4 parts: (1) e-portfolio compilation before in-class discussion of each theme, (2) in-class discussion, (3) weekly online peer comments and discussion writing, and (4) peer- assessment in e-portfolios. The e-portfolio, *Xuite*, adopted in this course was a user-friendly weblog. The students

were required to use relevant visual aids (e.g., illustrations, photos, video clips) to help comprehend and enrich their work.

The course schedule was described as follows. In the beginning of the semester, the students were divided into groups. Two days before the regular class meetings, they had to visit their group members' e-portfolios and read them. Afterwards, each group of students introduced their work to their members in class. In the subsequent week, the students had in-class group discussions of their advertisements. After class, the students posted comments on their members' e-portfolios for further discussion on their advertisements, which were comprised of a whole cycle (i.e., two weeks) of collecting theme-based advertisements. Moreover, the students searched online information for the second theme prior to the class, denoting the start of another cycle.

In terms of peer assessment, the instructor conducted an approximately 30-minute training session in advance. The assessment was conducted both orally and literally. The oral peer assessment was carried out during regular class meetings where members in each group discussed their own e-portfolios. The written peer assessment was performed both on-line and in papers. Students completed online feedback and discussion writing of their group members after discussing their e-portfolios in regular class meetings. In addition, the paper-based peer assessment was performed in forms of groups or individuals. The group peer assessment was conducted in mid-term

during which each group was responsible for assessing another group's e-portfolios. Group members discussed each work and then decided what grade to give to each member of another group. In addition, the individual peer assessment was conducted in the final week. Each student evaluated another classmate's e-portfolio outside his or her group, randomly selected by the instructor's drawing lots in advance. While conducting written peer assessments, students were administered a peer-assessment checklist to grade and offer comments to their peers' e-portfolios. Peer assessment checklists facilitate learner performance and promote collaborative learning effectively (Chen, 2005; Huang, 2004). Adapted from Hung (2006), the peer-assessment checklist used in this study included 2 parts. The first part listed 4 grading criteria and the second part contained 3 open-ended questions. The 4 grading criteria were content, peer feedback and comments, key words, and layout. Each category was scored 1 to 5, with 1 being the poorest and 5 being the best (see Appendix F). The students had to list reasons if they scored a classmate lower or higher (i.e., 1, 2, 5). The 3 open-ended questions in the second part requested students to write down strengths and weaknesses of a classmate's e-portfolio as well as suggestions to improve the e-portfolio compilation. The checklists were designed in English, but the participants were allowed to respond in either Chinese or English in case of any obstacles in expressing their thoughts and opinions. The outline of the

course schedule is illustrated in Table 3.1.

Table 3.1 Outline of the Course Schedule

Activity	Schedule	Descriptions
Orientation	Week 1~2	<ul style="list-style-type: none"> • Introducing the e-portfolio project to the students • Assigning students into groups
E-portfolio collection	Week 3~4 Week 5~6 Week 7~8	<ul style="list-style-type: none"> • Two days before regular class meetings, students had to visit their group members' e-portfolios and read them. • Every 2 weeks individual students made e-portfolio entries of their chosen articles based on the assigned themes. • In the second week, students had group discussions for their advertisements (oral peer assessment). Then they finished online feedback and discussion writing of their group members' e-portfolios at home.
Group peer assessment	Week 9	<ul style="list-style-type: none"> • Each group of students assessed e-portfolios of an assigned group together.
Midterm oral communicative exam	Week 10	
E-portfolio collection	Week 11~12 Week 13~14 Week 15~16	<ul style="list-style-type: none"> • Two days before regular class meetings, students had to visit their group members' e-portfolios and read them. • Every 2 weeks individual students made e-portfolio entries of their chosen articles based on the assigned themes

		<ul style="list-style-type: none"> • In the second week, students had group discussions for their advertisements (oral peer assessment). Then they finished online feedback and discussion writing of their group members' e-portfolios at home.
Reviewing and wrapping up e-portfolio collection	Week 17	<ul style="list-style-type: none"> • Finishing group discussions for the theme-based advertisements
Individual peer assessment	Week 18	<ul style="list-style-type: none"> • During the final exam, students conducted individual peer assessment from which the instructor drew lots in advance to decide whose e-portfolio to be assessed for each student.

As specified in the course syllabus, several measures implemented by the instructor for peer assessment in the e-portfolio project were students' learning assessment activities. First of all, group and individual peer assessments were conducted. Moreover, peer assessment was conducted in oral and written forms. Finally, to cope with peer assessors' bias, the instructor would adjust the students' grades based on the standard deviation of peer assessment scores at the end of the semester. In so doing, the instructor expected to attain the fairness and validity of the assessment. In addition, the whole portfolio project involved 40% of the total semester grades, and peer assessment involved 10% of the portfolio project.

3.3 Mixed-Method Approach

The current study adopted mixed-method approach to scrutinize EFL students'

perspectives of peer assessment in e-portfolios and any influence the perspectives may bring to their English learning. The mixed-method approach uses a research design encompassing both quantitative and qualitative data to respond to certain questions (Hesse-Bieber, 2010). Cresswell and Clark (2007) stated that mixed methods research offers strengths that balance the weaknesses of either quantitative or qualitative research. In addition, they pointed out that mixed-method research provided “more comprehensive evidence” for examining a problem than either qualitative or quantitative studies (p.9).

3.4 Data Collection Methods

In this study, quantitative data from pre- and post-questionnaires as well as qualitative data from semi-structured interviews were collected.

3.4.1 Questionnaire

Questionnaires have been used prevalently in language education (e.g., B. L. Chen, 2004; K. C. Chen, 2004; Chen & Warren, 1997; 2005; Hsu et al., 2008; Huang, 2003; Huang, 2004; Huang & Hung, 2004; Hung, 2006; Lai, 2004). According to Whittaker (2009), questionnaires were less expensive, quick to exert, convenient for participants to respond whenever they are available. Besides, the questions in questionnaires are delivered in a “stable and consistent manner” (p.73).

The questionnaire used in the present study was adapted from previous related

studies (Chang, 2001; Chen & Warren, 2005; Grajcaonek, 2009; Hsu et al., 2008; Li, 2009; Wen & Tsai, 2006; Son, 2007) (see Appendix A to D). The items were designed based on the 3 themes: (a) e-portfolio learning: student perceptions of e-portfolio learning, (b) peer assessment: student perceptions of peer assessment, and (c) peer assessment in e-portfolio: student perceptions of peer assessment in the e-portfolio project.

The 25 items in the questionnaire aimed to examine how students perceived the use of peer assessment in e-portfolios to aid them to learn English. Two issues were meant to be disclosed, including a) what students thought about e-portfolio learning and peer assessment, b) how the e-portfolio collection experience affected students' English learning attitudes and English learning effects. The survey used a 4-point Likert –scale: 4= strongly agree, 3= agree, 2= disagree, 1= strongly disagree. Specific items within each variable were as follows: (a) e-portfolio learning (items 3, 6, 11, 18, 21), (b) peer assessment (items 4, 5, 7, 9, 10, 12, 14, 15, 16, 17, 19, 20, 22, 24, 25), and (c) peer assessment in e-portfolio (1, 2, 8, 13, 23). To help the participants better comprehend the items, the questionnaire was presented in Chinese. The pre-questionnaire additionally asked 4 open-ended questions, aiming to probe the students' prior experiences of using paper-based or electronic portfolios as well as previous experiences of conducting peer assessment. Among the 25 items, item 12

and 17 were negative descriptions. Item 12 was the negative description about students' perceptions of the fairness of peer assessment compared to item 7 and 22. Student responses to the 2 items were transformed and recoded.

A semester prior to the present study, the questionnaire was piloted to a class of 19 students under the same class title. The questionnaire had a reliability of 0.76, proving it a reliable instrument. Afterwards, some of the survey items received expert review from Dr. Muchun Yin, a professor in the MA program at Tunghai University. For example, the researcher originally asked for the participants to fill in their level of English proficiency as background information, but Dr. Yin considered it akin to self assessment, which was subjective to answer. Therefore, the researcher deleted the question. Moreover, in the section probing students' prior experiences of using portfolios and performing peer assessment, Dr. Yin suggested that the researcher ask specifically what course and what subject one took in his or her experiences. Besides, item 13 initially contained too much information which might confuse the readers: I think peer feedback in e-portfolio provides opportunities for reflection, which is helpful to my subsequent design of the e-portfolio in English. Dr. Yin suggested the researcher to either separate it into 2 items or clarify its meaning: I think peer feedback in e-portfolio will provide opportunities for reflection, which is helpful to my English learning in the future. Under her thesis advisor's help, the researcher

revised and modified some wordings of the questionnaire items. The questionnaire was administered both in the beginning and the end of the study.

3.4.2 Semi-structured Interview

Semi-structured interviews are “the classic structure for qualitative research in the social science and the most commonly used format in student research projects” (Whittaker, 2009, p.34). Berg (2009) highlighted the benefits of employing this data collection method.

