การเรียนรู้ทักษะการสะท้อนความคิด ความคิดเชิงวิพากษ์ และภาษาอังกฤษ ของนักศึกษาเตรียมแพทย์ผ่านโครงการ e-portfolio

Reflection, Critical Thinking, and English Learning in **Pre-Medical** Students' E-Portfolio Project

โดย

ณธกร เสถียรชยากร

อุบล สรรพัชญพงษ์

บทคัดย่อ

ฉธกร เสถียรชยากร และ อุบล สรรพัชญพงษ์ 2565: การเรียนรู้ทักษะการ
สะท้อนความคิด ความคิดเชิงวิพากษ์ และภาษาอังกฤษของนักศึกษาเตรียม
แพทย์ผ่านโครงการ e-portfolio 92 หน้า

การใช้แฟ้มผลงานอิเล็กทรอนิกส์   (e-portfolio)   ได้รับความนิยมอย่างกว้างขวางทาง
แพทยศาสตร์ศึกษาเพื่อพัฒนาทักษะการสะท้อนความคิดของนักศึกษาแพทย์ อย่างไรก็ตาม งานวิจัย
การใช้แฟ้มผลงานอิเล็กทรอนิกส์ในปัจจุบันมุ่งเน้นไปที่การสะท้อนความคิดด้านเนื้อหาทาง
การแพทย์ ไม่มีการบูรณาการ 1. การพัฒนาและวัดทักษะการสะท้อนความคิดและทักษะความคิดเชิง
วิพากษ์ 2. การพัฒนาทักษะภาษาอังกฤษ รวมถึง 3. การแก้ปัญหาในการสร้างแฟ้มผลงาน
อิเล็กทรอนิกส์ในระดับนักศึกษาเตรียมแพทย์ ดังนั้น งานวิจัยนี้มีวัตถุประสงค์ 1. พัฒนาและวัด
ทักษะการสะท้อนความคิดและทักษะความคิดเชิงวิพากษ์ 2. พัฒนาทักษะภาษาอังกฤษ รวมถึง 3.
การแก้ปัญหาในการสร้างแฟ้มผลงานอิเล็กทรอนิกส์ในระดับนักศึกษาเตรียมแพทย์ โครงการ e-
portfolio โดยใช้แบบสอบถาม การเขียนสะท้อนความคิด และการสัมภาษณ์ และวิธีการวิเคราะห์
ประกอบด้วย สถิติเชิงพรรณนา (descriptive statistics) สำหรับวิเคราะห์แบบสอบถาม เครื่องมือ
ภาษาศาสตร์คลังข้อมูล (corpus linguistics) สำหรับวิเคราะห์ความถี่ของคำศัพท์ในงานเขียนสะท้อน
ความคิด และการวิเคราะห์แก่นสาระ (content analysis) สำหรับการสัมภาษณ์ ผลลัพธ์ชี้ให้เห็น
มุมมองที่เป็นบวกต่อการใช้แฟ้มผลงานอิเล็กทรอนิกส์   และแสดงถึงความจำเป็นของแนวทางใน
การเสริมสร้างทักษะทักษะการสะท้อนความคิด ความคิดเชิงวิพากษ์ และภาษาอังกฤษของนักศึกษา
เตรียมแพทย์ทั่วประเทศ

Abstract

Natakorn Satienchayakorn and Ubon Sanpatchayapong 2022: Reflection, Critical Thinking, and English Learning in Pre-Medical Students' E-Portfolio Project. 92 Page

E-portfolios are widely employed in medical education for developing reflective thinking skill in medical students. However, current research predominantly focuses on reflective medical content, neglecting the incorporation of development of critical thinking skill and English language learning in pre-medical education. Additionally, little is known about how reflective and critical skills of pre-medical students are measured or the challenges they face in developing e-portfolios. Therefore, this study aims to measure pre-medical students' reflective skills, their perceptions of e-portfolios in English language learning, and identify challenges and coping strategies. Data were gathered through questionnaires, reflective narratives, and semi-structured interviews, with analysis methods including descriptive statistics for questionnaires, corpus linguistics *frequency* for reflective narratives, and content analysis for interviews. Findings indicated positive perspectives on the use of e-portfolios emphasizing the need for guidelines to enhance reflective, critical, and learning skills in pre-medical students across medical schools

Acknowledgements

Table of Contents

List of Tables

List of Figures

CHAPTER 1

INTRODUCTION

E-portfolio is defined as "a digitized collection of artefacts including demonstrations, resources, and accomplishments that represent an individual, group, or institution" (Lorenzo & Ittelson, 2005, p. 2). Other scholars also have similar definitions. For example, Gray (2008) defines as "the product, created by the learner, a collection of digital artefacts articulating experiences, achievements and learning" and as "a purposeful aggregation of digital items – ideas, evidence, reflections, feedback, etc., which presents a selected audience with evidence of a person's learning and/or ability" (pp. 6-7). The characteristics of e-portfolio include being authentic, controllable, communicative, interactive, dynamic, personalised, integrative, multi-purposed, multi-sourced, motivational, and most importantly, reflective. The benefits of e-portfolio have been widely used as a new and authentic assessment tool because it provides several positive impacts on students' learning. For instance, it increases students' learning self-confidence, motivation, active participation, collaboration and interaction between themselves, teachers, and their peers. In addition, it develops students' self-learning, self-evaluation, self-assessment, and most importantly, self-reflection (Yastibas & Yastibas, 2015).

Self-reflection tends to play an important role in e-portfolio from which a student can develop. Given such importance, medical education has also utilised e-portfolio in medical curriculum because medical professional competence does not only include acquiring medical skill and knowledge, but also increase clinical reasoning, and self-reflection (Haffling et al., 2010). In addition, importance of reflective e-portfolios focusing on 360-degree feedback rounds, evaluations of clinical performance, etc., has positive impacts on case-solving ability and is correlated to improve medical students' academic performance (Heeneman & Driessen, 2017). Similarly, Schrempf et al. (2022) agree that reflective skill in e-portfolio is fundamental to core clinical competencies which shows professionalism such as altruism and empathy.

In English language learning, e-portfolio improves students' English language skills such as speaking, reading and writing when it is systematically integrated in meaningful and creative contents, activities, and tasks. Further, it helps reduce students' anxiety, engage and motivate their learning (Kusuma et al., 2021; Ngui et al., 2020; Rou & Yunus, 2020).

Overall, it seems to us that e-portfolio has been a great tool to improve a student's English skills and help the students become self-regulated learners. In addition, it is widely used in medical education to develop medical students' reflective skill, clinical reasoning as well as improve their academic performance. We strongly agree to how e-portfolio can help develop and foster medical students' reflective skill. Consequently, we aim to continue this tradition in our study because evidence above and in the following *previous studies* section below suggest an interesting correlation, but we will survey different participants and, in this case, pre-medical students at a private university in Prathum Thani, Thailand. However, there are still several points remained unclear to us concerning the use of e-portfolio in medical education. First, very little is currently known about how pre-medical students' reflective and critical thinking skills are measured. Second, given such importance of how e-portfolio helps improve students' English language skills, it seems to us that research to date has only focused in the reflective medical contents, not yet determined how English language learning; for example, is incorporated in the e-portfolio in medical education. Finally, what is less clear is what reported challenges and coping strategies are used by pre-medical students during their development of e-portfolio. Below were the objectives and research questions.

1.1. Research Objectives

1. To investigate to what extent pre-medical students' reflective and critical thinking skills are measured

2. To explore the perceptions of pre-medical students towards e-portfolio in English language learning in medical education

3. To identify pre-medical students' the reported challenges and coping strategies in developing an e-portfolio

1.2 Research questions

1. To what extent are pre-medical students' reflective and critical thinking skills measured?

2. What are the perceptions of pre-medical students towards e-portfolio in English language learning in medical education?

3. What are the reported challenges and coping strategies in developing an e-portfolio?

1.3 Significant of the Study

The findings of this study have several implications for educators and curriculum designers. Integrating e-portfolios into English language learning courses for pre-medical students can serve as an effective tool for developing reflective and critical thinking skills. Educators should focus on designing reflective questions that prompt students to engage in deep thinking and self-discovery. Providing guidance on time management, language proficiency, and motivation can also enhance the effectiveness of e-portfolio implementation. Furthermore, creating a supportive and collaborative learning environment, as exemplified by the emphasis on teamwork in this study, can contribute to holistic skill development.

Overall, this study contributes to the growing body of literature on the use of e-portfolios in medical education and highlights their potential in fostering reflective and critical thinking skills among pre-medical students.

CHAPTER 2

LITERATURE REVIEW

2.1 Framework of Reflection Quality

This present study applied the reflection quality framework by Moon (2004) cited in Sieben et al. (2021) which denoted four hierarchical levels of deep reflection "(1) The lowest level is description, when the reflection consists of descriptive information only. (2) The second level of argumentation is justification, when a rationale or logic is included. (3) The third level is labelled critique, when the reflection contains aspects of explanation or evaluation. (4) The highest level of argumentation is discussion, which includes suggestions for alternative solutions" (p.4).

Category	Content	Phrasing
Description	Contains only descriptions of actions and/or thoughts and/or emotions; factual information without interpretation or explanation.	Typically using simple past tense, e.g.: 'I did ...', 'I felt ...', 'I thought ...', 'He said ...'
Justification	Contains rationale or logic; explanation.	Signal-words: causal adverbs like 'because', 'as', 'thus', 'therefore', etc. Also an arrow in concept map can reflect inference.
Critique	Contains evaluation and/or interpretation of the situation, action or response. Also: expressions of personal values.	Signal-words: First person and referring to some kind of key message. 'I learned ...', 'I conclude ...', etc.
Discussion	Goes beyond evaluation; contains explanation why change is needed and how this could be achieved. Intention should be concrete, not vague or too general, otherwise level is coded as critique.	Forward-looking wording: 'Next time ...', 'For future occasions ...', 'My plan is ...' Also: Link to learning-goal.

Figure 2.1

Four Hierarchical Levels of Deep Reflection

Note: This figure was created from four levels of augmentation by Sieben et al. (2021).

Sieben et al. (2021) argued that this framework was a helpful technique to develop undergraduate medical students' critical thinking and reflective skills in their study. Elsewhere, this framework was proven to be useful to enhance tertiary dance students' these skills as well, which Leijen et al. (2012) confirmed that it was not only applicable to dance and art education, but also to higher education in general. Since the reflection quality framework can develop students' critical thinking and reflective skills

in higher education context in general, we employ it as a conceptual framework when we interpret the study findings.

2.2 E-portfolios and English Language Learning

The recent issues and challenges in English language learning which teachers have to encounter include how to increase students' speaking performance, how to motivate their reading interests, and how to better utilise technology for better writing and assessment (Kusuma et al., 2021; Ngui et al., 2020; Rou & Yunus, 2020). Further, teachers do not only face challenges to increase students' interests and motivations, but also, effective student assessment process (Muho & Leka, 2021). In addition, the learning assessment has been changed to prepare students for lifelong learning and global challenges because the traditional assessments are not designed to meet such goals (Singh et al., 2022).

Despite several challenges, e-portfolio has been employed to solve these English language learning issues in ESL/EFL classrooms. For example, Kusuma et al. (2021) suggested that implementation of e-portfolio and flipped classrooms in some Indonesian high schools increased students' speaking performance because they had more opportunities to practise regularly with peers who helped reduce their speaking anxiety. In addition, interactive and creative learning contents, activities, and tasks in this combination helped engage students learning English cognitively and affectively. For reading skill, Rou and Yunus (2020) revealed that reading activities in Seesaw e-portfolio increased students' reading motivation. The negative attitudes towards reading were also decreased to 52%. Further, the percentage of students preferring reading books over watching TV increased from 30% to 34%. Similarly, Ngui et al. (2020) found that the Malaysian university students viewed classmates' e-portfolios as well as classmates and teachers' comments beneficial because these were factors to motivate themselves to perform better. The teachers also had positive attitudes towards e-portfolios because they offered authentic writing assessment experience.

E-portfolio has not only enhanced students' English speaking, reading, and writing skills, but also positively increased students and teachers' attitudes towards the e-portfolio usage. For instance, Muho and Leka (2021) investigated students and

teachers' perceptions towards the use of e-portfolios in English as foreign language classrooms by conducting the in-depth semi-structured interviews with teachers and students in Albanian high schools. The findings suggested that both teachers and students preferred this type of assessment; especially, students, because the e-portfolio reflection helped them realize their learning strengths and weaknesses. In addition, it helped students become self-regulated learners. Further, Singh et al. (2022) explored how five ESL teachers perceived the new form of assessment, portfolio in English classrooms through class observations and interviews. The results found while there were some challenges teachers were facing during e-portfolio implementation, this portfolio assessment provided students, their peers, and teachers opportunities to interact and discuss about the challenges all parties faced; as a result, this promoted sustainable teaching and learning. Next section explains how e-portfolio is utilised in medical education context.

2.3 E-portfolio and Medical Education

Reflective skill is mandatory for medical students. However, some studies (Gomez et al., 2013; Heeneman & Driessen, 2017; Sieben et al., 2021) argued that the medical students lacked this skill due to several reasons. For example, students found it time consuming, unhelpful learning. In addition, the medical school culture mostly did not promote self-reflective writing, so students were not interested in producing reflective observations. Also, the challenges were on teachers and mentors who had poor knowledge of technology and e-portfolios (Gomez et al., 2013). Moreover, most medical students perceived the reflective writing as difficult because they were not trained to do this, coupled with unclear instructions and too rigid format requirements (Sieben et al., 2021).

However, incorporating both traditional and e-portfolio in the medical curriculum is found to be beneficial for developing medical students' reflective skill. Several studies also argued this important point. For example, in traditional portfolio, the reflections made the medical students realize importance of treating patients as human being rather than a cluster of symptoms and this improved them to have respects and empathy towards patients (Yielder & Moir, 2016). Similarly, Haffling et al. (2010)

showed that medical students in clinical practice improved their patient-centered consultation skill and patient rapports when they did not lose control of the consultation, did not get caught in a flow of less ordered information from patients. Most importantly, they were open and honest about their mistakes and how they had tried to overcome at that moment and how they will apply these lesson learning in their future practice. However, if inexperienced students were anxious about how to use the portfolio, if there were misconception and the lack of understanding about reflective learning part, or if students found the reflective learning and process difficult and unhelpful, Ross et al. (2009) recommended that the introductory information, good examples of portfolio, supports from the faculty members and mentors were needed. These are some examples how traditional portfolios can help enhance medical students' reflective skill.

Currently, most traditional portfolios are digital or electronic forms for easy access and learning evidence complication, so e-portfolio has been widely used in medical education. The benefits of utilising e-portfolio are obviously seen in medical curriculum. For instance, Sieben et al. (2021) pointed out the satisfactory results which the medical students' depth of reflection reached 54% of the critique level followed by 28%, 11%, and 7%, discussion, justification, and description respectively. In addition, the medical students gave feedback that e-portfolio provided them with practical experience of reflective writing because they had opportunities to select their own meaningful experience and that learning by doing improved their quality of reflection. Similarly, Schrempf et al. (2022) suggested that mentors' led-conversation and engagements had positive impacts on medical students' learning and trusting relationship, so combination of study content, reflection in e-portfolio, and mentors' led-conversation for reflection were able to significantly increase students' learning motivation and deepen reflection. However, some medical students may have bias towards the use of e-portfolio such as a perceived burden, duplicated work with log books, unsure feeling how to navigate, what purposes it served, etc. Vance et al. (2017) argued that it could take time for students to realize the value of self-directed and reflective learning, so early introduction was recommended (Fida & Shamim, 2016).

Overall, most studies above tended to confirm that reflective writings in e-portfolio of medical education have enhanced medical students' reflective and critical thinking skills and Figure 2 visually summarised this concept.

Figure 2.2

Concept of E-Portfolio in Enhancing Critical Thinking and Reflective Skills
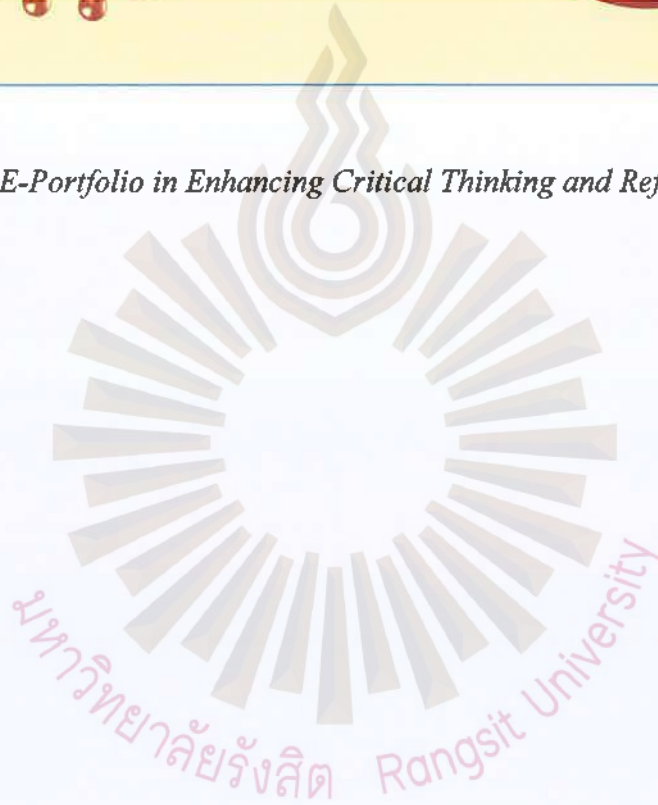
CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Design and Context

The study was conducted to support a pilot implementation of e-portfolio project for the first-year medical student. The questionnaire was sent out prior to Term 2, 2022 (January-April 2023) and at the end of Term 2, focused group interviews were prepared and conducted with 9 first-year pre-medical students at a private university in Pathum Thani where the first and second authors worked as lecturers. The first author had seven years of teaching experience at higher education level in Thailand while the second author had decades of extensive teaching experience at high school and higher education levels in Thailand. The combination of both authors' teaching experience provided the insight of positive perspectives and constraints of the study's context.

This private university offers a variety of programs and courses in Thai and English. It is categorised as the top private university in Thailand. Upon writing this paper, there were approximately 19,359 current students, about 2,500 personnel, 15 colleges, 17 faculties, and 2 institutions at the private university. It provides the undergrad as well as graduate students, who need to study English, a core or mandatory subject offered through EFL, CLIL, and EMI approaches.

3.2 Participants and Recruitment

College of medicine at this private university has accepted around 120-130 students a year. This year, 128 students were accepted and everyone needs to enrol an integrated English course (ENL 128), focusing on improving speaking, writing, and presentation skills and taking place every second semester (Term 2) from January-April each year. Usually, there are four sections of this subject and pre-medical students are equally divided for each section. The human ethic proposal was approved by Research Ethics Office of this private university prior to data collection and preparation process.

3.2 Data Collection and Preparation

We triangulated data with 1) pilot questionnaire, 2) pre-medical students' reflective essays, and 3) interview transcription. By using multiple methods of data collection, we ensured that the data were consistent and dependable to reach the study reliability (Merriam & Tisdell, 2015).

Before Term 2, 2022 began, lecturers responsible for teaching an integrated English course (ENL 128) embedded with e-portfolio project, were introduced to the goals and expectation via our presentation, so this important information was transmitted to pre-medical students later. Then, the questionnaire questions were constructed by us and validated using the index of item-objective congruence (IOC) to reach the content validity by the three English lecturers and piloted with two out of four sections where pre-medical students enrolled the integrated English course (ENL 128) to find the reliability and consistency based on correlation coefficient before Term 2 started.

In the first week of Term 2, 2022, the pilot questionnaire (Appendix A) was sent out to 128 pre-medical students from four sections taking an integrated English course (ENL 128). The questionnaire questions were centered around definitions and characteristics of e-portfolios. As the first data collection, the questionnaire results informed opportunities how we improved e-portfolio instruction in this course.

During Term 2, 2022, pre-medical students developed their e-portfolio with 1) artefacts and 2) a reflective essay. First, the artefact part, it included written journals which must reflect anything related to Units 1-5 and Tasks 1-5 (For example, reflections towards unit contents, classmates' presentations, own tasks, tasks 1-5 process, etc.) For the reflective essay (200-300 words max), it reflected pre-medical students' work and work process for the whole semester based on the following four questions: 1) What story did your artefacts tell? 2) What surprised you? 3) What did you learn from these artefacts and about yourself? And 4) what would you have done differently? However, upon the semester ended, 113 out of 128 e-portfolios were submitted. The missing numbers resulted from withdrawal, dropping out, and a preference not to submit for

research. As the second data collection, reflective essays from 113 pre-medical students were expected to be used as second data and the total size was 135,407 words.

Upon the semester ended, a series of the focus group interview in English conducted in May 2023 via Zoom with recorded interviews to explore insight of the participants' learning experience. The focus groups were chosen because they did not only offer students' perceptions and beliefs, but also be beneficial for the group dynamic, relationship, confidence to share information. In addition, the focus group allowed students to direct and lead the discussions as well (Kitzinger, 1994). The interview questions (Appendix B) were involved around the perceptions of participants about e-portfolio in English language learning in Thai universities, the reported challenges and coping strategies in developing an e-portfolio, and narrative experience gained from e-portfolio project. Total volunteer interviewees were 9 from each section. As the third data collection, the focus interviews were transcribed verbatim. We took turns checking the transcription accuracy.

3.4 Data Coding and Analysis

Our analytical steps were divided into three steps according to data collection types: 1) pilot questionnaire, 2) pre-medical students' reflective essays, and 3) interview transcription.

In step one, upon the questionnaires were returned, the data was analysed by descriptive statistics namely percentage. That is, the pilot questionnaire was automatically analysed by Google form which showed opportunities how we are going to design, assess, and integrate e-portfolio learning in this course. This gave us the opportunities to improve our instructions.

In step two, we identified signal words that indicated pre-medical students' reflective and critical thinking abilities. The signal words were guided by Figure 1: Four hierarchical levels of deep reflection presented in the literature review section; for example; first-person pronoun *I* + *verbs* in the *past tense* in level 1; *causal adverbs* in level 2; first-person pronoun *I* with *evaluative verbs* in level 3; and *forward-looking words* in level 4. In each level, we assessed deep reflection by frequently counting these signal words in 113 reflective essays.

the frequent results of signal words or phrases were recorded, categorized, and themed (Appendix C).

However, since manually counting these signal words were time consuming, we utilized the basic feature of *frequency* in the Key Word In Context (KWIC) function in #LancsBox, a corpus linguistic software from Lancaster University (Brezina & McEnery, 2020). In the field of applied linguistics, the application of corpus linguistics, specifically its function of *frequency*, has been extensively employed in educational research. This is particularly evident in studies focused on language learners, educators, and teaching materials (Aşık, 2017; Sert & Aşık, 2020). Nevertheless, we employed *frequency* function only to ensure the accuracy of the counted signal words. The followings are instances guided by Figure 1: Four hierarchical levels of deep reflection how to detect signal words from each level in #LancsBox.

1. In Level 1: Description, the signal words were the first-person pronoun *I* and past simple verbs. We entered "I PAST TENSE" into the KWIC search function. Then, we noted the frequent results.

2. In Level 2: Justification, the signal words were causal adverbs (e.g., 'because,' 'as,' 'thus'). We typed them into the KWIC search function, and the frequent results were recorded.

3. In Level 3: Critique, which involves the first-person pronoun *I* and evaluative lexical items, we compiled a list of verbs from the fifth level of the revised Bloom Taxonomy (Anderson & Krathwohl, 2001), such as *choose* and *compare*. Subsequently, we entered phrases; for example, "I chose" in the KWIC search function, and the frequent results were noted.

4. In Level 4: Discussion, we typed forward-looking words (e.g., 'next time', 'for future') into the KWIC search, and the frequent results were recorded.

Then, we analyzed all frequent signal words across the four levels, categorized, and themed to address the research question 1: *To what extent are pre-medical students' reflective and critical thinking skills measured?*

In step three, all interview was transcribed (Appendix E). Then, we conducted content analysis which we did open-coding, categorised, and themed on pre-medical students' transcribed interview (Saldana, 2014, p.585). To be more specific, first, we categorized similar or comparable codes into groups for pattern construction and

analysis. Next, we reviewed all categories again to ensure we mutually understood the patterns. Then, we themed the patterns of categories and we debriefed all themes (Appendix D). The emerging themes answered the research questions 2) *what are the perceptions of pre-medical students towards e-portfolio in English language learning in medical education? And 3) what are the reported challenges and coping strategies in developing an e-portfolio?* For the study validity of steps two and three, we employed peer review strategy reliability (Merriam & Tisdell, 2015) which we asked another two lecturers who also taught this subject to give comments and feedback for our results.

CHAPTER 4

RESEARCH RESULTS AND DISCUSSION

In step one, 127 (out of 128) questionnaires were returned. Not surprisingly, 96.9% were aware of definition and characteristics of traditional portfolio. 78% have done the traditional portfolio previously. However, while most students reported that they had not done e-portfolio before, 62.2% tended to be aware that e-portfolio is an individual showcase in a digital world consisting of a person's blogs and resumes. Further, 89.8% were not aware of the relationship between an e-portfolio and a reflective skill. These results indicated that we had the opportunities to add our instructions of e-portfolio and reflective skill in an integrated English course (ENL 128).