The flexibility of the semi-structured interview allowed the interviewers both to ask a series of regularly structured questions, permitting comparisons across interviews, and to pursue areas spontaneously initiated by the interviewee. This resulted in a much more textured set of accounts from participants than had only scheduled questions been asked. (p.109)

Adapted from relevant prior studies (Chen & Warren, 2005; Hsu et al., 2008; Li, 2009; Pinkman, 2005; Resnik, 2005), the interviews were conducted in order to offer qualitative data to further clarify the results of the questionnaires. The major themes of interviews involved students’ perceptions of e-portfolio learning, peer assessment, and the influence of e-portfolio learning and peer assessment on their English language education (see Appendix E for the interview questions). The researcher scrutinized student perspectives of peer assessment and English learning after implementing a semester’s e-portfolio project. The interviews were conducted in

Chinese in order to help the participants better comprehend the questions and express their opinions freely. The whole interview process was audio-recorded and transcribed verbatim.

Before collecting the data, the interview questions were piloted by several students with experiences of performing e-portfolios as well as under Dr. Yin's expert review. Afterwards, the researcher revised some wordings and grammatical errors in the interview items under her thesis advisor's instruction.

3.5 Data Collection Procedures

Data collection lasted for a whole semester starting from September, 2010 to January, 2011(see Table 3.2 schedule for data collection procedures). The researcher served as an outsider-researcher in this course, and she extracted the peer assessment activities for exploration in this study.

The questionnaire was conducted both in the beginning and end of the course, and the interviews were held after this semester-long course. In the beginning of the course, students were administered the pre-questionnaire to document their background information and their perceptions of peer assessment, e-portfolio learning, and the 2 elements' influence on their English learning. Prior to answering the questionnaires, the students were told that their answers would not influence their scores in the course, and the questionnaires were delivered anonymously. In the end

of the course, the students were administered the post-questionnaire in order to probe their attitudes and perceptions of peer assessment, e-portfolio learning, and their influence on the students' English learning. Afterwards, twenty-seven students were interviewed for 15 to 20 minutes individually in order to help assist interpreting the outcomes of questionnaires.

Table 3.2 Schedule for Data Collection Procedures

Data collection \ Time	2010				2011
	Sep.	Oct.	Nov.	Dec.	Jan.
Questionnaire distribution	●				●
Student interviews					●

3.6 Data Analysis

Findings from the questionnaires and interviews were analyzed in response to the research questions of the study. As for quantitative data, paired t-tests were conducted to compare items in the pre- and post- questionnaires to see if any significant differences exist. Moreover, descriptive statistics from pre- and post-questionnaires were displayed using SPSS version 15.0. Tables of frequencies and percentages were reported and analyzed to show how many people agree or disagree with the categories

in the questionnaire. This would reveal the tendencies whether students are in favor or against peer assessment in e-portfolio learning and what are the influences on their attitudes toward learning English after a semester's participation in the project.

The grounded theory proposed by Glaser and Strauss (1967) were used to code and analyze the interview results. The grounded theory is different from other research approaches because it explains the phenomenon being examined. It generates theory from strategies implemented in collecting and analyzing data in certain context. The theory is directly grounded in the data produced and compiled by the researcher (Birks & Mills, 2011). The method is contemporarily the most popular qualitative research method used throughout diverse disciplines and subject areas (Bryant & Charmaz, 2007). According to Charmaz (2006), the grounded theory method is comprised of systematic as well as elastic guidelines for assembling and scrutinizing qualitative data to build up theories based on the data. Such method enhances viewing the data in new perspectives and probes ideas regarding the data via early analytic writing. By adopting the method, researchers can repetitively develop their data assembly and hence refine the compiled data. Grounded theory accelerates the speed of getting a clear focal point on themes emerging in the data “without sacrificing the detail of enacted scenes” (Charmaz, 2006, p.14). In the present study, the interview results were compared, contrasted, and synthesized to further buttress the issues

investigated in the survey.

The procedure of the qualitative data analysis encompassed 3 stages as Charmaz (2006) suggested: initial coding, focused coding, and theoretical coding. During the initial coding stage, the data were coded word-by-word, line-by-line, and incident-by-incident. Word-by-word analysis enables a researcher to focus on the form and flow of words, and how they affect his or her sense of them, together with their specific content (Charmaz, 2006). Line-by-line coding can be immensely useful while performing a common thematic analysis for ideas initially ignored, which will then emerge to researchers (Charmaz, 2006). In addition, coding incident to incident allows researchers to recognize properties of emerging conception (Charmaz, 2006).

At the second stage, the researcher used focused coding to integrate and explain larger portions of data to decide what initial codes involve the most analytic sense so that the data can be categorized adequately. Connecting or integrating categories is a vital task at this stage (Birks & Mills, 2011). By applying the means of constant comparison of data, comparison is made among categories and their sub-categories when the researcher queries these medium-level concepts' relationships with one another (Birks & Mills, 2011). At this stage, gaps would be found out as well, and more questions would be proposed, calling for further data analysis to acquire a satisfying answer (Birks & Mills, 2011).

At the third stage, theoretical coding was conducted to specify relationships between the developed categories during focused coding. Such coding procedure helps to generate coherent and apprehensible analysis (Charmaz, 2006). The researcher would clarify the context and individual conditions for a particular phenomenon related to peer assessment. The changed phenomenon would be specified under the conditions and its outcomes would be outlined hereinto. For example, several students may turn to the negative side of viewing peer assessment near the end of the study, which cannot be inferred that peer assessment is not worth implementing. This shift of attitudes may be due to their peers' laziness of offering feedback within their groups, whereas peers in other groups may give useful and abundant comments to their members.

The analytical stages of grounded theory are recursive and keep overlapping (Birks & Mills, 2011). While at the theoretical coding stage, the researcher often should revert to essential coding activities in order to confirm that the theory stays grounded (Birks & Mills, 2011).

CHAPTER FOUR RESULTS

This chapter discusses the research findings concerning EFL students' perceptions of peer assessment in e-portfolios. In the first section, the questionnaire results are provided, including the description of participants' profile, t-tests and individual item's descriptive statistics. In the second section, the interview findings are further integrated into specific examination of survey items in order to cross validate their statistical results.

4.1 Questionnaire Results

The participants' profile is presented first. Then, the 3 variables' paired t-tests are computed in order to evaluate student perceptions of this e-portfolio project before and after partaking in the study. Finally, individual item's descriptive statistics, involving each item's paired t-test, are calculated and presented.

4.1.1 Participants' Profile

Based on the data collected from the pre-questionnaire, the participating students' profiles were as follows. As for years spent in studying English, five of the 27 students had spent 5 to 7 years studying English, thirteen had spent 8 to 10 years and 7 of them had spent more than 10 years. Concerning prior experiences of using e-portfolios and performing peer assessment, ten of the students had used e-portfolios and 5 had participated in peer assessment activities in other courses. The

questionnaire results suggest that more than half of the participants had not used e-portfolios before, and most of them had no experience assessing peers.

4.1.2 Paired T-Test Results

To investigate how EFL students perceived peer assessment and what problems or difficulties they encountered in the e-portfolio project from the beginning to the end of the study, paired t-tests were conducted on the 3 variables: 1) student perceptions of e-portfolio learning, 2) student perceptions of peer assessment, and 3) student perceptions of peer assessment in the e-portfolio project (see Table 4.1 to Table 4.3).

Table 4.1 Paired T-Test of Student Perceptions of E-portfolio Learning

	Paired Differences					t	df	Sig.(2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
PreEP-PostEP	Pre: 3.08 Post: 3.10	.70187	.05829	-.13590	.09452	-.355	144	.723

Note: PreEP is the abbreviation of Pre-questionnaire of Student Perceptions of E-portfolio Learning; PostEP is the abbreviation of Post-questionnaire of Student Perceptions of E-portfolio Learning.

Table 4.2 Paired T-Test of Student Perceptions of Peer Assessment

	Paired Differences					t	df	Sig.(2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
PrePA-PostPA	Pre: 2.97 Post: 2.96	.78720	.03774	-.06269	.08568	.305	434	.761

Note: PrePA is the abbreviation of Pre-questionnaire of Student Perceptions of Peer Assessment; PostPA is the abbreviation of Post-questionnaire of Student Perceptions of Peer Assessment.

Table 4.3 Paired T-Test of Student Perceptions of Peer Assessment in the E-portfolio Project

	Paired Differences					t	df	Sig.(2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
PrePAinEP-PostPAinEP	Pre: 3.13 Post: 3.14	.62911	.05225	-.11016	.09637	-.132	144	.895

Note: PrePAinEP is the abbreviation of Pre-questionnaire of Student Perceptions of Peer Assessment in the E-portfolio Project; PostPAinEP is the abbreviation of Post-questionnaire of Student Perceptions of Peer Assessment in the E-portfolio Project.

As shown in Table 4.1 to Table 4.3, there is no significant *t* value, indicating that the participants' perceptions of e-portfolio learning, peer assessment, and performing peer assessment in the e-portfolio project were not significantly different after taking this semester-long course. In other words, the students appeared to retain positive opinions toward the 3 variables throughout the study. It was also possible that they held negative opinions of the 3 variables throughout the e-portfolio project.