4.1 Research Question 1: To what extent are pre-medical students' reflective and critical thinking skills measured?

In step two, upon completing the detection of signal words in four levels, we found several interesting patterns of emerging signal words which indicated the development of pre-medical students' reflective and critical thinking skills.

Level 1: Description: Personal Stories. This level implies that pre-medical students can articulate their personal and academic experiences, actions, thoughts, emotions, and factual information without providing detailed explanations. The signal words were identified through the analysis of first-person pronoun *I* combined with past simple verbs using the KWIC function. The findings presented in Figure 3 indicated 1,207 frequently used verbs associated with the first-person pronoun *I*.

Figure 4.1

Numbers of Frequent Past Simple Verbs Associated with the First-Person Pronoun I.

After analyzing texts containing the first-person pronoun *I* + past simple verbs, a prevalent theme of *personal stories* among pre-medical students emerged. This theme encompassed two primary categories: *extracurricular activities* and *education*. This outcome was not surprising, indicating that at this level, students were anticipated to write their personal and academic experiences, with past simple verbs playing a significant role in conveying these narratives. The following excerpts provided examples of students utilizing past simple verbs (underlined) to articulate their personal and academic experiences.

Extra-curricular Activities.

> *Excerpt 1. Since I <u>was</u> 9 years old, I have studied the piano. During this time, I have been able to perform at a Yamaha Music event when I <u>was</u> 10 and at a Sooner Classic event when I was 14.*
>
> (Student 1)

> *Excerpt 2. I <u>was</u> in the external affairs team for this project.   I <u>learned</u> many skills back*
> *such as how to comĴunicate with external organizations   and how to write formal email.*

Education.

Excerpt 3. I <u>*completed*</u> *kindergarten and elementary school from Ek Burapa School. I* <u>*graduated*</u> *middle school and high school from Bodindecha (Sing Singhaseni) School.*

(Student 32)

Excerpt 4. I <u>*graduated*</u> *from Samsenwittayalai school. I* <u>*was*</u> *in a MSEP Program that is a Mathematics and Science Enrichment Program.*

(Student 103)

Level 2: Justification: Skills and Self-improvement. This level highlights words that signal rationale or logical explanation including causal adverbs such as *so* and *because*. Upon inputting all potential causal adverbs into the KWIC function, Table 1 displayed 16 frequently occurring causal adverbs, with a total count of 834. Notably, the most prevalent causal adverb was *so* appearing 301 times, followed by *because* at 241 occurrences. This observation indicated that these two causal adverbs were commonly employed by pre-medical students in their writing.

Table 4.1

Numbers of Frequent Casual Adverbs

Ranks	Causal Adverbs	Frequency
1	so	301
2	because	241
3	since	67
4	as	46
5	therefore	31
6	so that	26
7	in order to	25

8	although	24
9	even though	18
10	thus	18
11	due to	14
12	as a result	12
13	hence	4
14	though	4
15	consequently	2
16	subsequently	1
	Total	**834**

Upon reviewing data linked to the causal adverbs *so* and *because*, the theme *justification of important skills* emerged and supported by two categories: the significance of *communication and collaboration* and *self-reminder for room improvement*. The data indicated that pre-medical students were well aware of the importance of communication and collaboration skills, as these skills facilitated effective interaction with fellow students and teachers. Furthermore, the students demonstrated a developed ability for self-regulated learning. The following excerpts provided examples of pre-medical students using the causal adverbs *so* and *because* (underlined) to justify the important skills.

Communication and Collaboration.

Excerpt 1. This task is quite challenging <u>because</u> we have to persuade the professor to agree with us.

(Student 30)

Excerpt 2. But what made the event truly special was how it boosted up my social-skill rapidly <u>because</u> I was required to interact with a group of strangers who hailed from different provinces and parts of the country that I would not have had the opportunity to meet them if I had not attended this event.

(Student 64)

Excerpt 3. All of this will have to go through group work as well, *so* I have to work with others and listen to a lot of opinions. What is essential for group work is a division of work and listening, which I got all these things from my group so it gives me some anticipation for the next group work.

(Student 77)

Excerpt 4. This semester I do group work that has different people from last semester, *so* I have to adapt my style of   working to fit with new groups' friends. This gave me experience working with other people that I didn't know well.

(Student 105)

Self-reminder for Room Improvement.

Excerpt 1. First, after get the task I think that it will be difficult *because* when I present in front of audience, I usually look at the PowerPoint while talking, so I know what will I say next time

(Student 3)

Excerpt 2. As the teacher is a foreigner and a native speaker, *so* I practice communication (on my own) a lot.

(Student 87)

Excerpt 3. I liked the advice from the teacher after the presentations *because* I can know what I need to improve, and consequently, I can get more practice

(Student 94)

Excerpt 4. Lastly, this activity improved my reading skill a lot *because* I have to read the whole research and conclude it in a little article.

(Student 15)

Level 3: Critique: Self-discovery. This level suggests that pre-medical students possess the ability to evaluate and interpret situations or responses. The key signal words in this context involved around the first-person pronoun *I* and *evaluative* words. Table 2 revealed that the most frequently used evaluative word is *learned/learnt* with a count of 552, followed by *chose/chosen* at 176. These findings suggested that *learned/learnt* and *chose/chosen* were commonly employed evaluative words among pre-medical students when assessing and interpreting various situations.

Table 4.2

Numbers of Frequent Evaluative Words

Ranks	Evaluative Words	Frequency
1	learned/learnt	201
2	chose	27
3	was/been able to	32
4	decided	9
5	recommended	1
6	selected	1
7	valued	1
	Total	272

Upon reviewing texts containing the first-person pronoun *I* and the top evaluative words: learned/learnt; chose/chosen; and was able to, a prevalent theme of *self-discovery* emerged among pre-medical students. This theme included two primary categories: *self-realization ability* and *enhancement of research skills.* The following excerpts provided examples of pre-medical students using evaluative words (underlined) to describe their self-realization ability and how their research skills were enhanced.

Self-Realization Ability.

Excerpt 1. *Additionally, I <u>was able to</u> expand my horizons and discover new information, thanks to the research component of the course.*

(Student 29)

Excerpt 2. *Surprisingly, each theme I <u>chose</u> can reflect my characteristics. It expresses how much earnestness I have when I must focus on something and the flexibility, I have for being a team-worker.*

(Student 61)

Excerpt 3. *Moreover, I <u>learned</u> a lot about myself during this semester. I discovered that I have a lot of potential and that I can achieve great things when I put my mind to it. I also <u>learned</u> that it is okay to make mistakes and that the feedback I received was not meant to criticize but to help me improve.*

(Student 111)

Enhancement of Research Skill.

Excerpt 1. *I <u>chose</u> an article related to anxiety of ADHD children with bullying and pretended to be the researcher in a conference. Although it is challenging, I am very proud of myself that I did very well.*

(Student 23)

Excerpt 2. *Participating in the Monkeypox research project was an enlightening experience for me. I <u>learned</u> how to navigate the Scopus website and search for credible research from around the world.*

(Student 29)

Excerpt 3. *I have gained a wealth of knowledge and valuable skills through my research on thalassemia in Thailand. Not <u>only did I learn</u> about this specific medical condition, but I also had the opportunity to practice reading and interpreting research papers, which is an essential skill in any field.*

(Student 56)

Excerpt 4. *And in task 5, I <u>learned</u> more about medical research that would be helpful for my career in the future.*

<div align="right">(Student 90)</div>

Level 4: Discussion: Future Aspirations. This level means that pre-medical students are able to describe suggestions for alternative solutions and how this can be achieved. The signal words were *forward looking* words such as *next time* and *for future*. Table 3 suggested that the top frequent forward-looking words were *I will* and *I should* at 38 and 18 respectively.

Table 4.3

Numbers of Frequent Forward-Looking Words

Ranks	Forward Looking Words	Frequency
1	I will	38
2	I should	18
3	Future	7
4	I look forward	7
5	my goal	7
6	Next time, I	4
	Total	**81**

After analyzing data associated with the forward-looking words, per-medical students' theme *future aspirations* was emerged which included two categories of *self-improvements* and the *self-learning goals*. The following excerpts showed some examples of the pre-medical students using forward looking words (underlined) describing their self-improvements and the self learning goals.

Self-improvement.

Excerpt 1. *We forgot some of our script because we were a little anxious and excited, but I think we did a great job overall. We also got feedback from the teacher, so we can use it to get better for the <u>next time</u>.*

(Student 25)

Excerpt 2. The last thing is to practice reflecting on our presentation. I was a bit nervous, so I forgot the script. That's why the presentation doesn't look smooth. Which I will try to fix as much as possible next time.

(Student 47)

Excerpt 3. My group presents this time did a very good job overall except did not pay attention to the audience. Maybe next to I should more be careful.
(Student 54).

Self-learning Goals.

Excerpt 1. I hope in the future I will continue to develop myself. I have got many strategies.

(Student 24)

Excerpt 2. As I conclude, I am excited to apply my newfound skills in future tasks, delivering impactful presentations, and grateful for the valuable experiences and growth opportunities this course provided. I look forward to continuing my journey as a skilled presenter.

(Student 40)

Excerpt 3. My goal in the future is to become a doctor. I'm passionate about functions of human body and helping people to recover from diseases.

(Student 96)

Overall, Table 4 suggested the high frequency in *personal stories* which fundamentally showed strong reflective skills in expressing experiences. Substantial justification frequencies indicated the ability to articulate reasons for *skills and self-improvement*. Moderate critique frequencies suggested thoughtful *self-discovery* reflecting developing critical thinking. Although aspirations had lower frequencies,

engagement in *future aspirations* implied openness to forward-looking perspectives. Overall, pre-medical students demonstrated a multifaceted approach to reflection, indicating progress in both reflective and critical thinking skills. As a result, this has led to address the research question 1: *To what extent are pre-medical students' reflective and critical thinking skills measured?*

Table 4.4

Summary of Frequent Four Hierarchical Levels of Deep Reflection

Levels	Four Hierarchical Levels of Deep Reflection	Total Frequency
1	Description: Personal Stories	1207
2	Justification: Skills and Self-improvement	834
3	Critique: Self-discovery	272
4	Discussion: Future Aspirations	81

4.2 Research Question 2: What are the perceptions of pre-medical students towards e-portfolio in English language learning in medical education?

Skill Improvement. The perceptions of re-medical students toward e-portfolios in English language learning in medical education revealed that *skill improvement* was a major theme, including three categories: English writing, presentation, and teamwork skills.

English Writing Skill. The development of students' English writing ability was apparent through the e-portfolio tasks. Evidence suggested that students wrote more efficiently during various writing assignments. Some mentioned that they had not written a proper English in a while, and the e-portfolio motivated them to resume writing. The following excerpts illustrated the students' perceptions of their improvement in English writing.

Excerpt 1.I think my writing skill is really improved. I can see how faster I am using my vocabulary.

(Student 3)

Excerpt 2. For me, I think I've improved along the e-portfolio task is the writing skill. As you know, we actually do a lot of tasks along, you know class like the script and all the presentation it makes me like learn more about doing all the scripts and writing.

(Student 6)

Excerpt 3.I think it's maybe about my writing skill because I have not written proper English for quite a long time.

(Student 8)

Presentation Skill. In addition to improving the English writing skill of pre-medical students, there was a noticeable development in their presentation skill. This was not surprising because ENL 128 was a dedicated subject focused on presentations. Students were required to learn, practice, and present immediately after each unit, exposing them to various presentation techniques. The following excerpts illustrated how the students perceived the development of this skill.

Excerpt 1.I really improved my presentation skill since all of the assignments in E portfolio focus on presentations.

(Student 1)

Excerpt 2. So, the skills that I think I have improved. By doing task 6 and like every test in the portfolio project is that presentation skills.

(Student 5)

Excerpt 3. It helps me a lot with the presentation skills like there are several technique techniques that it is taught through the course.

(Student 9)

Teamwork Skill. The teamwork skills of pre-medical students were also enhanced during the ENL 128 course. Engaging in group work contributed to an increase in some students' learning confidence. By the end of the semester, they were both surprised by their accomplishments and proud of their teamwork, as confirmed by the following excerpts.