In sum, the 3 variables lacked noticeable difference in any of the paired t-tests. Such results seemed to imply that the participants did not change their perceptions of e-portfolio learning, peer assessment, and performing peer assessment in the e-portfolio project as a result of their participation in the study. To clarify the survey results, more exploration of the variables' individual items is necessary to depict how the students perceived peer assessment in the e-portfolio project.

4.1.3 Individual Item's Descriptive Statistics

Table 4.4 demonstrates the frequencies of response (%), means (M), standard deviations (SD) and paired t-tests of the 5 items describing “student perceptions of e-portfolio learning” in pre- and post-questionnaires. As shown in Table 4.4, no significant difference is found in these individual items. Nevertheless, the grand mean of the post-questionnaire (3.10) and the fair portion (beyond three-fourth) of students' positive responses to all statements revealed their modest confirmation of e-portfolio in promoting their English learning. Specifically, although a few respondents disagreed that the e-portfolio benefited their English learning in item 18, most participants showed positive attitudes toward this item on the pre- (100%) and post-questionnaire (86.2%). On item 3, approximately 80% of participants agreed that the e-portfolio enhanced discussions about English learning among peers (pre- = 79.3% and post-questionnaire = 82.7%). For item 6, similarly, around 83% of

respondents considered an e-portfolio a good language learning tool initially, rising to 89.6% at the end of the semester. As to item 11, through e-portfolio collection, nine-tenths of the participants thought that English learning became more interesting (pre- = 96.5%, post-questionnaire = 93.1%). On item 21, roughly three-fourths of the students believed that their English ability was fostered through e-portfolio learning (pre- = 75.9%, post-questionnaire = 79.3%). In sum, the majority of students agreed that e-portfolio increased their learning motivation and facilitated their English learning.

Table 4.4 Comparison of Student Perceptions of E-portfolio Learning in the Beginning and the End of the Study (5 items)

Item Description	Test	4	3	2	1	M	SD	t
		Percentages (%)						
3. I think the use of an e-portfolio will enhance discussions about English learning among peers.	Pre	31.0	48.3	20.7	0	3.10	.72	.273
	Post	24.1	58.6	17.2	0	3.06	.65	
6. I think an e-portfolio is a good language learning tool.	Pre	20.7	62.1	17.2	0	3.03	.62	-.902
	Post	24.1	65.5	10.3	0	3.13	.58	
11. I think English learning becomes more interesting through an e-portfolio collection.	Pre	31.0	65.5	0	3.4	3.24	.63	-1
	Post	44.8	48.3	6.9	0	3.37	.62	
18. I think the use of an e-portfolio will be beneficial to my English learning.	Pre	13.8	86.2	0	0	3.13	.35	1.072
	Post	17.2	69.0	10.3	3.4	3.00	.65	
21. I am confident that my English ability will be fostered through e-portfolio learning.	Pre	13.8	62.1	24.1	0	2.89	.61	-.239
	Post	13.8	65.5	20.7	0	2.93	.59	

Mean of Pre-test	3.08
Mean of Post-test	3.10

Note: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

Table 4.5 presents the 15 items of “student perceptions of peer assessment” in pre- and post-questionnaires. As reported in the Table, students’ responses show no significant difference on all items before and after participating in the peer assessment activities except for item 12, describing the students’ perception that there was some bias in peer assessment. Most of the items were strongly supported (beyond 80%), indicating an overall favorable tendency of student perceptions of peer assessment from the beginning to the end of the study. Nonetheless, the solely significant results of item 12 displayed the respondents’ shift to the negative perception concerning the fairness of peer assessment (item 12: pre- = 44.8%, post- = 79.3%). The students initially believed that peer assessment produced fair and objective results, but after a semester of evaluating each other, they turned to regard that this evaluation method contained some bias. In addition to this item’s result, findings of other items were described as follows.

Firstly, three-fourths of participants said that peer assessment activities made them aware of their strengths (item 4: pre- = 86.2%, post- = 75.8%) and weaknesses (item 9: pre- = 79.3%, post- = 89.7%) in English learning. Secondly, most participants considered the experience of peer assessment helped them to better understand the

improvements in their own (item 14: pre- = 93.1%, post- = 89.6%) or other classmates' (item 24: pre- = 93.1%, post- = 89.7%) English learning. A majority of students realized how to use English for communication through peer assessment activities (item 15: pre- = 79.3%, post- = 82.8%). Thirdly, a great number of students regarded themselves as more willing to participate in group discussions. The students became more conscious of their own contribution (item 5: pre- = 89.6%, post- = 93.1%) and more involved in the classroom activities (item 20: pre- = 89.6%, post- = 86.2%; item 25: pre- = 89.7%, post- = 96.5%). Fourthly, many students stated that the experience of peer assessment enhanced their relationships with peers (item 10: pre- = 86.2%, post- = 87.2%) and helped motivate them to learn English (item 19: pre- = 86.2%, post- = 82.7%). Over 70% of the respondents deemed it more comfortable to perform peer assessment while learning English during the study (item 16: pre- = 72.4%, post- = 72.4%). Fifthly, The respondents thought that peers could assess fairly (item 7: pre- = 58.6%, post- = 65.5%). Nevertheless, the agreement that grades from peers would be a fair reflection of their own efforts decreased (item 22: pre- = 75%, post- = 62.1%). Finally, a large number of students disagreed that peer assessment was time-consuming (item 17: pre- = 89.7%, post- = 86.2%). Students appeared to think that they had enough time to perform peer assessment.

Table 4.5 Comparison of Student Perceptions of Peer Assessment in the Beginning and the End of the Study (15 items)

Item Description	Test	4	3	2	1	M	SD	t
		Percentages (%)						
4. I think peer assessment activities will make me aware of my strengths in English learning.	Pre	27.6	58.6	13.8	0	3.13	.63	.941
	Post	24.1	51.7	24.1	0	3.00	.70	
5. I think the experience of peer assessment will make me more conscious of my own participation and contribution in class.	Pre	24.1	65.5	10.3	0	3.13	.58	-1.651
	Post	41.4	51.7	6.9	0	3.34	.61	
7. I think peers can assess fairly.	Pre	10.3	48.3	37.9	3.4	2.65	.72	-.226
	Post	10.3	55.2	27.6	6.9	2.68	.76	
9. I think peer assessment activities will make me aware of my weaknesses in English learning.	Pre	17.2	62.1	20.7	0	2.96	.62	-1.162
	Post	20.7	69.0	10.3	0	3.10	.55	
10. I think the experience of peer assessment will enhance my relationships with my classmates.	Pre	31.0	55.2	13.8	0	3.17	.65	-.779
	Post	48.3	37.9	10.3	3.4	3.31	.80	
12. I think there is some bias in peer assessment.	Pre	6.9	48.3	34.5	10.3	2.51	.78	2.985**
	Post	3.4	17.2	58.6	20.7	2.03	.73	
14. I think the experience of peer assessment will help me better understand my growth and improvements in English learning.	Pre	13.8	79.3	6.9	0	3.06	.45	-.571
	Post	24.1	65.5	10.3	0	3.13	.58	
15. I will know how to communicate with my classmates in English through peer assessment activities.	Pre	17.2	62.1	17.2	3.4	2.93	.70	-.648
	Post	20.7	62.1	17.2	0	3.03	.62	
16. I think I feel comfortable with performing peer assessment in English learning.	Pre	6.9	65.5	27.6	0	2.79	.55	-.215
	Post	10.3	62.1	27.6	0	2.82	.60	
17. I think peer assessment is time-consuming.	Pre	20.7	69.0	10.3	0	3.10	.55	.420
	Post	20.7	65.5	10.3	3.4	3.03	.68	
19. I think feedback from peers helps motivate me to learn English.	Pre	17.2	69.0	13.8	0	3.03	.56	1.410
	Post	3.4	79.3	17.2	0	2.86	.44	

Item Description	Test	4	3	2	1	M	SD	t
		Percentages (%)						
20. I think the experience of peer assessment will directly influence me to participate more in the group.	Pre	24.1	65.5	10.3	0	3.13	.58	.769
	Post	17.2	69.0	13.8	0	3.03	.56	
22. I think grades from peer assessment will be a fair reflection of the students' efforts.	Pre	10.7	64.3	21.4	3.6	2.82	.66	1.095
	Post	6.9	55.2	37.9	0	2.68	.60	
24. I think the experience of peer assessment will help me better understand the growth and improvement of other classmates in English learning.	Pre	10.3	82.8	6.9	0	3.03	.42	-.626
	Post	20.7	69.0	10.3	0	3.10	.55	
25. I think the experience of peer assessment will directly influence some classmates to participate more in the group.	Pre	20.7	69.0	10.3	0	3.10	.55	-1.223
	Post	31.0	65.5	3.4	0	3.27	.52	
Mean of the Pre-test						2.97		
Mean of the Post-test						2.96		

Note: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

In brief, through taking part in peer assessment activities, the students became closer to their peers and hence participated more in their own groups. Moreover, peer feedback inspired the students to learn English, enabled them to notice their strengths and weaknesses, and helped to make progress in their English ability. However, to some extent the participants were incongruous with the fairness of peer assessment.

Table 4.6 displays the 5 items of “student perceptions of peer assessment in the e-portfolio project” in pre- and post-questionnaires. As shown in the Table, in line with variable 1 (i.e., student perceptions of e-portfolio learning), there is no significant difference in these items before and after students took this course. In

another aspect, the grand mean (3.14) of the post-questionnaire was positive as that of variable 1 “student perceptions of e-portfolio learning” (3.10). Furthermore, positive responses comprise over 80% of all responses, indicating the students’ favorable perceptions of peer assessment in the e-portfolio project throughout the study. Item 1 shows that the participants had a strong preference for receiving peer feedback on their e-portfolios (pre- = 93.1%, post- = 100%). With regard to item 2, e-portfolio was deemed appropriate to assess the learning among peers (pre- =93.1%, post- = 96.6%). Item 8 showed that the students agreed that peers’ comments in the e-portfolio helped them cultivate critical and independent thinking ability (pre- = 93.1%, post- = 86.2%). As for items 13 and 23, the feedback from peers assisted the students in reflection (pre- = 96.5%, post- = 89.7%), which was beneficial to their further learning of English (pre- = 96.5%, post- = 96.5%). In summary, peer feedback was not only favored by these participants, but was considered conducive to understanding the students’ own English learning and developing independent-thinking ability.

Table 4.6 Comparison of Student Perceptions of Peer Assessment in the E-portfolio Project in the Beginning and the End of the Study (5 items)

Item Description	Test	4	3	2	1	M	SD	t
		Percentages (%)						
1. I like receiving peer feedback in the e-portfolio.	Pre	13.8	79.3	6.9	0	3.06	.45	-.812
	Post	13.8	86.2	0	0	3.13	.35	

Item Description	Test	4	3	2	1	M	SD	t
		Percentages (%)						
2. I think e-portfolio is appropriate to assess the learning among peers.	Pre	31.0	62.1	6.9	0	3.24	.57	.571
	Post	20.7	75.9	3.4	0	3.17	.46	
8. I think peer feedback in the e-portfolio will help me cultivate critical thinking and independent thinking ability.	Pre	24.1	69.0	6.9	0	3.17	.53	.941
	Post	20.7	65.5	10.3	3	3.03	.68	
13. I think peer feedback in the e-portfolio will provide opportunity for reflection, which is helpful to my English learning in the future.	Pre	17.2	39.3	3.4	0	3.13	.44	-.626
	Post	24.1	72.4	3.4	0	3.20	.49	
23. I think the feedback from peers in the e-portfolio helps me reflect on my English learning processes.	Pre	10.3	86.2	3.4	0	3.06	.37	-.902
	Post	27.6	62.1	10.3	0	3.17	.60	
Mean of the Pre-test						3.13		
Mean of the Post-test						3.14		

Note: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

4.2 EFL Students' Assessment-as-Learning Experience

In the following sections, interview data are analyzed to reveal students' perceived benefits of performing peer assessment and the problems or difficulties they confront in the assessment activities. This set of data further clarifies the quantitative analysis of survey items discussed in the previous sections.

4.2.1 Benefits of Conducting Peer Assessment

In this study, the participating students held positive perceptions of peer assessment including (1) increasing peer relations as well as involvement in the

e-portfolio project, (2) improving language proficiency, (3) broadening world knowledge, (4) identifying the convenience of e-portfolios, (5) developing critical thinking ability, and (6) recognizing the objectivity of group peer assessment. Table 4.7 summarizes the interview results of students' perceived benefits of peer assessment, which were listed based on the ranking.

Table 4.7 Benefits of Peer Assessment

Benefits	Percentages	Frequency	Rank
Enhancing Peer Relationships and Involvement in the E-portfolio Project	100%	27	1
Improving Language Proficiency	85.1%	23	2
Broadening World Knowledge	55.5%	15	3
Convenience of E-portfolio as a Learning Tool	51.8%	14	4
Developing Critical Thinking Ability	48.1%	13	5
Objectivity of Group Peer Assessment	40.7%	11	6

4.2.1.1 Peer Relations and Involvement in the E-portfolio

In the questionnaires, many of the participants agreed that they experienced enhanced relationships with their peers (item 10), which naturally fostered the students' involvement in the e-portfolio project (items 5, 20, and 25). Such positive cause and effect was further confirmed by the interview results, with all of the 27 students (100%) stating that they became more familiar with their classmates, which made them more courageous to speak English and more active in finding interesting

materials. For example, one student said, “We originally dared not speak English because of unfamiliarity with others, and then after getting familiar with one another, we keep talking in English” (S₁ in Q8)¹. Likewise, another student stated, “When getting closer to others, I become more courageous about speaking and less afraid of making mistakes, as others could accept more of my English” (S₄ in Q8). In addition, a participant commented, “Other classmates would read [my e-portfolio] and provide feedback below, so I thought it wouldn’t be good if I made a poor portfolio. I desired to do it well” (S₁₅ in Q8). Furthermore, a student remarked, “You have become used to speaking English with other classmates and making e-portfolios, so you would like to find more interesting stuff for them to see, which motivates you to compile it and explore more creative things” (S₂ in Q8).

When the students were asked if they anticipated applying these peer assessment activities to other English courses in the future, over 77% of them (21 students) answered that they did. They considered these peer assessment activities good to continue, for these activities were entertaining compared to traditional teacher-oriented instruction. For example, one student said, “Such ways of performing peer assessment are rare in my educational experiences, and I think they can indeed foster our interest in learning English, so I hope that other English courses will

¹ The researcher numbered the participants from 1 to 27. S₁ refers to the student who was numbered 1; Q8 refers to the eighth question of the interviews.

implement them as well” (S₂ in Q9). In addition, they took pleasure in interacting with their classmates, as confirmed by one participant, “If there is a chance, I absolutely hope to continue performing these [peer assessment] activities as they can foster relationships with my peers” (S₂₀ in Q9).

4.2.1.2 Improving Language Proficiency

As far as the students’ English proficiency is concerned, they reflected their improvements in speaking, quantity of vocabulary, feedback writing, reading and listening. First of all, the students made positive responses on the questionnaires about knowing how to communicate with their classmates in English through peer assessment activities (item 15). Fourteen (51.8%) of the interviewed students mentioned that they learned to express themselves in English with their classmates’ help. Also included were several ways of using English colloquially and comprehensively. For instance, a student acknowledged that talking to peers was helpful because “I understand that this sentence can also be said like that...that expression is more comprehensible to others...so next time I can use this kind of expression as well” (S₁₉ in Q3). In addition, another student mentioned that learning from classmates with higher English proficiency was beneficial in that “they use more colloquial English, which is not a fixed expression. Like the guy sitting across from me, he seems to be proficient in English. If I read more of his English, I may make a

lot of progress” (S₂ in Q2). In another aspect, two students recognized an increase in their speaking fluency. For example, one of the students said, “I have improved speaking fluency and learned some vernacular expressions from my group members” (S₉ in Q7).

Moreover, fourteen participants (51.8%) acknowledged that they absorbed more vocabulary by reading their peers’ e-portfolios and interacting with their group members in class. For example, one student said, “When you are assessing his e-portfolio, you feel that the vocabulary he selected is good and practical, so you would learn it, which is very helpful for [enhancing] your English ability” (S₂ in Q6). Likewise, another student commented, “Some classmates write in complete sentences whose grammar is perfect, and some vocabulary is unknown to you. For replying to them, you would look it up, and then memorize it, which would enlarge your vocabulary size” (S₃ in Q6). Further, one respondent remarked that correcting the use of vocabulary was pretty common. He said, “Everyone would correct your vocabulary. [At times] you may really get stuck and become unable to think of a certain word, and then peers would [give you advice], so you would get more help” (S₁₄ in Q6).

Apart from increasing the amount of vocabulary, thirteen respondents (48.1%) confirmed that being forced to writing online feedback to their classmates helped improve their writing ability. Most students had few opportunities to write in English

in other courses. As a result, the required 50-word feedback written to each of their group members' e-portfolios seemed beneficial to them. As one student mentioned, "You manage to make some sentences. Later in this course the teacher required us to write a certain number of words, making our feedback more like an article" (S₅ in Q6). Moreover, some students said that they learned more literary expression from their classmates, as stated by one, "You could learn from others' feedback. Though I could only use certain English sentences or adjectives to offer comments, others have different expressions to describe the same thing" (S₆ in Q 7). Additionally, a student pointed out her improvement in writing amount and fluency:

Originally I wrote only 2 or 3 sentences before mid-term, but afterwards I wrote with more words and thoughts.... In the past I often got stuck when replying [peers' e-portfolios]. Now although I use easier words, I key them in faster and more fluently. (S₁₇ in Q9)

Moreover, fifteen participants (55.5%) stated that they enhanced their reading ability via exploring English information related to their e-portfolios and reviewing their peers' work for giving comments and suggestions. For example, one student stated, "My reading ability is enhanced because I have to keep surfing on the Internet and filter the information" (S₂₆ in Q2). Another participant explained the reason why she considered her reading ability was improved. She stated, "Some information cannot be found in Chinese. It can be found only in English. As a result, reading in

English help you roughly know what it is talking about” (S₂₀ in Q5). Furthermore, a student found that her reading speed increased and that she was more able to get the gist, “This article contains many words, but not every sentence is the focus. I could read faster and know what the content is about” (S₁₇ in Q6).