> *Excerpt 1. But I also found out that my other skill is also improved to such as team work, self-learning practice and improve myself over time.*
>
> (Student 4)

> *Excerpt 2. So, the surprising thing that I think is the teamwork that me and my team have made throughout the project. Like throughout the semester, like the last work is the things that confirms our teamwork.*
>
> (Student 5)

> *Excerpt 3. Like I'm less nervous, I feel more confident and I'm really proud of all team working skill because we stick with the same team all the time, right?*
>
> (Student 8)

Overall, pre-medical students showed positive perceptions towards the use of e-portfolios in English language learning within medical education. The positive feedback was from the realization that e-portfolios not only improved their English language abilities, specifically in writing, but also contributed to the development of presentation and teamwork skills. Consequently, these positive outcomes provided answers to the research question 2: *What are the perceptions of pre-medical students towards e-portfolios in English language learning in medical education?*

4.3 Research Question 3: What are the reported challenges and coping strategies in developing an e-portfolio?

Throughout the entire term of working on the e-portfolio task, pre-medical students encountered challenges related to *self-learning* and *compiling learning documents*. However, they also shared strategies they employed to overcome these issues when they encountered ones. The following section began with the reported challenges, followed by the coping strategies.

Self-learning Issue.

Time Constraints. The pre-medical students appeared to face time constraints due to their tight schedules. Some had to juggle between self-learning and exam preparation, while others were involved in numerous extracurricular activities at the university. Balancing their time became a challenge, as indicated by the following excerpts.

> *Excerpt 1. I lack of time because it is difficult to balance self-learning with reading for exam.*
>
> (Student 2)

> *Excerpt 2. Oh, for me my first main problem is the time because I did a lot of extracurricular activities and so I don't really have much time to do for self-improvement for myself.*
>
> (Student 8)

Time Management. Despite facing time constraints, pre-medical students developed coping strategy *time management* that they were willing to share. Some students found success in setting realistic goals for when to accomplish specific tasks. Others utilized a 'To-do list' as a self-reminder, as suggested by the following excerpts.

> *Excerpt 1. So, I solved this problem by setting a realistic goal and prioritize essential things like when it's near the exam, I will only focus on reading and when the exam past, I will focus on self-learning*
>
> (Student 2)

Excerpt 2. *Maybe, I have my To Do List. So sometimes that I am procrastinating enough to I have to start doing something and when it came to the deadline it's made me know that I have to focus on this only one thing to make it.*

(Student 7)

Struggle with Language Proficiency. The pre-medical students often encountered struggles with language proficiency, particularly in terms of difficulty remembering grammar rules and advanced vocabularies. The following excerpts highlighted their challenges in language proficiency.

Excerpt 1. *I think that myself learning problems or challenges is that it is like a grammar problem. Sometimes I cannot remember all grammar rules, so that is a problem.*

(Student 5)

Excerpt 2. *So, I've learned all C1, C2 or IELTS words, but it's just like very, it's very great deep in my mind. I just can't dig it out so. I know that word, but I just can't use it so it's always my problems.*

(Student 7)

Effective Learning Strategies. Although the pre-medical students faced difficulties with grammar rules and advanced vocabularies, they appeared to engage in self-reflection and sought help online and from others, as the following excerpts suggested.

Excerpt 1. *I think after writing or saying it just like I can recall it again and try to check it (grammar) on the Internet and sometimes to see if they are correct. I think also a good thing is to ask others such as teachers and friends.*

(Student 5)

Excerpt 2. Maybe I would, yeah. Just have to do the vocabularies, just have to read it, use it more. Just make I just make sure that I am. I always realize myself. That I have to use that word instead of this word. And for the time being, just like, make a timetable that's easy.

(Student 7)

Challenges of Consistent Motivation. The pre-medical students struggled with learning motivation issues, often engaging in last-minute efforts and experiencing a tendency to get bored easily. However, they acknowledged that this behaviour was not ideal. The following excerpt illustrated these challenges.

Excerpt 1. I am a person who is doing something when I wanted to do so it's actually a bad thing because sometimes. I have started doing something when it's almost reaching the deadline and it makes the work process bad and the thing has to be rushed.

(Student 6)

Excerpt 2. I often rely on my passions to do things. For example, I want to learn something. if I want to learn Spanish, for example, I just start right away, but for just like two or three days later, I will get bored of it.

(Student 9)

Purpose and Goal-Oriented Mindset. While the pre-medical students were aware that the mentioned behaviours above were not ideal, they coped with these issues by prioritizing important tasks and setting clear goals for what to do next. The following excerpt showed their purpose and goal-oriented mindset.

Excerpt 1. Maybe, I have my To Do List. So sometimes that I am procrastinating enough to I have to start doing something and when it came to the deadline it's made me know that I have to focus on this only one thing to make it.

(Student 6)

Excerpt 2. I will rely less on my passions and focus on the goals or focus on how I make this my habit like instead or like why do I want to learn something. That's, I mean that's the solution for me to like realizing the purpose of doing the thing, yeah.

(Student 9)

Document Learning Compilation Issues. In addition to the issue of self-learning, the compilation of learning documents for the e-portfolio task posed a challenge for the pre-medical students. The primary reasons were that the learning documents were not stored together in one place, and upon completing each unit and task, students tended to forget to reflect on their activities. Consequently, they struggled to recall what to write.

Scattered Learning Evidences. Evidence indicated that pre-medical students were taking notes both in books and several applications. However, when it came to time to compile these notes, they encountered difficulties locating where they were stored. The following excerpt illustrated these challenges.

Excerpt 1. I had a problem with the same problem as Elleen about learning evidences which are separately in a lot of places.

(Student 6).

Excerpt 2. But also, what I did in the class through the book and sometimes I didn't write everything in a book as noted and write in many applications. It's just everywhere, so. When I have to compile everything, it gives me a little bit of trouble.

(Student 8)

Systematic Organization of Learning Documents. The pre-medical students admitted that it took time and patience to remember where all these documents were.

While they were experiencing difficulties compiling notes, they realized that they needed to create a centralized place to keep all learning documents and activities. The following excerpts indicated their systematic organization of learning documents.

> ***Excerpt 1.*** *I started to make just the only one place that I keep all my activities that I do, and I also write how the feeling that I like, I feel that day or when I finished those activities. It's like the journal of my portfolio. So, when I when it comes to doing the e-portfolio, it's easier for me to just pick it up and choose which one is more representing myself and which one that I like most to show it to you guys. And this is the thing that I learned from the last time.*
>
> (Student 6)

> ***Excerpt 2.*** *It just takes a little bit of time and also a patient and try to figure out where I take notes, where I keep this kind of assignments, where I keep out of this idea and it just takes a bit of time and effort.*
>
> (Student 8)

Memory Lapse. The pre-medical students appeared to encounter memory issues when writing reflections in the e-portfolio. The extended duration of the semester and spanning about four months posed a challenge as they struggled to recall learning contents and associated feelings. Some students took notes as the only form of learning evidence, resulting in a limited resource. The following excerpts highlighted these challenges.

> ***Excerpt 1.*** *This is a long period of time and I cannot remember the content well. So, I have other groups' comments for my presentation performance as learning evidence.*
>
> (Student 3)

Excerpt 2. *I feel that I sometimes forgot what feeling at that time when I have a presentation in class. So when I look in the video, I feel I cannot feel the feeling what I learned at the task.*

(Student 4)

Excerpt 3. *I always keep the photos, but I usually don't take notes. I only got the photos so it's quite hard to me to just review the memories.*

(Student 7)

Value of Diverse Documentation. Keeping various forms of learning documents proves to be valuable resources for the e-portfolio. Some students referred to comments from other groups, while others repeatedly revisited videos (VDO). Additionally, some opted to take notes immediately, as indicated by the following excerpts.

Excerpt 1. So, I have other groups' comments for my presentation performance as learning evidence.

(Student 3)

Excerpt 2. But when I slowly look into them (learning evidences), I can remember some of it and I put those reflection into my e-portfolio. I handle it by watching (again) those VDOs that I recorded and watching my slides that we that I made with my groups.

(Student 4)

Excerpt 3. For the first thing I just like have to take notes, just have to just have to gather more information than the photos, not just take the photos, but maybe take notes, write diary, for example.

(Student 7)

Overall, pre-medical students reported facing challenges in self-learning and compiling learning documents during the development of an e-portfolio. Despite these

challenges, they demonstrated flexibility and adaptability by implementing coping strategies such as improved time management and the systematic organization of learning documents. Consequently, this addressed the research question 3: *What are the reported challenges and coping strategies in developing an e-portfolio?*

In this research, we explored the perceptions of pre-medical students regarding the use of e-portfolios in English language learning within medical education at a private university in Thailand. We aimed to measure the extent of their reflective skills and identify the challenges they reported along with the coping strategies during the development of e-portfolios.

4.4 Power of Asking the Right Questions

The results from the research question 1 indicated that the reflective skills of pre-medical students were developed based on the frequency of signal words in four levels: 1) description (1207), 2) justification (834), 3) critique (272), and 4) discussion (81). These levels were structured according to Figure 1 *framework of four hierarchical levels of deep reflection.*

Additionally, the critical thinking skills of pre-medical students were evident, supported by evaluative words in level 3 *critique,* suggesting thoughtful *self-discovery* indicative of developing critical thinking. This is similar to Sieben et al. (2021) which found that their medical students' highest level of reflection reached 54% in critique.

Upon rearranging the frequency of signal words in the four levels (from levels 1-4 to 4-1) and presenting it visually, a pyramid shape emerged (Figure 4). Closer examination of this pyramid suggested it functioned as a scaffold for the development of reflective and critical thinking skills among pre-medical students. Drawing from the concept of *scaffolding,* as described by Reiser and Tabak (2014), which involves activities designed to support students' learning, the e-portfolio task, embedded in ENL 128, was intentionally designed to scaffold students' reflective and critical thinking skills. To be more specific, at the bottom level (description: personal stories), the pre-

medical students fundamentally showed strong reflective skills in expressing experiences. Then, the next level (justification: skills and self-improvement) indicated their ability to articulate reasons for *skills and self-improvement*. After that, the critique level suggested thoughtful *self-discovery* reflecting developing critical thinking. At the top level (discussion: future aspirations), although aspirations had lowest frequencies, engagement in *future aspirations* implied openness to forward-looking perspectives.
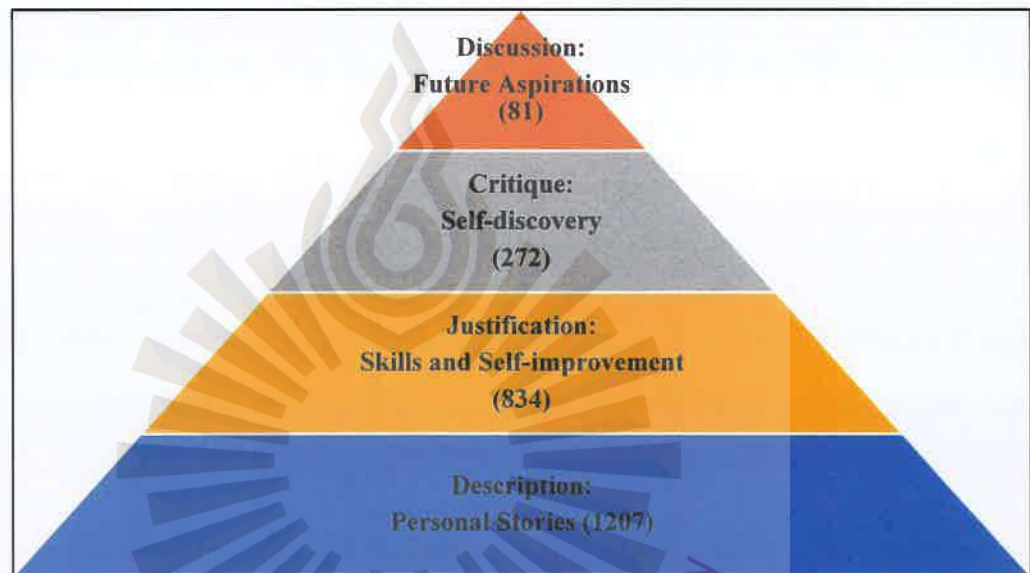
Figure 4.2
Pyramid Of the Four Hierarchical Levels of Deep Reflection

Practically, students were tasked with composing a reflective essay of 200-300 words, guided by four key reflective and critical questions: 1) What story did your artifacts tell? 2) What surprised you? 3) What did you learn from these artifacts and about yourself? And 4) what would you have done differently? Thus, posing the right questions was important in enhancing students' reflective and critical thinking skills. This assertion aligned with the findings of Malthouse et al. (2015) and Mustika et al. (2020), who emphasized the importance of questioning techniques in developing individuals' reflective and critical thinking skills.

4.5 Power of Journaling

Pre-medical students showed positive perceptions towards the use of e-portfolios in English language learning within medical education. The favourable feedback was from the realization that e-portfolios not only enhanced their English language abilities, particularly in writing, but also played a role in the development of presentation and teamwork skills.