In addition, eleven interviewees (40.7%) said that they made progress in their listening ability through listening to other classmates’ speaking. As described by one student, “As you listen more often to your peers’ use of English, even if there are 1 or 2 unknown words, you are able to perceive the main idea of their talk” (S₃ in Q4).

4.2.1.3 Broadening World Knowledge

In addition to the participants’ improvement in English proficiency, their recognition of personal growth and improvement may also derive from the expansion of their world knowledge during the processes of completing e-portfolios and discussing with their peers. Fifteen students (55.5%) stated that they extended their horizons from the work and feedback their classmates provided. For instance, one student remarked, “After reading the content, others may have different perspectives that you never think of. From their feedback you know how many ideas they can generate from the topic, so you would gain knowledge from one another” (S₃ in Q3). Moreover, a student stated that his classmates triggered his originality and creative thinking. He said, “If I want to introduce a chair, a peer told me that I could find a

different or special chair. Another example is that noodles can be made of flour, but some people may use other ingredients to make them” (S₁₈ in Q3). In addition, a student considered the themes of the e-portfolio project close to his life. As commented by him, “I learn things around me and in English. In previous English courses, I usually read textbooks or some simple conversations or novels, which were hard to connect to my life” (S₁₄ in Q6).

4.2.1.4 Convenience of E-portfolio as a Learning Tool

Similar to the questionnaires results, during the interviews about 88% of the students (24 of them) said they were in favor of using e-portfolios as a language learning tool. More than half of them (14 students) thought that e-portfolios were convenient mainly for searching for information as well as reading their own or other classmates’ e-portfolios any time. For example, one student mentioned, “As for learning a language, [using e-portfolios] allows me to easily check past files and connect to others’ e-portfolios by means of links” (S₂₅ in Q2). Similarly, a student considered that e-portfolio is instantaneous as “you can go online any time to read the different themes of peers’ work they uploaded.... [The e-portfolio] is like a magazine, except that it is an electronic type. Any time you want to read it, you’re doing online learning” (S₃ in Q2). Moreover, one student commented that “it is very effective in searching for information. Because [making e-portfolios] requires reading English

sources, I feel that I have a little improvement [in reading English] (S₁₆ in Q2).

4.2.1.5 Developing Critical Thinking Ability

Thirteen of the participants (48.1%) developed their critical thinking ability through inspecting their own strengths and weaknesses in English when participating in peer assessment activities. The results were consistent with the students' agreement on the questionnaire items describing that peer feedback in the e-portfolio enabled them to cultivate critical and independent thinking (item 8) and aided them in reflecting on their English learning processes (items 13 and 23). Moreover, the assessment activities made them aware of their own strengths and weaknesses in English learning (items 4 and 9). For example, one student said, "I can regard myself as a temporary teacher assistant to evaluate others. After the assessment I would get my own results, so I can see what areas I need to improve in or maintain my strengths" (S₇ in Q9). Similarly, another student said that "I can realize my classmates' average performance in making e-portfolios and then reflect on whether my work has any problems or weaknesses" (S₃ in Q4). Moreover, another student remarked that her group leader made painstaking comments, pointing out "what is missing in the article or the parts of vocabulary and sentence making that needed to be increased" (S₁₅ in Q8).

4.2.1.6 Objectivity of Group Peer Assessment

In the questionnaire, more than 60% of students believed that peers could assess fairly (item 7). These findings corresponded with the interview results, showing the students' recognition that peer assessment conducted in groups rather than individuals was a more objective evaluating method. For example, a student said, "The midterm peer assessment is performed by many classmates, which is more objective. If the teacher only evaluates the work...if she doesn't like the red color, you would fail if you wrote with it" (S₂₆ in Q3). Similarly, a student commented that "If more people assess together, it is less likely that an e-portfolio would be evaluated based on a single individual's impression of the author...because if the work is good, the scores they give would not differ too much" (S₈ in Q5). However, one student did confess his bias in favor of his acquaintances, "I may give higher scores to my acquaintances. However, if an assessor is from other department, he or she would evaluate the e-portfolio from more objective perspectives...which means you cannot fight with the whole group to influence their decisions" (S₉ in Q3).

4.2.2 Perceived Concerns and Difficulties

In this section, several concerns and difficulties arose during the peer assessment processes. These concerns and difficulties mainly encompassed the students' lack of confidence in conducting the assessment, the unfairness of assessment and the

learners' affective problems generated during the evaluation activities.

4.2.2.1 Lack of Confidence in Conducting Peer Assessment

As depicted in the interview data, over 60% of the participants (N= 17) were not confident of conducting peer assessment despite most students' general agreement that they were comfortable with assessing their peers in English learning (item 16). This concern was on account of their language expression problems, limited vocabulary, and frustration in understanding English problems.

In terms of expression problems, the interviewees remarked that it was difficult to express themselves in English, as described by one student, "I don't know how to express myself in English, so I have to speak using some Chinese for others to realize what I'm trying to express" (S₁₅ in Q7). Moreover, another student responded that he felt tired from speaking English all along in class. He said, "Perhaps you have to keep talking in the universities, but I just don't know how to talk. Maybe while learning a language one needs to keep speaking, but it makes me fatigued" (S₁ in Q8).

Apart from that, the students stated their frustration in examining English problems. They had difficulty in pinpointing their classmates' mistakes, as mentioned by one student, "When we reply to the feedback, the classmates may not spot spelling mistakes. Further, they may also make grammar mistakes in their feedback. Not until the teacher returns it do we notice these mistakes" (S₂₀ in Q4). Another student was not

confident of her classmates' English proficiency as they "may not be able to correct my mistakes, so the next time I may speak wrongly as well" (S₁₄ in Q4).

Furthermore, some students were concerned with their insufficient vocabulary knowledge to perform peer assessment activities. For instance, one of them reacted, "My speaking is kind of short, and the vocabulary for common usage is limited" (S₂₂ in Q8). Similarly, another student said, "Sometimes I don't really understand the meanings of certain words, so I get stuck when I read and speak...which influences my subsequent apprehension of the text or the flow of my expression" (S₁₉ in Q7).

4.2.2.2 Unfairness of the Assessment

In spite of the students' overall favorable perspectives on group peer assessment, many of them indicated reasons why they thought peer assessment were unfair. Two major reasons were identified during the processes of peer assessment, including assessors' subjective attitudes and peers' irresponsible manners toward the e-portfolio activities.

4.2.2.2.1 Subjectivity

Twelve assessors admitted that they held preconceptions about their peers, which reduced the fairness of assessment, as described by one student, "If we read someone's e-portfolio, we just read his or her work. However, if we know who the author is, we would unavoidably add our impression of him or her" (S₈ in Q4).

Similarly, another student said, “If I’m closer to you, I will give you higher scores” (S₁₈ in Q4). In addition, a couple of students were also concerned with the closeness among certain groups when performing peer assessment, presented in the following excerpt.

At that time I felt that there was suspicion between groups. My group and the group across from us evaluated each other, and I heard them say why this person did not explain the vocabulary carefully. Then I realized who this person was in my group. In my mind I knew whether I had replied to the feedback. Then it turned out that when I evaluated them, I thought they would assess me poorly, so I didn’t have to give them high scores. (S₂₄ in Q3)

4.2.2.2 Irresponsible Attitudes

In addition to the assessors’ subjectivity, eighteen students pinpointed their peers’ were irresponsible in offering feedback. They complained about receiving shallow or very limited feedback, reflecting that most peers’ comments were identical to sharing of personal thoughts and feelings, whereas little constructive feedback was provided to improve their e-portfolios. For example, a participant said, “Some comments do not tell you what to improve. The audience simply shares his or her feeling to the work. It’s just like introducing an electronic product to them, they just respond that it is cool and they also want one” (S₂₂ in Q7). In a similar vein, another student remarked, “Almost everyone writes his or her own thoughts [on peers’ work]. Deeper comments are suggestions like enlarging words or being consistent with the words’ colors” (S₆ in

Q3). Still another student responded, “The feedback peers give is alike. They ask how to find the object, share the work they like with you in e-portfolio, and comment that it is fun” (S₁₈ in Q7).