Regarding improvement in English writing, this could be attributed to the fact that students were assigned the task of writing a short reflection after completing each study unit and presentation. This brief reflection, *journaling*, involves the act of documenting one's thoughts, views, and feelings (Lara, 2020). Additionally, Sihite and Simanjuntak (2016) confirmed the enhancement of English writing skills (in e-portfolio project) in an experimental group over time. Consequently, it can be inferred that the practice of journaling after completing each unit and presentation contributed to the heightened writing skills of pre-medical students.

4.6 Power of Teamwork

In terms of presentation and teamwork skills improvement, it is evident that the ENL 128 course focused on diverse presentation tips and techniques in a medical professional context. While this is expected for presentation skills, the enhancement of teamwork skills can be attributed to the course providing a secure and supportive learning environment conducive to fostering essential communication and collaboration skills. Notably, students were assigned to work in groups of their choices for most presentation projects throughout the semester. Consequently, this collaborative approach instilled a sense of safety and support within the working groups, contributing to increased confidence and pride in the students' accomplishments. This aligned with Hsiung's (2012) argument that offering a group work option over a defined period not only led to significant academic achievements, but also resulted in better performance in both homework and unit tests compared to an individualistic learning condition.

4.7 Power of Adaptive Strategies of Pre-Medical Students

Pre-medical students went through a journey of self-discovery and learning through e-portfolio development. However, it was not easy to get through during the semester-long. Time constraints and moving between exams and extracurricular activities made them feel pressured which was similar to Deb et al.'s (2015) study.

Overcoming this issue needed strategic time management, realistic goal-setting, and the to-do list method (Covey, 1989). Language proficiency was another challenge that students struggled with, involving grammar rules and advanced vocabulary (Dörnyei, 2014). Coping with this required self-reflection, online help, and assistance from peers and teachers (Ellis, 1994). Nevertheless, inconsistency in motivation, particularly procrastination, remained challenging for the pre-medical students. Focusing on clear goals was their coping strategy to ensure they maintained intrinsic motivation (Deci & Ryan, 2000).

In addition, compiling learning evidence during the development of the e-portfolio presented another set of challenges. Learning evidence was kept scattered across various platforms and applications, causing troubles when needed. Consequently, pre-medical students implemented strategies for systematic organization, creating centralized locations for their learning materials (Nilson & Zimmerman, 2013). However, memory lapses also proved to be the last issue that the students faced. It was difficult for them to recall specific learning experiences, so the students employed diverse documentation methods, including comments, videos, and notes (Baddeley, 2003)

5. CONCLUSION AND RECOMMENDATIONS

The results of this study suggested that pre-medical students showed a multifaceted approach to reflection indicating progress in both reflective and critical thinking skills through the development of e-portfolios. The structured framework of four hierarchical levels of deep reflection, illustrated in the pyramid shape, suggested that the e-portfolio task served as a scaffold for the intentional development of these skills. Asking the right reflective and critical questions, coupled with the power of journaling, played a crucial role in enhancing students' abilities. Positive perceptions towards e-portfolios in English language learning were evident, emphasizing the role of e-portfolios in improving English writing, presentation, and teamwork skills.

Despite the valuable insights gained from this study, it is important to acknowledge its limitations. The study was conducted in a specific context, focusing on pre-medical students at a private university in Thailand. Generalizing the findings to different contexts or student populations may require caution. Additionally, the study relied on self-reported data, which may introduce biases in participants' responses. Further research with a more diverse sample and mixed-methods approach could provide a more comprehensive understanding of the impact of e-portfolios on reflective and critical thinking skills.

Future research could explore the long-term impact of e-portfolios on the development of reflective and critical thinking skills beyond the duration of a single semester. Investigating the transferability of these skills into real-world medical practice or further academic pursuits could provide valuable insights. Additionally, comparative studies between different instructional approaches or variations in e-portfolio design could help identify best practices for enhancing reflective and critical thinking skills in medical education.

The findings of this study have several implications for educators and curriculum designers. Integrating e-portfolios into English language learning courses for pre-medical students can serve as an effective tool for developing reflective and critical thinking skills. Educators should focus on designing reflective questions that

prompt students to engage in deep thinking and self-discovery. Providing guidance on time management, language proficiency, and motivation can also enhance the effectiveness of e-portfolio implementation. Furthermore, creating a supportive and collaborative learning environment, as exemplified by the emphasis on teamwork in this study, can contribute to holistic skill development.

Overall, this study contributes to the growing body of literature on the use of e-portfolios in medical education and highlights their potential in fostering reflective and critical thinking skills among pre-medical students.

References

Aşık, A. (2017). A sample corpus integration in language teacher education through coursebook evaluation. *Journal of Language and Linguistic Studies, 13*(2), 728-740.

Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching and assessing*: A revision of Bloom's taxonomy of educational objectives: Complete edition. Longman.

Baddeley, A. (2003). *Your memory: A user's guide.* Psychology Press.

Brezina Tessier, P., & McEnery, A. (2020)., V., Weill-#LancsBox v. 5.x. [software]. Available at: http://corpora.lancs.ac.uk/lancsbox.

Covey, S. R. (1989). *The 7 habits of highly effective people.* Simon & Schuster.

Deb, S., Strodl, E., & Sun, H. (2015). Academic stress, parental pressure, anxiety and mental health among Indian high school students. *International Journal of Psychology and Behavioral Science, 5*(1), 26-34.

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.

Dörnyei, Z. (2014). *The psychology of the language learner: Individual differences in second language acquisition.* Routledge.

Ellis, R. (1994). *The study of second language acquisition.* Oxford University.

Fida, N. M., & Shamim, M. S. (2016). Portfolios in Saudi medical colleges: Why and how? *Saudi Medical Journal, 37*(3), 179-182.

Gray, L. (2008). Effective practice with e-portfolios. *JISC*, 5-40.

Gómez, S. S., Ostos, E. M. C., Solano, J. M. M., & Salado, T. F.

H. (2013). An electronic   portfolio for quantitative assessment of surgical

skills in undergraduate medical education. *BMC Medical Education, 13*(1), 1-

9.

Haffling, A.-C., Beckman, A., Pahlmblad, A., & Edgren, G.

(2010). Students' reflections in a   portfolio pilot: Highlighting professional

issues. *Medical Teacher, 32*(12), 532-540.

Heeneman, S., & Driessen, E. W. (2017). The use of a portfolio

in postgraduate medical education–reflect, assess and account, one for each or

all in one? *GMS Journal for Medical Education, 34*(5), 1-12.

Hsiung, C. M. (2012). The effectiveness of cooperative

learning. *Journal of Engineering Education, 101*(1), 119-137.

Kitzinger, J. (1994). The methodology of focus groups: The

importance of interaction   between research participants. *Sociology of

Health & Illness, 16*(1), 103-121.

Kusuma, I., Mahayanti, N. W. S., Adnyani, L. D. S., & Budiarta, L. G. R. (2021).

Incorporating e-portfolio with flipped classrooms: An in-depth analysis of

students' speaking performance and learning engagement. *JALT CALL

Journal, 17*(2), 93-111.

Lara, L. C. (2020). Benefits of journal-writing for students in the

emotional/behavior disorders classroom. *Journal of Poetry

Therapy, 33*(3), 187-193.

Leijen, Ä., Valtna, K., Leijen, D. A., & Pedaste, M. (2012). How to determine the

quality of students' reflections? *Studies in Higher Education, 37*(2), 203-217.

Lorenzo, G., & Ittelson, J. (2005). An overview of e-portfolios. *Educause Learning

Initiative*, 1-27.

Malthouse, R., Watts, M., & Roffey-Barentsen, J. (2015). Reflective questions, self-

questioning and managing professionally situated practice. *Research in

Education, 94*(1), 71-87.

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A

guide to design and   implementation*. John Wiley & Sons.

Moon J. A. 2004. *Reflection in learning and professional development.* Routledge.

Muho, A., & Leka, K. (2021). Students' perceptions of portfolio as a motivating factor in learning English as a foreign language. *Journal of Educational and Social Research, 11*(6), 47-47.

Mustika, N., Nurkamto, J., & Suparno, S. (2020). Influence of questioning techniques in EFL classes on developing students' critical thinking skills. *International Online Journal of Education and Teaching, 7*(1), 278-287.

Nilson, L. B., & Zimmerman, B. J. (2013). *Creating self-regulated learners: Strategies to strengthen students' self-awareness and learning skills.* Routledge.

Ngui, W., Pang, V., & Hiew, W. (2020). Designing and developing an e-portfolio for second language learners in higher education. *International Journal of Information and Education Technology, 10*(5), 362-366.

Ross, S., Maclachlan, A., & Cleland, J. (2009). Students' attitudes towards the introduction of a personal and professional development portfolio: Potential barriers and facilitators. *BMC Medical Education, 9*(1), 1-6.

Rou, L. Y., & Yunus, M. M. (2020). The use of Seesaw in increasing pupils' reading interest. *Universal Journal of Educational Research, 8*(6), 2391-2396.

Saldana, J. (2014). Coding and analysis strategies. In P. Leavy & J. Saldana (Eds.), *The Oxford handbook of qualitative research* (pp. 581–685). Oxford University Press.

Schrempf, S., Herrigel, L., Pohlmann, J., Griewatz, J., & Lammerding-Köppel, M. (2022). Everybody is able to reflect, or aren't they? Evaluating the development of medical professionalism via a longitudinal portfolio mentoring program from a student perspective. *GMS Journal for Medical Education, 39*(1), 1-20.

Sert, O., & Aşık, A. (2020). A corpus linguistic investigation into online peer feedback practices in CALL teacher education. *Applied Linguistics Review, 11*(1), 55-78.

Sieben, J. M., Heeneman, S., Verheggen, M. M., & Driessen, E.

W. (2021). Can concept mapping support the quality of reflections made by undergraduate medical students? A mixed method study. *Medical Teacher, 43*(4), 388-396.

Sihite, E. E., & Simanjuntak, D. C. (2016). Daily Journal Writing to Enhance Students' Writing Skills. *Acuity: Journal of English Language Pedagogy, Literature and Culture, 1*(2), 27- 35.

Singh, C. K. S., Muhammad, M. M., Mostafa, N. A., Noordin, N., Darmi, R., Md Yunus, M., . . . Masa Singh, T. S. (2022). Challenges and needs of ESL teachers in implementing portfolio assessment as alternative assessment in teaching English. *Asian Journal of University Education, 18*(3), 710-723.

Vance, G. H., Burford, B., Shapiro, E., & Price, R. (2017). Longitudinal evaluation of a pilot e-portfolio-based supervision programme for final year medical students: Views of students, supervisors and new graduates. *BMC Medical Education, 17*(1), 1-9.

Yastibas, A. E., & Yastibas, G. C. (2015). The use of e-portfolio-based assessment to develop students' self- regulated learning in English language teaching. *Procedia-Social and Behavioral Sciences, 176*, 3-13.

Yielder, J., & Moir, F. (2016). Assessing the development of medical students' personal and professional skills by portfolio. *Journal of Medical Education and Curricular Development, 3*, 9-15.

APPENDICES

Appendix A: Questionnaire Questions

1. Do you know 'Portfolio'? Yes/No

2. Portfolio is …..

   a) collections of your showcases that highlight your academic achievements.

   b) collections of your showcases that highlight your work achievements.

   c) collections of your showcases that highlight your academic and work achievements.

   d) None is correct.

3. Have you done 'Portfolio' before? Yes/No

4. How about an e-portfolio? Have you ever done it? Yes/No

5. What is an e-portfolio like in your opinion?

   a) It is a showcase in a digital world.

   b) It is a showcase in the form of blogs.

   c) It is a showcase in the form of resumes.

   d) It is a showcase in the form of reflections.

6. E-portfolio is ...

   a) collections of your blogs in a digital world.

   b) collections of your resumes in a digital world.

   c) collections of your reflections in a digital world.

   d) All is correct.

7. E-portfolio should be done

   a) individually.

   b) in pairs.

   c) in groups.

8. Have you ever done e-portfolio? Yes/No

9. How many e-portfolios have you done so far?

   a) 0

   b) 1

   c) 2

d) More than 3

10. Did you know the relationship between e-portfolio and reflective skill? Yes/No

11. If yes, please explain.

12. Please describe your e-portfolios you have done

Appendix B: Interview Questions

1. What language skills did you improve from this project? How did you know this if you improved?
2. What are your self-learning techniques for this project?
3. What are your self-learning motivations for this project?
4. What were your self-learning problems or challenges?
5. Why is this a problem?
6. How would you solve this problem?
7. How could you avoid this problem in the future?
8. How did you feel when you were assigned this task and how did you feel after you saw your e-portfolio done?
9. How did you compile your artfifacts or learning evidence/evidence?
10. What were challenges when you compiled e-portfolios? And how did you cope with them?