4.2.2.3 Affective Concerns

In addition to the participants’ lacking confidence in performing peer assessment, their affective problems may also diminish their comfort with the evaluation. Thirteen students were conservative in pointing out their classmates’ mistakes or problems for fear of breaking relationships. As commented by one student, “If the group members get too close to one another, you may make serious errors but no one would remind you, for they are worried about hurting your feelings” (S₂ in Q3). On the other hand, several students said that they would remind their classmates of the errors privately rather than pointing them out in the online public space. As stated by one of students, “For wrong spelling of words, I would correct them for my peers before the teacher did so” (S₉ in Q6). Moreover, a few students even felt it was stressful to assess their acquaintances as in one student’s remark:

When conducting individual peer assessment, the assessee may be one of your prior group members, which leads to lower standards on his or her work because of the pressure. The assessee may know it is you who do the evaluation, because when walking around, he or she may glance over and find that you are evaluating his or her work. Then the person may come and say, “Oh, it is you who evaluate my work,” and then go away. Then you would feel stressful. (S₂₀ in Q4)

4.3 Summary

The present study displayed both the positive and negative perceptions reported by the EFL students when they were engaged in applying electronic portfolios into language learning. In general, according to the survey findings, around 80% of students held positive perceptions of peer assessment and e-portfolio English learning from the beginning to the end of this course. As further shown in the interview data, the participants' responses supported the survey findings overall. The most favorable interview result was the improvement of peer relationships recognized by all of the students, and then it further fostered their participation in the e-portfolio project. In addition, the students acknowledged their growth and improvement in English proficiency and the expansion of world knowledge. Moreover, they responded that e-portfolios could be conveniently implemented as a language learning tool. Furthermore, the students developed critical thinking ability by realizing personal strengths and weaknesses from their classmates' feedback. Finally, the students indicated that peer assessment conducted in groups produced fairer and more objective results than when conducted by individuals. However, several concerns and difficulties were revealed during the evaluation process, including limited confidence in evaluating others, the perceived unfairness of peer assessment, and affective concerns emerging from this assessment-as-learning experience.

In the Chapter that follows, student perceptions of peer assessment within an e-portfolio context are discussed by answering the research questions.

CHAPTER FIVE

DISCUSSION AND CONCLUSION

5.1 Overview

This chapter summarizes the results based on the 2 aforementioned research questions. The discussion of the research findings is elaborated according to the reviewed literature. Furthermore, pedagogical implications are provided for instructors to use peer assessment in e-portfolio projects. Finally, the limitations of the study and research suggestions are offered.

5.2 Summary and Discussion

1. What are EFL students' perceptions of peer assessment in an e-portfolio project?

According to the data analysis in this study, the majority of students kept positive perceptions of performing peer assessment in e-portfolios throughout the investigation. The students acknowledged that peer assessment was most helpful in increasing peer relations, which further promoted their involvement in the e-portfolio project. In addition, the students considered peer assessment beneficial to improve language proficiency, broaden world knowledge and develop critical thinking ability. Moreover, they perceived the convenience of using e-portfolio as a language learning tool and recognized the objectivity of peer assessment conducted in groups. These findings are elaborated as follows.

Firstly, all of the students recognized the enhancement of peer relationships as

they increased social interaction with their classmates. In turn, this familiarity among peers helped them become more involved in the e-portfolio project during this study. The students were inspired to find more interesting materials for their e-portfolios because they were aware that others would read their work. Secondly, the students enhanced their general English proficiency through interacting with peers both in class and online. They had more opportunities to practice speaking and writing in English with other classmates, which helped them improve their English language skills. Thirdly, the students broadened their world knowledge by participating in peer assessment activities, in which they searched for related sources for their work as well as read and discussed each other's work with various advertisement topics. Fourthly, the students cultivated their critical thinking ability by means of realizing personal advantages and disadvantages in English they acquired from peers' comments. Fifthly, the e-portfolio was regarded as a convenient tool for looking for theme-based English information and reading the students' work online. Sixthly, the students recognized that peer assessment performed in groups rather than by individuals produced more objective evaluation results. The students believed that having more assessors to evaluate an e-portfolio entry could prevent subjective opinions from influencing the assessment outcomes.

Specifically, enhancing peer relationships was the foremost benefit of peer assessment perceived by students. The students held overwhelmingly positive perceptions (100% of students) of peer assessment in enhancing student relationships with each other, which further fostered the students' participation in their English learning tasks. This finding was similar to Pinkman (2005), reporting that what students favored most to peer assessment activities was the enjoyment of interacting with others. Such a result stimulated the students to contribute more to their e-portfolio projects. By contrast, this finding differed from the results of most previous studies (e.g., Chen, 2005; Chen, 2006b; Joeh, 2010; among others) which depicted students' perceived major benefits of peer assessment in relation to language learning. Students in these previous studies considered that peer assessment improved their English learning motivation (e.g., Chang, 2003; Joeh, 2010; Peng, 2009; Yang, 2004) or English proficiency (e.g., Chang, 2003; Chen, 2005; Chen, 2006b; Joeh, 2010; Lai, 2004; Lin, 2009; Peng, 2009; Yang, 2004).

Despite the challenges of conducting peer assessment, which will be discussed in the next section, the majority of students still looked forward to continuing these evaluation activities in future English courses. Similar to Chang's (2003) participants, students in this study enjoyed interacting with their classmates. Thus, it could be inferred that peer assessment is a successful type of evaluation, which is worth

conducting to help reinforce EFL students' positive learning attitudes and enhance their English proficiency.

2. What concerns and difficulties do EFL students encounter in the peer-assessment experience?

The results of this semester-long e-portfolio project revealed several major concerns and difficulties, including (1) students' lack of confidence when conducting peer assessment, (2) students' perceived unfairness toward peer assessment, especially peer assessment conducted by individuals, and (3) students' affective concerns generated during the assessment. Regarding the students' lack of confidence when performing peer assessment, they were uncertain about their peers' or their own English proficiency. The students felt frustrated by failing to inspect others' English problems, found it difficult to express themselves, and were aware of their limited vocabulary. Moreover, the students' perceived unfairness of peer assessment was the result of their subjective attitudes toward their classmates and their peers' irresponsibility in conducting the evaluation. One of the reasons for the students' subjectivity and unfairness when evaluating peers was due to friendship because they would assign higher grades to their acquaintances. This personal preference particularly led to more subjective evaluation results especially when the students performed individual peer assessment. The other reason was because of peers'

irresponsible manner. About two-thirds of the students stated that their peers provided superficial or very limited feedback to them, reflecting a lack of responsibility in helping their classmates. Finally, the students' affective concerns were another factor leading to the unfairness of peer assessment, since they were worried about offending others. Hence, they were conservative when having to pinpoint their classmates' mistakes or weaknesses because they were afraid of breaking relationships with peers. As a result, they may have ignored any mistakes their classmates made or neglected to correct them until they met privately.

Derived from the participating students' concern regarding the unfairness toward peer assessment, the current study further depicted these EFL students' perception that peer assessment conducted in groups was more objective than by individuals. This finding echoed the results of previous studies, demonstrating students' recognition that peer assessment performed in groups produced fair evaluation outcomes (e.g., Chen & Warren, 1997; Chen, 2005; Chen, 2006b), despite that two extant studies showed some participants' negative attitudes toward the fairness of group peer assessment (Lai, 2004; Peng, 2009). In terms of peer assessment employed by individuals, students in the present study tended to regard it subjective. This result was in line with some prior studies (e.g., Chen, 2009; Joeh, 2010) where some students were doubtful of their classmates' evaluation ability and considered that the

peer assessment activities were not objective assessment methods.

The above discussions suggest the inconsistent findings of peer assessment conducted in groups and limited literature exploring the 2 types of assessment methods. There were both positive and negative findings concerning students' perceptions of the fairness of group peer assessment in the literature. Moreover, most prior research examined group and individual peer assessment separately. In order to fill in the aforementioned gaps, it is worth further scrutinizing the difference between group and individual peer assessments as investigated in the current study.

5.3 Pedagogical Implications

According to the results and discussions of this study, several pedagogical implications are proposed for improving EFL learning when implementing peer assessment in an e-portfolio project. The first 2 points are based on the major benefits found in this study, and the remaining implications are provided to cope with the reported concerns and difficulties.

Firstly, the current study showed that peer assessment was beneficial in improving EFL students' general language proficiency. To enhance learners' English learning, instructors could provide guiding questions to involve students in a group discussion about their e-portfolio entries. For instance, instructors could ask students to propose the merits and demerits of peers' performance.

Secondly, the interactive nature of peer assessment should be promoted to make students' English learning process a delightful and enjoyable one. Similar to previous literature (e.g., Chang, 2003; Peng, 2009; Wang, 2002), the majority of students in the current study expressed their anticipation to continue performing these peer assessment activities in other English courses, since they enjoyed interacting with others and were able to foster relationships with their classmates. As suggested by Bruffee (1984), students will enhance a meaningful learning experience by interacting with others in peer assessment activities.

Thirdly, in addition for teachers to constantly monitor students' feedback to their classmates (Hung, 2006), developing students' learning autonomy through peer assessment (Chen, 2005) can amend their evaluation behavior toward providing comments. For example, instructors could have students assess each other's contribution to their English learning. Students could be asked to score 1 to 10 for their peers' attitude toward offering feedback to other group members, and whether their peers' opinions are helpful to improve their performance, and then write down the reasons. In so doing, students can become more responsible for their own English learning.