When you look at your artfifacts, 1) What surprised you? And) what would you have done differently?

Appendix C: Themes of Reflective Essays

Level 1: Description: Personal Stories

Extra-ccurricular Activities

      Excerpt 1. *Since I <u>was</u> 9 years old, I have studied the   piano. During this time, I have been able to perform at a   Yamaha Music event when I <u>was</u> 10 and at a Sooner   Classic event when I was 14.*

<div align="right">(Student 1)</div>

      Excerpt 2. *I <u>was</u> in the external affairs team for this project. I <u>learned</u> many skills back such as how to comĴunicate with external organizations and how to write formal email.*

<div align="right">(Student 57)</div>

Education

      Excerpt 3. *I <u>completed</u> kindergarten and elementary school from Ek Burapa School. I <u>graduated</u> middle school and high school from Bodindecha (Sing Singhaseni) School.*

<div align="right">(Student 32)</div>

      Excerpt 4. *I <u>graduated</u> from Samsenwittayalai school. I <u>was</u> in a MSEP Program that is a Mathematics and Science Enrichment Program.*

<div align="right">(Student 103)</div>

Level 2: Justification: Skills and Self-*improvement*

Communication and Collaboration

      Excerpt 1. *This task is quite challenging <u>because</u> we have to persuade the professor to agree with us.*

<div align="right">(Student 30)</div>

Excerpt 2. *But what made the event truly special was how it boosted up my social-skill rapidly* <u>*because*</u> *I was required to interact with a group of strangers who hailed from different provinces and parts of the country that I would not have had the opportunity to meet them if I had not attended this event.*

(Student 64)

Excerpt 3. *All of this will have to go through group work as well,* <u>*so*</u> *I have to work with others and listen to a lot of opinions. What is essential for group work is a division of work and listening, which I got all these things from my group so it gives me some anticipation for the next group work.*

(Student 77)

Excerpt 4. *This semester I do group work that has   different people from last semester,* <u>*so*</u> *I have to adapt my style of working to fit with new groups' friends. This gave me experience working with other people that I didn't know well.*

(Student 105)

Self-reminder for Room Improvement

Excerpt 1. *First, after get the task I think that it will be difficult* <u>*because*</u> *when I present in front of audience, I usually look at the PowerPoint while talking, so I know what will I say next time*

(Student 3)

Excerpt 2. *As the teacher is a foreigner and a native speaker,* <u>*so*</u> *I practice communication a lot.*

(Student 87)

Excerpt 3. *I liked the advice from the teacher after the presentations* <u>*because*</u> *I can know what I need to improve, and consequently, I can get more practice*

(Student 94)

Excerpt 4. *Lastly, this activity improved my reading skill a lot* <u>*because*</u> *I have to read the whole research and conclude it in a little article.*

Level 3: Critique: Self-discovery

Self-Realization Ability

Excerpt 1. Additionally, I <u>was able to</u> expand my horizons and discover new information, thanks to the research component of the course. (Student 29)

Excerpt 2. Surprisingly, each theme I <u>chose</u> can reflect my characteristics. It expresses how much earnestness I have when I must focus on something and the flexibility, I have for being a team-worker.

(Student 61)

Excerpt 3. Moreover, I <u>learned</u> a lot about myself during this semester. I discovered that I have a lot of potential and that I can achieve great things when I put my mind to it. I also <u>learned</u> that it is okay to make mistakes and that the feedback I received was not meant to criticize but to help me improve.

(Student 111)

Enhancement of Research Skill

Excerpt 1. I <u>chose</u> an article related to anxiety of ADHD children with bullying and pretended to be the researcher in a conference. Although it is challenging, I am very proud of myself that I did very well.

(Student 23)

Excerpt 2. Participating in the Monkeypox research project was an enlightening experience for me. I <u>learned</u> how to navigate the Scopus website and search for credible research from around the world.

(Student 29)

Excerpt 3. *I have gained a wealth of knowledge and valuable skills through my research on thalassemia in Thailand. Not <u>only did I learn</u> about this specific medical condition, but I also had the opportunity to practice reading and interpreting research papers, which is an essential skill in any field.*

(Student 56)

Excerpt 4. *And in task 5, I <u>learned</u> more about medical research that would be helpful for my career in the future.*

(Student 90)

Level 4: Discussion: Future Aspirations

Self-improvement

Excerpt 1. *We forgot some of our script because we were a little anxious and excited, but I think we did a great job overall. We also got feedback from the teacher, so we can use it to get better for the <u>next time</u>.*

(Student 25)

Excerpt 2. *The last thing is to practice reflecting on our presentation. I was a bit nervous, so I forgot the script. That's why the presentation doesn't look smooth. Which <u>I will</u> try to fix as much as possible <u>next time</u>.*

(Student 47)

Excerpt 3. *My group presents this time did a very good job overall except did not pay attention to the audience. Maybe next to I <u>should</u> more be careful.*

(Student 54)

Self-learning Goals

Excerpt 1. *I hope in the future <u>I will</u> continue to develop myself. I have got many strategies.*

Excerpt 2. As I conclude, I am excited to apply my newfound skills in future tasks, delivering impactful presentations, and grateful for the valuable experiences and growth opportunities this course provided. I look forward to continuing my journey as a skilled presenter.

(Student 40)

Excerpt 3. My goal in the future is to become a doctor. I'm passionate about functions of human body and helping people to recover from diseases.

(Student 96)

Appendix D: Themes of Interview

Coding and Categories: RQ 2: What are the perceptions of pre-medical students towards e-portfolio in English language learning in medical education?

Diverse Skill Improvement

Presentation Skill

Excerpt 1. I really improved my presentation skill since all of the assignments in E portfolio focus on presentations.

(Student 1)

Excerpt 2. So, the skills that I think I have improved. By doing task 6 and like every test in the portfolio project is that presentation skills, communication skills and teamwork skills.

(Student 5)

Excerpt 3. It helps me a lot with the presentation skills like there are several technique techniques that it is taught through the course.

English Writing Skill

Excerpt 1.*I think my writing skill is really improved. I can see how faster I am using my vocabulary.*

<div align="right">(Student 3)</div>

Excerpt 2. *For me, I think I've improved along the e-portfolio task is the writing skill. As you know, we actually do a lot of tasks along, you know class like the script and all the presentation it make me like learn more about doing all the scripts and writing.*

<div align="right">(Student 6)</div>

Excerpt 3.*I think it's maybe about my writing skill because I have not written proper English for quite a long time.*

<div align="right">(Student 8)</div>

Teamwork Skill

Excerpt 1. *but I also found out that my other skill is also improved to such as team work, self-learning practice and improve myself over time.*

<div align="right">(Student 4)</div>

Excerpt 2. *So, the surprising thing that I think is the teamwork that me and my team have made throughout the project. Like throughout the semester, like the last work is the things that confirms our teamwork.*

<div align="right">(Student 5)</div>

Excerpt 3. *Like I'm less nervous, I feel more confident and I'm really proud of all team working skill because we stick with the same team all the time, right?*

<div align="right">(Student 8)</div>

Coding and Categories: RQ 3: What are the reported challenges and coping strategies in developing an e-portfolio?

Self-learning Issues

Time Constraints

Excerpt 1. *I lack of time because it is difficult to balance self-learning with reading for exam.*

(Student 2)

Excerpt 2. *Oh, for me my first main problem is the time because I did a lot of extracurricular activities and so I don't really have much time to do for self-improvement for myself.*

(Student 8)

Time Management

Excerpt 1. *So, I solved this problem by setting a realistic goal and prioritize essential things like when it's near the exam, I will only focus on reading and when the exam past, I will focus on self-learning*

(Student 2)

Excerpt 2. *Maybe, I have my To Do List. So sometimes that I am procrastinating enough to I have to start doing something and when it came to the deadline it's made me know that I have to focus on this only one thing to make it.*

(Student 7)

Struggle with Language Proficiency

Excerpt 1. *I think that myself learning problems or challenges is that it is like a grammar problem. Sometimes I cannot remember all grammar rules, so that is a problem.*

<div align="right">(Student 5)</div>

Excerpt 2. *So, I've learned all C1, C2 or IELTS words, but it's just like very, it's very great deep in my mind. I just can't dig it out so. I know that word, but I just can't use it so it's always my problems.*

<div align="right">(Student 7)</div>

Effective Learning Strategies

Excerpt 1. *I think after writing or saying it just like I can recall it again and try to check it (grammar) on the Internet and sometimes to see if they are correct. I think also a good thing is to ask others such as teachers and friends.*

<div align="right">(Student 5)</div>

Excerpt 2. *Maybe I would, yeah. Just have to do the vocabularies, just have to read it, use it more. Just make I just make sure that I am. I always realize myself. That I have to use that word instead of this word. And for the time being, just like, make a timetable that's easy.*

<div align="right">(Student 7)</div>

Challenges of Consistent Motivation

Excerpt 1. *I am a person who is doing something when I wanted to do so it's actually a bad thing because sometimes. I have started doing something when it's almost reaching the deadline and it makes the work process bad and the thing has to be rushed.*

<div align="right">(Student 6)</div>

Excerpt 2. I often rely on my passions to do things. For example, I want to learn something. if I want to learn Spanish, for example, I just start right away, but for just like two or three days later, I will get bored of it.

(Student 9)

Purpose and Goal-Oriented Mindset

Excerpt 1. Maybe, I have my To Do List. So sometimes that I am procrastinating enough to I have to start doing something and when it came to the deadline it's made me know that I have to focus on this only one thing to make it.

(Student 6)

Excerpt 2. I will rely less on my passions and focus on the goals or focus on how I make this my habit like instead or like why do I want to learn something. That's, I mean that's the solution for me to like realizing the purpose of doing the thing, yeah.

(Student 9)

Document Learning Compilation Issues

Scattered Learning Evidences

Excerpt 1. I had a problem with the same problem as Elleen about learning evidences which are separately in a lot of places.

(Student 6)

Excerpt 2. But also, what I did in the class through the book and sometimes I didn't write everything in a book as noted and write in many applications. It's just everywhere, so. When I have to compile everything, it gives me a little bit of trouble.

(Student 8)

Systematic Organization of Learning Documents

Excerpt 1.*I started to make just the only one place that I keep all my activities that I do, and I also write how the feeling that I like, I feel that day or when I finished those activities. It's like the journal of my portfolio. So, when I when it comes to doing the e-portfolio, it's easier for me to just pick it up and choose which one is more representing myself and which one that I like most to show it to you guys. And this is the thing that I learned from the last time.*

(Student 6)

Excerpt 2. *It just takes a little bit of time and also a patient and try to figure out where I take notes, where I keep this kind of assignments, where I keep out of this idea and it just takes a bit of time and effort.*

(Student 8)

Memory Lapse

Excerpt 1. *This is a long period of time and I cannot remember the content well. So, I have other groups' comments for my presentation performance as learning evidence.*

(Student 3)

Excerpt 2. *I feel that I sometimes forgot what feeling at that time when I have a presentation in class. So when I look in the video, I feel I cannot feel the feeling what I learned at the task.*

(Student 4)

Excerpt 3. *I always keep the photos, but I usually don't take notes. I only got the photos so it's quite hard to me to just review the memories.*

(Student 7)

Value of Documentation

Excerpt 1. *So, I have other groups' comments for my presentation performance as learning evidence. (S3).*

Excerpt 2. *But when I slowly look into them (learning evidences), I can remember some of it and I put those reflection into my e-portfolio. I handle it by watching (again) those VDOs that I recorded and watching my slides that we that I made with my groups.*

(Student 4)

Excerpt 3. *For the first thing I just like have to take notes, just have to just have to gather more information than the photos, not just take the photos, but maybe take notes, write diary, for example.*

(Student 7)

Appendix E: Interview Transcription

Interviewer

Wat language skills did you improve from task number six of your project? How did you know if this improved?

Student 2

In this project, I really improved my presentation skill since all of the assignments in E portfolio focus on presentations. I had a lot of time to practice and get better. I knew my skills were improving because I found a way to work during my weakness which is that I get nervous and forget. What's to say. So, in every presentation? I will prepare and practice more.

Interviewer

OK. What about you?

Student 3:

The most important, the most of my improvement from this project on the e-portfolio. I think my writing skill is really improved. I can see how faster I am using my vocabulary.

Interviewer

OK, that's good. So, let's move to the second next question. What are yourself learning techniques for this project? And then how did you feel about it?

Student 3

I used ChatGPT to paraphrase my writing and felt great about it.

Interviewer

What about you?

Student 2

My self-learning technique is to list my content into bullet points, so they reminded me what to say and try to use the keyword and technique from the book.

Interviewer

OK, so how did you feel about it?

Student 2

I feel it's kind of useful and suitable for me.