Fourthly, instructors should provide more sample models and more opportunities for students to practice peer assessment (Chen, 2005; Hung, 2006; Peng, 2009). As

found in this study, students tended to mistrust the fairness of individual peer assessment, which was performed merely once. By practicing individual peer assessment more often and demonstrating how to assess an e-portfolio, students may boost their confidence to evaluate their classmates' work. In addition, this would help them examine peers' English problems, reduce their discomfort in assessing their peers, and foster their ability to express themselves.

Fifthly, involving more students in assessing a given e-portfolio entry may produce more objective results. This would help to tackle a couple of students' concerns about the subjectivity of individual peer assessment, in which each e-portfolio is only evaluated by one student. Increasing the number of assessors, such as 3 above, and changing assessors for each time of evaluation (Lin, 2009) could improve the fairness of peer assessment.

Sixthly, confidentially submitting peer-assessment evaluation sheets via e-mail to instructors can help address students' affective concerns (Peng, 2009). This would alleviate the concern of those students having their views exposed to others, which makes them cautious about indicating their classmates' mistakes or weaknesses.

5.4 Limitations

While the present study sheds some light on EFL students' perceptions of peer assessment in an e-portfolio context for English learning, it has several limitations.

First of all, this study used convenient sampling and a small sample size of participants (i.e., 27 students), all of whom attended the same course at the same school. Hence, the research results may not be representative of all EFL students who evaluate their peers in an e-portfolio context. In addition, this study was conducted for a short duration of data collection (i.e., a semester-long), which may not be sufficient time to gauge students' shift in perceptions of performing peer assessment in an e-portfolio context. Furthermore, limited data collection methods were employed in this study. Using questionnaires and student interviews to compile the data may be insufficient to exploring students' English learning processes and challenges they encountered in this project.

5.5 Suggestions for Future Research

Considering the aforementioned findings and limitations, a number of suggestions are provided for further research concerning EFL students' perceptions of peer assessment in an e-portfolio project.

Firstly, future studies could involve a greater number of students from schools in a variety of districts, as well as students with various levels of English proficiency. Moreover, peer assessment activities could be applied to other English learning contexts, such as English for Academic Purpose (EAP) or English for Specific Purpose (ESP) courses.

Secondly, future researchers could conduct a longitudinal study in order to keep track of the students' perceptions of performing peer assessment in an e-portfolio project. With a longer duration of investigation, researchers could further scrutinize students' assessment-as-learning experience.

Thirdly, multiple methods should be employed to collect the data in order to more thoroughly scrutinize EFL students' learning and the problems encountered during the peer assessment process. For example, researchers could include classroom observation to examine students' interaction with their classmates in the assessment activities. Moreover, conducting interviews with instructors would help view the students' learning from a different perspective, providing more solid standpoints to inspect their perceptions of peer assessment in an e-portfolio project.

Fourthly, future research could scrutinize the difference of student perceptions of group peer assessment from individual peer assessment. For example, researchers could examine if students' confidence of evaluating each other varies after a longer duration of conducting the 2 types of evaluation approaches. Moreover, it is of significance to document students' perceived advantages and disadvantages of group and individual peer assessments.

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Chinese Reference

楊政坤 (民 93)。國小英語學習檔案評量網路系統之設計與實施成效。國立台北英語教育研究所碩士論文，未出版，台北市。

Appendix A

Pre-questionnaire Conducted in the Beginning of the Semester -- English Version

Dear students,

This questionnaire is designed to realize your perspectives and attitudes toward performing peer assessment in e-portfolios. There is no right or wrong answer. Please respond each item with your authentic perceptions and experiences. This questionnaire will be used only for the research purpose. It will not be used for grading. Thanks for your cooperation!

Best wishes,

Ann

September 27, 2010

Part I. Background information:

1. Major: _____
2. Year: _____
3. Gender: _____
4. Age: _____
5. I have learned English for _____ years.

Part II. Please respond to the questions based on your own experiences:

1. a. Have you ever used a portfolio? Please circle the answer: Yes No
b. If yes, in what subject did you use the portfolio?

2. a. Have you ever used an e-portfolio? Please circle the answer: Yes No
b. If yes, in what way did you compile the e-portfolio? (e.g., blogs, FrontPage)

3. According to the above answers, please describe the learning experience of using the portfolio or e-portfolio.
 - a. In what course? _____
 - b. What is the purpose of using it? _____
 - c. How to use it? _____
 - d. What are your perceptions of this portfolio- or e-portfolio-compiling experience?

4. Have you ever had an experience of assessing your peers' performance? If yes, please describe this experience.

a. In what course? _____

b. What is the purpose of using it? _____

c. How to use it? _____

d. What are your perceptions of this peer assessment experience?

Part III. Investigation for Perceptions of Peer Assessment in E-portfolios as an English learning Tool: Please tick ✓ for the one you think the most appropriate for each item. It is best to respond based on our first impression. Don't think it over or omit any item. (4: Strongly Agree; 3: Agree; 2: Disagree; 1: Strongly Disagree)

Questionnaire Items	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly disagree
1. I like receiving peer feedback in the e-portfolio.				
2. I think e-portfolio is appropriate to assess the learning among peers.				
3. I think the use of e-portfolio will enhance discussions about English learning among peers.				
4. I think peer assessment activities will make me aware of my strengths in English learning.				
5. I think the experience of peer assessment will make me more conscious of my own participation and contribution in class.				
6. I think e-portfolio is a good language learning tool.				
7. I think peers can assess fairly.				
8. I think peer feedback in the e-portfolio will help me cultivate critical thinking and independent thinking ability.				
9. I think peer assessment activities will make me aware of my weaknesses in English learning.				
10. I think the experience of peer assessment will enhance my relationships with my classmates.				
11. I think English learning becomes more interesting through e-portfolio collection.				
12. I think there is some bias in peer assessment.				
13. I think peer feedback in the e-portfolio will provide opportunity for reflection, which is helpful to my English learning in the future.				

Questionnaire Items	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly disagree
14. I think the experience of peer assessment will help me better understand my growth and improvements in English learning.				
15. I will know how to communicate with my classmates in English through peer assessment activities.				
16. I think I feel comfortable with performing peer assessment in English learning.				
17. I think peer assessment is time-consuming.				
18. I think the use of e-portfolio will be beneficial to my English learning.				
19. I think feedback from peers helps motivate me to learn English.				
20. I think the experience of peer assessment will directly influence me to participate more in the group.				
21. I am confident that my English ability will be fostered through e-portfolio learning.				
22. I think grades from peer assessment will be a fair reflection of the students' efforts.				
23. I think the feedback from peers in the e-portfolio helps me reflect on my English learning processes.				
24. I think the experience of peer assessment will help me better understand the growth and improvements of other classmates in English learning.				
25. I think the experience of peer assessment will directly influence some classmates to participate more in the group.				

Appendix B

Pre-questionnaire Conducted in the Beginning of the Semester --Chinese Version

親愛的同學：

本問卷調查的目的在於瞭解您對於電子歷程檔案中進行同儕互評的看法與態度，答案沒有對錯之分，故請依照您的感受與自身經驗回答即可！此問卷僅供本人研究使用，不會列入任何成績考核的參考，請各位同學安心作答！謝謝您的協助！！

敬祝 學業進步

東海英教所研究生 林宛頤 敬啟

民國九十九年九月二十七日

一、基本資料：

1. 系所：_____
2. 年級：_____
3. 性別：_____
4. 年齡：_____
5. 我學習英文幾年：_____

二、請根據您的經驗來回答以下問題：

1. a. 您曾經使用過紙本歷程檔案嗎？請圈選：是 否
(歷程檔案是系統化收集學習作品、心得和過程的反思紀錄，可呈現個人成長與進步。如：在美術課每次畫的作品會收在一本簿子中，從中可循序漸進看出作者繪畫技巧的進步。)

b. 如果有的話，請問您是在什麼學科使用的紙本歷程檔案？

2. a. 您曾經使用過電子歷程檔案嗎？請圈選：是 否
b. 如果有的話，請問您是以什麼方式來製作電子歷程檔案？(如：教學平台、部落格、FrontPage 等)