Interviewer

OK, let's move to the second next question. What are your self-learning motivations for task number six e-portfolio project and then how did you feel about it?

Student 2

My motivation is that I want to do better in my next chapter in e-portfolio.

Interviewer

OK, So what? How did you feel?

Student 2

I feel like I'm challenged.

Student 3

Me too, I felt challenged because my motivation is that I want to improve my writing skill since I started this subject.

Interviewer

OK. OK, let's move to the next one.

- What were you were learning self-learning problem or challenges?
- And why is this the problem?
- How could you avoid this problem in the future

Student 2

OK, I think my problem is. I lack of time because it is difficult to balance self-learning with reading for exam. So, I solved this problem by setting a realistic goal and prioritize essential things like when it's near the exam, I will only focus on reading and when the exam past, I will focus on self-learning. So to avoid this problem in the future, I think I should find the right balance between self-learning and reading.

Interviewer

OK, good job. You?

Student 3

My learning problem is that I am always nervous when I am speaking English.

Interviewer

OK.

Student 3

OK. This is a problem because English is a general communication that you have to use in the future. How would I solve this problem? I think I have to get a chance to talk to more people and I also have to encourage myself to do so.

Interviewer

OK, so how did you feel when you were first assigned this project? And then how did you feel after you your project was done?

Student 2

At first, I didn't have any special feeling about this, but when it's done, it's kind of feel like this E portfolio is my learning diary in this semester and I decided it on my style so it I kind of like it.

Interviewer

OK, so you?

Student 3

At first, I thought it was going to be difficult because it was hard to write in English at all. That but after it was done, that was really good, I could do it. It's not difficult, but I like I think before.

Interviewer

OK, so how did you compile your artifacts? Or learning evidence in your E portfolio?

Student 2

I recorded a video of my presentations.

Interviewer

OK. Did you collect anything else beside the video clip?

Student 2

And the comments from teacher Suchada.

Interviewer

OK.

Interviewer

OK. What about you?

Student 3

Me too, I use her comments and classmates' comments about my presentation. I also compiled exercises from each learning sessions and put them in the e-portfolio.

Interviewer

OK. The next questions, so what were challenges when you compiled E portfolio and how did you cope with them? Did you have any problems collecting your artifacts?

Student 2

Some of the videos I recorded during the studying sessions cannot be opened, so it has a technical problem.

Interviewer

OK, so how did you cope with them?

Student 2

I have to I use the teachers' written comments during that session instead and tried to improve myself based on those comments.

Interviewer

OK, if this happened in the future, how could you avoid this problem?

Student 2

I think it can.

Student 3

We need to record the lectures using two devices in case.

Student 2

I used 2 devices, me too.

Interviewer

OK, what were the challenges about your compiling e-portfolio? Where about you.

Student 3

Because we studied ENL 128 about four months, right?

Interviewer

Right.

Student 3

This is a long period of time and I cannot remember the content well. So, I have other groups' comments for my presentation performance as learning evidence.

Interviewer

OK, so if this problem happen in the future, how could you avoid it?

Student 3

I think I have to jot down about what I do at that time. Don't wait, so this problem will not happen again in the future.

Interviewer

I think when you look at your artifacts, OK, what surprised you and then what would you have done it better?

Student 2

I think what really surprised me is that my bad hand gestures in the video I recorded. It is like my hands are moving around too much and lack of eyes content while speaking so. What I would have done better is to using a proper hand gesture and maintaining proper eye contact during presentation to leave a positive impact on the audience.

Interviewer

OK. What about you?

Student 3

I think when I was presenting, I looked at the note too much.

Interviewer

OK. OK, So what would you have done it better?

Student 3

And I need to remember the outlines and practice presenting contents before presentation.

Interviewer

What language skills did you improve from this project? How did you know this if you improved?

Student 5

So, the skills that I think I have improved. By doing task 6 and like every test in the portfolio project is that presentation skills, communication skills and teamwork skills. So the reason why I. I know that those skills of mine are improved is that I can successfully communicate with others and the messages that get to others is like correctly like the way I wanted to say and I can really communicate. Yeah, that's all, I think.

Interviewer

What about you?

Student 4

This class is about the presentation skill. It's obvious that my presentation skill is improved, but I also found out that my other skill is also improved to such as team work, self-learning practice and improve myself over time. I can feel that all my English skills have improved and I am proud of it.

Interviewer

OK, so how did you know it is improved?

Student 4

I compare for my first class to my 6th class assignments. I found out that it is getting better and better in terms of speaking confidently and writing more quickly.

Interviewer

OK. Yeah. Thank you. Let's move to the second question. What are your learning techniques for Task 6 e-portfolio? And then how did you feel about it is done?

Student 4

For task number 6. Let me tell you, it's about practicing myself by recording my video while practice presenting and watch it again so I can see what I need to improve for better presentation next time.

Interviewer

OK. How did you feel about it?

Student 4

I feel very good when I know my weak point and I improve it better.

Interviewer

OK, what about you?

Student 5

I think that myself learning technique is that to prepare first like I need to like. Have the key point noted like to have a brief script for myself, and I felt that it is like. A really good things like you need to. When you present you will know that what point that you have. Talked and the one that you have. So, you can like talk straight to the point and complete all the things. that you wanted to say.

Interviewer

OK, so how did you feel about it? About your learning techniques.

Student 5

I think that it is like a very good thing. Like to have the key point noted, so I don't miss like the point that I wanted to say when presenting.

Interviewer

Hey, let's move to the next one. What are your self-learning motivations for the task #6 E portfolio project and then how did you feel about it in Karaka?

Student 5

For myself, learning motivation is that. When I really love to think that when others can, like, fully understand us and I felt like I want people to understand what I am thinking. And I think that this is my motivation is that I can communicate with like people all around the world with English, yes.

Interviewer

So how did you feel about it in? Right.

Student 5

I feel great is that? I think I can communicate with others. As I as I have said and.
There is like no language barrier between like me and others.

Interviewer

What about you?

Student 4

So, for me, from the first task when I was my friend's presentation, they synchronize
and talk together. If I feel that I need to improve myself to be right there. So, I try to
practice and improve myself, learning my strengths and weakness to improve myself
and I feel that when I am good at speaking, it's very, very good to communicate with
other people in another country too.

Interviewer

OK, so how did you feel about it? About your motivations?

Student 4

I feel that when I improve myself, I can communicate with many teachers and friends.
Also, I I I also have an online friend who live in another country. After a while, I feel
that I can talk with him easily easier than before.

Interviewer

OK. So next question, what were yourself learning problem when you were doing E
portfolio project?

And then why is this problem? How would you solve this problem and how could you
avoid this problem in the future?

Student 4

First of all, myself learning problem and challenges are about my laziness. I know that
myself it's not very good to focus on one thing. So, when I have time, I try to relax
myself first before practicing myself so that I can focus on it and not look to the other

thing. Second one, why is the problem? So I know that I cannot focus on one thing very long time. I know that's on the start, so I know how to avoid it by relaxing myself first. I think that I will try to improve, try to improve and fix my bad habit so that in the future when I have a class which is very important and I need to just focus on it, I will, I will do it better and not have bad weakness.

Interviewer

Hey, thank you. What about you?

Speaker

So for the.

Student 5

First question, I think that myself learning problems or challenges is that it is like a grammar problem. It's not a really serious one. But yeah, I think it's one of the problems that I am concerned. The second question is Well, why is this a problem? I think that the grammar problem is like sometimes I cannot remember all grammar rules, so that is a problem. Yeah. And the third one. Is how would you solve this problem; I think after writing or saying it just like I can recall it again and try to check it on the Internet and sometimes to see if they are correct. I think also a good thing is to ask others such as teachers and friends. The last question is how could you avoid this from in the future? I think it is like a little bit hard to avoid as English is not my like mother tongue language, but it can be improved by like studying more maybe. Or trying using English like more frequently.

Interviewer

How did you feel when you were first assigned this project? And then how did you feel after you saw your project done?

Student 5

To be honest. I am like a little bit lazy at first because it is like another task for me to do, but then I thought it is like. A good chance for me to improve my English skills and improve myself. By doing E portfolio and after seeing it done, I felt great like the

first thing is that I get my task done. Second one is that it is like it come out better than I thought. And the third one is I am like proud of myself like doing this done and having it great.

Interviewer

OK. What about you?

Student 4

I think all these key portfolio things as a task for me to do. But when I start doing it, I feel enjoy myself and I it's like going on a vacation. Well, I put everything that I have so far from each assignment in task and put it on this canvas. Make it beautiful and proud of it.

Interviewer

OK. Next question how did you compile your learning evidence or artifacts?

Student 4

From every class, me and my group recorded our video so that we can review it and so I will watch this video of all tasks.

Interviewer

OK. What about you?

Student 5

So, I compile my artifacts and learning evidence by collecting like every piece of interesting information and words. After it was done right away, like when the teacher reflect my presentations or those slide, we have made, I think. I come back and then think about it and I try to like. I tried to improve it right away.

Interviewer

When you were collecting artifacts, what were the problems when you compiling them, and how did you handle it?

Student 5

When I compile my artifacts from my E portfolio, there is like some challenges like I think it is not easy to look and mention the mistakes I have made and my team have made so I think this was the challenging one and the. How did I cope with this? I think I need to understand that everyone can make mistake and like to look and mention the mistake we've made and which like sometimes I've made or sometime our group have made could improve myself.

Interviewer

OK, so if this happened again, how could you avoid this kind of problem in the future?

Student 5

So I think. I think it cannot be like avoided but. Sorry, I think. It cannot be like avoided but. Just do our best. Yeah, to like having the best version of yourself at that time.

Interviewer

Yeah, OK. What about you?

Student 4

For me, for me, the challenge that I face when compile my Portfolio is I feel that I sometimes forgot what feeling at that time when I have a presentation in class. So when I look in the video, I feel I cannot feel the feeling what I learned at the task. But when I slowly look into them, I can remember some of it and I put those reflection into my e-portfolio. I handle it by watching those VDOs that I recorded and watching my slides that we that I made with my groups.

Interviewer

OK. If you have this kind of problem again in the future, how would you avoid it or prevent it?

Student 4

Personally, I think that is normal that everyone forgot what happened in the past very long, but when you collect the artifact from the past like video or picture or Internet. When we compile it together, we can remember those things that are important, and we can focus on the main subject.

Interviewer

When you look at your artifacts, what's the price you the most and then what would you have? What would you have done it better?

Student 4

First of all, I'm very proud that I was a first runner-up for the 2022 e-portfolio competition. Oh. It's very good and I'm very surprised because I do it for enjoyment and fun. So it so for the first question, it really surprises me when I know that I get a second prize.

Interviewer

OK. When you look at your E portfolio, what would you have done it better?

Student 4

I think that what I need, what I should improve is that I should improve about my grammar and put more picture into it because picture can show more meaning than many words.

Interviewer

OK, so what about you ?

Student 5

So the surprising thing that I think is the teamwork that me and my team have made throughout the project. Like throughout the semester, like the last work is the things that confirms our teamwork. And the second question is that what would you have done differently? I think like to communicate with friends more and more like it could be better, but I think that is the best version of that time. So I am really not regretting. That, but I just feel surprised.

Interviewer

What language skills did you improve from this project portfolio and then how did you know if this is if you have improved?

Student 7

OK, say for me during this task, E-portfolio project, I have improved of all of my English here listening, writing, speaking. Yeah, I have to get it out through to the tasks because, like, these tasks, it's like 4 month long, doesn't it? I have so many activities for these tasks, especially in an English class in the past semesters, I have a lot of communication with professors and have done many works throughout it. So, it's that improved my English skill. And yet I have recognized that it's improved because I feel like I can read like hard article a lot easier than it was before and I, you know. It is useful to lusten to native accents or what? Say it's I can I can listen to something better in English? That's how I know I improve my English skill, yeah.

Interviewer

OK. What about you?

Student 8

I think it's maybe about my writing skill because I have not written proper English for quite a long time. Most of the time I just write in chat and not. I do feel like I have better English writing. Like when you're writing, you have to think about it, try to summarize all your idea and try to be concise and precise when you write it, so I think I improve in this.

Interviewer

OK. And how did you know if you improved?

Student 8

Because before this, I feel like I'm kind of rambling a lot when I write in English. But when it comes to e- portfolio, I can't just ramble everything and I have to be quite like summarizing my idea and make sure that does not sound too informal when writing. Writing must sound proper to be included in the e-portfolio and I'm quite satisfied

with the final writing piece of mine and it looked much better compared to my previous writing piece because before this I did write too but like I did for my friend. I did this for my leisure time, not for this occasion like this.

Interviewer

OK. What about you?