3. 根據以上兩題的回答，請描述您使用此種歷程檔案學習的經驗。

a. 在哪堂課使用？_____

b. 使用的目的？_____

c. 如何使用？

d. 您對這個經驗有什麼看法？

4. 您是否曾經有評量同儕學習表現的經驗？有的話，請描述這個經驗。
(同儕評量包括互相給同學的作業或作品一些意見、建議以及打分數。)

a. 在哪堂課使用？_____

b. 使用的目的？_____

c. 如何使用？

d. 您對這個同儕互評的經驗有什麼看法？

三、個人於電子歷程檔案中對同儕互評作為英語學習工具之看法調查：

請勾選您認為最合適的答案。請依直覺來回答每一題，不須考慮太多，也不要遺漏任何一題。（4：非常同意；3：同意；2：不同意；1：非常不同意）

問 卷 題 目	4 非常 同意	3 同 意	2 不 同 意	1 非 常 不 同 意
1. 我喜歡同學在電子歷程檔案裡給我的同儕回饋。				
2. 我認為電子歷程檔案很適合評量同儕之間的學習。				
3. 我認為使用電子歷程檔案可以促進同儕之間對於英語學習的討論。				
4. 我認為同儕互評的活動將使我了解自己在英語學習上的優點。				
5. 我認為同儕互評的經驗將使我更加瞭解自己在課堂學習上的參與和貢獻。				
6. 我認為電子歷程檔案是很好的語言學習工具。				
7. 我認為同學能公平客觀地進行同儕評量。				
8. 我認為電子歷程檔案中的同儕回饋能幫助我培養批判式思維與獨立思考的能力。				
9. 我認為同儕互評的活動將使我了解自己在英語學習上的缺點。				
10. 我認為同儕互評的經驗拉近了我和同學之間的關係。				
11. 我認為藉由電子歷程檔案來學習英語使得課程學習內容變得比較有趣。				
12. 我認為同儕互評有不客觀的地方。				
13. 我認為電子歷程檔案中的同儕回饋將提供省思的機會，可以幫助我於日後的英語學習。				
14. 我認為同儕互評的經驗將使我更加瞭解我在英語學習上的成長與進步。				
15. 透過同儕評量活動，我將學會如何與同學用英語溝通。				

問 卷 題 目	4 非常 同意	3 同 意	2 不 同 意	1 非 常 不 同 意
16. 我認為我能夠自在地進行英語學習上的同儕互評。				
17. 我認為同儕互評很浪費時間。				
18. 我認為使用電子歷程檔案將有助於我學習英語。				
19. 我認為同儕回饋能引起我學習英語的動機。				
20. 我認為同儕評量的經驗將會提高我在小組活動中的參與度。				
21. 我有自信透過電子歷程檔案之學習將會提升我的英文能力。				
22. 我認為同儕互評的結果能公平確實地反映學生的努力。				
23. 我認為同學在電子歷程檔案中給我的同儕回饋能幫助我反思自己學習英語的歷程。				
24. 我認為同儕互評的經驗將使我更加瞭解其他同學在英語學習上的成長與進步。				
25. 我認為同儕互評的經驗將會提高其他同學在小組活動中的參與度。				

Appendix C

Post-questionnaire Conducted in the End of the Semester – English Version

Part I. Background information:

1. Major: _____
2. Year: _____
3. Gender: _____
4. Age: _____

Part II. Investigation for Perceptions of Peer Assessment in E-portfolios as an English learning Tool: Please tick ✓ for the one you think the most appropriate for each item. Read each statement carefully and do not omit any of it.

(4: Strongly Agree; 3: Agree; 2: Disagree; 1: Strongly Disagree)

Questionnaire Items	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly disagree
1. I like receiving peer feedback in the e-portfolio.				
2. I think e-portfolio is appropriate to assess the learning among peers.				
3. I think the use of e-portfolio enhances discussions about English learning among peers.				
4. I think peer assessment activities make me aware of my strengths in English learning.				
5. I think the experience of peer assessment makes me more conscious of my own participation and contribution in class.				
6. I think e-portfolio is a good language learning tool.				
7. I think peers can assess fairly.				
8. I think peer feedback in the e-portfolio helps me cultivate critical thinking and independent thinking ability.				

Questionnaire Items	4 Strongly Agree	3 Agree	2 Disagree	1 Strongly disagree
9. I think peer assessment activities make me aware of my weaknesses in English learning.				
10. I think the experience of peer assessment enhances my relationships with my classmates.				
11. I think English learning becomes more interesting through e-portfolio collection.				
12. I think there is some bias in peer assessment.				
13. I think peer feedback in the e-portfolio provides opportunity for reflection, which is helpful to my English learning in the future.				
14. I think the experience of peer assessment helps me better understand my growth and improvements in English learning.				
15. I know how to communicate with my classmates in English through peer assessment activities.				
16. I think I feel comfortable with performing peer assessment in English learning.				
17. I think peer assessment is time-consuming.				
18. I think the use of e-portfolio is beneficial to my English learning.				
19. I think feedback from peers helps motivate me to learn English.				
20. I think the experience of peer assessment directly influences me to participate more in the group.				
21. I am confident that my English ability is fostered through e-portfolio learning.				
22. I think grades from peer assessment is a fair reflection of the students' efforts.				
23. I think the feedback from peers in the e-portfolio helps me reflect on my English learning processes.				

24. I think the experience of peer assessment helps me better understand the growth and improvements of other classmates in English learning.				
25. I think the experience of peer assessment directly influences some classmates to participate more in the group.				

Appendix D

Post-questionnaire Conducted in the End of the Semester – Chinese Version

一、基本資料：

1. 系所： _____
2. 年級： _____
3. 性別： _____
4. 年齡： _____

二、個人於電子歷程檔案中對同儕互評作為英語學習工具之看法調查：

請勾選您認為最合適的答案。請仔細閱讀之後再回答每一題，也請不要遺漏任何一題。（4：非常同意； 3：同意； 2：不同意； 1：非常不同意）

問 卷 題 目	4 非 常 同 意	3 同 意	2 不 同 意	1 非 常 不 同 意
1. 我喜歡同學在電子歷程檔案裡給我的同儕回饋。				
2. 我認為電子歷程檔案很適合評量同儕之間的學習。				
3. 我認為使用電子歷程檔案可以促進同儕之間對於英語學習的討論。				
4. 我認為同儕互評的活動使我了解自己在英語學習上的優點。				
5. 我認為同儕互評的經驗使我更加瞭解自己在課堂學習上的參與和貢獻。				
6. 我認為電子歷程檔案是很好的語言學習工具。				
7. 我認為同學能公平客觀地進行同儕評量。				
8. 我認為電子歷程檔案中的同儕回饋能幫助我培養批判式思維與獨立思考的能力。				

問 卷 題 目	4 非 常 同 意	3 同 意	2 不 同 意	1 非 常 不 同 意
9. 我認為同儕互評的活動使我了解自己在英語學習上的缺點。				
10. 我認為同儕互評的經驗拉近了我和同學之間的關係。				
11. 我認為藉由電子歷程檔案來學習英語使得課程學習內容變得比較有趣。				
12. 我認為同儕互評有不客觀的地方。				
13. 我認為電子歷程檔案中的同儕回饋提供了省思的機會，可以幫助我於日後的英語學習。				
14. 我認為同儕互評的經驗使我更加瞭解我在英語學習上的成長與進步。				
15. 透過同儕評量活動，我學會了如何與同學用英語溝通。				
16. 我能夠自在地進行英語學習上的同儕互評。				
17. 我認為同儕互評很浪費時間。				
18. 我認為使用電子歷程檔案有助於我學習英語。				
19. 我認為同儕回饋能引起我學習英語的動機。				
20. 我認為同儕評量的經驗提高了我在小組活動中的參與度。				
21. 我有自信透過電子歷程檔案之學習能提升我的英文能力。				
22. 我認為同儕互評的結果能公平確實地反映學生的努力。				
23. 我認為同學在電子歷程檔案中給我的同儕回饋能幫助我反思自己學習英語的歷程。				
24. 我認為同儕互評的經驗使我更加瞭解其他同學在英語學習上的成長與進步。				
25. 我認為同儕互評的經驗提高了其他同學在小組活動中的參與度。				

Appendix E

Interview Questions

1. What do you think about using e-portfolio as a language learning tool at the end of the course?
2. What do you think are the advantages and/or disadvantages of using e-portfolio as a language learning tool?
3. What do you think about peer assessment related to English learning at this stage?
4. What do you think are the advantages and/or disadvantages of peer assessment?
5. What do you learn from this peer assessment experience in this e-portfolio project?
6. Do you think performing peer assessment in the e-portfolio project has facilitated your English learning? Why or why not?
7. What are the difficulties or concerns you have encountered, if any, when conducting peer assessment in this e-portfolio project?
8. Do you think the e-portfolio collection experience has influenced your interaction and relationships with peers in your English learning processes? Why or why not?
9. Would you like your teachers to apply such peer assessment activities to other English courses in the future? Why or why not?
10. Is there anything you would like to add to your comments?

_____ The end _____

中文版

訪談問題

1. 課程即將結束，現在的你對電子歷程檔案有什麼看法？
2. 你認為以電子歷程檔案作為語言學習工具有什麼優缺點？
3. 現階段的你對於跟英語學習相關的同儕評量有什麼看法？
4. 你認為同儕評量有什麼優缺點？
5. 你在這門課的同儕評量學到了什麼？
6. 你認為在電子歷程檔案中進行同儕評量對你學習英語有幫助嗎？為什麼？
7. 你在電子歷程檔案中進行同儕評量有沒有遇到什麼困難？
8. 你認為同儕評量的活動在你學習英語的過程中有沒有影響你和同學的互動與關係？為什麼？
9. 你希望你的老師未來也在其他英語課進行類似的同儕評量活動嗎？為什麼？
10. 對於以上的題目，你是否還有寶貴的看法或建議？