Student 6

For me, I think I've improved along the e-portfolio task is the writing skill. As you know, we actually do a lot of tasks along, you know class like the script and all the presentation it make me like learn more about doing all the scripts and writing. So, I think I improved the writing skill. And how did I know that I have improved my writing skill because I used to take so long to write one, like just short essays that, as now I'm writing the e-portfolio is just shorter than I used to, and I also used to use the Grammarly. It is the like the thing that can help check grammar. I think most people use that to correct their writing, and when they use grammar, Grammarly on the e-portfolio is like it's correct mostly.

Interviewer

OK. So, my next question, what were yourself learning techniques for this project, and then how did you feel about it? OK.

Student 6

So the learning technique, I actually have a lot of learning techniques for English because I like I love English is like beautiful. For preparing for doing the e-portfolio. I watch more like the talk shows to learn how to use some words because there are some specific words that make the portfolio more interesting. When you read and I also search for the example of the portfolio that you used to given to like the big company. And that is my learning technique to search around the www. and things that have in the online Internet and I feel excited when I do such research because I feel like I'm interested in someone, something and I into it and I really, really love doing it.

Interviewer

Hey, so how did you feel about it?

Student 6

I really excited about it and I love doing it.

Interviewer

OK, what about you got?

Student 7

Yes, for me, my self-learning techniques for English skill, I just kind of like to watch, so. So based on me, I am the person who's like to like to watch something especially like for entertainments like game casting. Yeah, like or like some movies, some series, but all of it. All of it, mostly being English. I understand, like a reading guy, I like to read novels like Mystery, Mysteries fantasy or else. But the book I love is always, always in English but yeah, it's always in English. It is the way I learn English and for the portfolio techniques I just like most are my friend, just search online for the guides of portfolio, look at the reference and then just like use it as a template, just do it. What I feel about it for the English self-technique for English? Yeah, that's fine. I like to watch it. And that just kind of feel good, yeah.

Interviewer

OK, what about you?

Student 8

OK, speaking of you e-portfolio, I will focus on my writing skill for me, I love reading and I love poems and poetry. So, I read that a lot and I think I learned through that when it comes to writing and also. When I'm confused about the vocabulary and also grammar, I like to use Cambridge Dictionary like that. They have a website and. It's so good it. They, you know, just like, show the definition of the word and also how to use that word properly. How to use that word like a native person? So if you sound more natural when you write in English and that really useful for me when I write in my, if possible, when I'm not really sure about the words that I would like to

use. I mean sometimes I want to write a sentence. And I don't want it to sound like repetitive, so I use something like a thesaurus. But thesaurus is not really that reliable sometimes. So, you have to check that with Cambridge dictionary. It may have the same meaning, but sometimes it's used for different occasions (context), so I like cross check between the websites. I use that quite a lot and also another website that I find really useful is I forget the name of, it's a dictionary in a dictionary website.

I feel like they have, like quite an easier definition to understand and also, I like their example to I prefer Cambridge, but for sometimes can be also. Give me like a. I still have to go the finish and so I will go to this website. Instead, I will search for you.

Student 8

Ohh, it's Collins Collins Collins.

Interviewer

Our Collins OK Collins.

Student 8

It's for me personally.

Interviewer

So how did you feel about it? About your learning techniques?

Student 8

I like it like it's useful for me because I did it and I prove it by myself, so I feel like it's really useful for me and after I really like everything after I cross check with all the dictionary and when I saw the result of it, I'm a little bit proud. And make it better, something like that. I'm happy about it.

Interviewer

So next question, what about your learning motivation? What are they? And then how do you feel about it?

Because when I did just something, I don't want to just finish. Just like, OK, I finished it. It's one of my assignments. I just submit it when I'm kind of a perfectionist person perfectionist. So, when I did something it's just like OK, if I'm going to put my effort in this, I'm going to make it the best one. I'm like. Go for yes or nothing. So, if we're going to do this, I will try my best. So, this like and that is like how my learning motivation for this project. So, I will want to be to show like teacher and everyone the best version of my assignment, and the best version of my project. What did I feel about this? I am happy to show this side of me more than just submit like the medical work to just finish it, to get the score and just finish everything.

Interviewer

So what about you, Satan?

Student 6

For me, I think the motivation of doing the task is like it's actually like that that Alleen mentioned. That is the one-of assignments that we have to do. And what I heard about the epoch for the e-portfolio. Before we get into the college, I have to do the e-portfolio before and I feel like if I have a chance to do it again, I want to do it better than I used to and normally I didn't really use that a lot. So, I think if I have a chance, I should make like I could do it, so I. Take effort and trying to do. The best I can, but I have to on here. I actually surprised when that result came out that I am one of the finalists. And yes, and that is also my feeling.

Interviewer

So what about you?

Student 7

I just want to do the best that I could. That's the way that my motto for it, for for everything that's not, not just the task, this portfolio. So I just try and do my best for this. I just feel like I just want to truly describe me through the e-portfolio. I was just trying to like describe who I am, what I can do, what my beliefs, anything just trying to shows that. Yeah, that's that's me. Yeah, that's how I feel about it. Actually, when the results came out, I was just very surprised there. That finalist, I think we all

surprised that we our finalist because I never image that I'm going to be in this place. Just feel proud about it, yeah.

Interviewer

What were yourself learning problem when you were doing e-portfolio? And then why is that a problem? And then how could you avoid this kind of problem in the future?

Student 7

For myself, what's the self-learning problems or challenges? I would say for the challenges? So normally I am the person. I'm kind of like say I always have problems with words. Because I would say I have learned many, many words like so in my like since my high school. In my school, we have like English class especially for IELTS and I have learned many many hard words like C1, C2 or IELTS words. So, I've learned all, but it's just like very, it's very great deep in my mind. I just can't dig it out so. I know that word, but I just can't use it so it's always my problems. It's always my challenge when I write e-portfolio. Because all it's because all of the words that pop up in my mind just very easy and simple words, and I just feel like my, my my like my data is not gonna be right and well if I use that words. So that's my challenge. And more of it say I just. I'm a bit ashamed to say this because another problem is time management. I would say for the task. You have assigned it in the in the beginning of the semester? But I just totally forgot that I just realized it like. One week before the deadline, so I just have to rush doing that's that's that's the problem. Yeah, but yeah, and why is the problem? Yeah, that's because I just forget it. And for for the time it is when I just forget it and. As I told you for the works. I just think like maybe I I'm not used to that word enough to use it fluently. That's maybe the problems and how could I avoid it, say for the for for the the words problems? Maybe I would, yeah. Just have to do the vocabularies, just have to read it, use it more. Just make I just make sure that I am. I always realize myself. That I have to use that word instead of this word. And for the time being, just like, make a timetable that's easy.

Interviewer

OK, So what about you?

Student 6

For me, myself learning problem is I usually procrastinate thing a lot. I am a person who is doing something when I wanted to do so it's actually a bad thing because sometimes. I have started doing something when it's almost reaching the deadline and it makes the work process bad and the thing has to be rushed so. The problem and also another problem is I like to do things, a lot of things at the same times, I actually like multitasking. When I do something, I also want to watch something, and I also want to listen to something. So, it's made me less, less focus for doing the main thing that I have to do. I think why this is the problem, because maybe because I. You know I. I'm not really strict to myself. About the way to avoid it? Maybe, I have my To Do List. So sometimes that I am procrastinating enough to I have to start doing something and when it came to the deadline it's made me know that I have to focus on this only one thing to make it. Fast to and finish in like quite effective and productive, and the best that I should do. In that time.

Interviewer

OK. OK, So what about what about you?

Student 8

Oh, for me my first main problem is the time because I did a lot of extracurricular activities and so I don't really have much time to do for self-improvement for myself. You have to spend some time for yourself. And for now, I study in the classroom and do all the extracurricular activities such as a rally. A lot of. Thing I I don't even have enough. I don't even have a good sleeping schedule, so that is my problem for me and I think it's a problem at itself and. How to avoid this problem in the future? Maybe a better time management and maybe have to turn down about my extracurricular activities. So, I think it will be better for my health. And so, in the long term too, and there are other problem is that. As I have mentioned, I am, a perfectionist and if you see my e-portfolio, I want My Portfolio to have the same color theme. I so every detail is important for me, so even I don't really have that much time. I still spend a lot

of time pick the color layering thing, color matching. Like if you see the shade of pink in my e-portfolio. That I spent a lot of time for every single page, so everything will look like coherent with each other so. And I think this is kind of a problem because you should, you should focus on the content and not just the aesthetic. And I spend like a lot of time on the aesthetic more than the content, so to avoid this problem in the future, I think I should prioritize what is important for the work. And not to focus on what is satisfying me like, OK, like it had to be this color it, have to be this layering like this. This has to forget because that's not important for that content or assignment or whatever that you would like to do in the future.

Interviewer

OK. OK, next, how did you feel when you were first assigned this project this e-portfolio project? And then how did you feel after you saw when it's done?

Student 8

When I first saw this assignment, I was like all the description and explanation and everything, I have to include in this task, I feel like, OK, this is going to be a big one. I have to save like some time for this, so I try to start this project a little bit earlier like it's not that early but. Because I have to spend a lot of time on everything, like on both content and aesthetic sides. So when I first thought it was like, OK, this going to take so much time for me, but I'm going to do this because I'm like, as I have mentioned. I go for it or nothing. So, after I finish it, I'm just like finally I did it all. I'm really satisfied with everything, so when I submit it, I'm just like. It is just so relieve that you can satisfy yourself and you finish everything, and after you saw the description, like what the assignment requires you to do, and after you finish, like every single question in that, it's just like you reach the finish line. It's just felt really relive and satify. I don't know how to describe it.

Interviewer

What about you?

Student 6

To be honest, I actually feel a little bit negative because I thought it's going to be a big project that I have to do and it's like it's feel like a lot and. Percentage of the e-portfolio score and I'm like, Oh my gosh, I'm like, and I'm like I have to do this. And then after I finish it and I saw my portfolio and I surprised that I. take this like I really like it like doing it and I didn't plan it to make it this way actually. And when it come out the way. It like more than I expect, so I kind of happy and proud of myself.

Interviewer

OK. What about you?

Student 7

OK for me, what a shame. Actually, I'm quite like Sasikarn. Again, I just feel like, ah, it's it's. It's a bit annoying like ohh it's more work I have. I have lots more things to do but. And yeah, it's kind of quite big work, which takes time for me doing e-portfolio, that's what I. That's what I feel in the 1st place. And you know just doing it and. When the results coming out just. I have told you. I'm very shocked with the result that I'm the finalist and. Kind of get proud of myself because yeah, I do it. I did it.

Interviewer

OK. So I have next question for you. How did you compile your learning evidence in your E portfolio?

Student 7

How do I compile my learning evidence? So actually, for since I am at Rangsit University in Rangsit campus, I have done so many activities by the way. Say it's not. It's not hard to compile the learning evidence because I always keep the photos. I always keep everything say by the time I have to do the e-portfolio, I just dig in my gallery and pick and choose the pictures and just pick it up. It's not that hard, it's yeah. Because I'm normally, yeah. Because since I'm here, I just doing many activities, yeah.

Interviewer

OK. What about you?

Student 6

So I compile my artifacts by open canvas because all my project that my group have done is done and we do it in Canva. So every project is already in Canva. I just copy the link and the slide of it and then show it into the portfolio.

Interviewer

OK. What about you now?

Student 8

For me it's like Sasikan, because my team do all the work in canvas so. When I want to use some of my learning evidence and just want to show some of my learning evident, copy the link and turn it into a QR code. If you can see my e-portfolio for an easier access and just show it in my parcel. Something like that.

Interviewer

What were challenges when you compile e-portfolio? And then how did you cope with them? And then how could you avoid this kind of problem in the future?

Student 8

OK. The challenge that I face. First thing, because everything is in the Internet, it is easy that way. But for my e-portfolio I want to show not just my presentation that show in the room. But also, what I did in the class through the book and sometimes I didn't write everything in a book as noted and write in many applications. It's just everywhere, so. When I have to compile everything, it give me a little bit of trouble so. And so how did you cope with that? It just takes a little bit of time and also a patient and try to figure out where I take notes, where I keep this kind of assignments, where I keep out of this idea and it just takes a bit of time and effort. How could you avoid this problem in the future? Write everything, note, everything on a single app. Maybe just open a door like a document in Google Doc. So, when I try to compile all of my learning evidence, I just opened this Google Doc and don't really have to like try to figure it out where I keep all my learning evidence.

Interviewer

OK. What about you?

Student 6

So, as I have mentioned before, that most of us used to do the e-portfolio before, so I the last time that I did, I had a problem with the same problem as Elleen about learning evidences which are separately in a lot of places. I started to make just the only one place that I keep all my activities that I do, and I also write how the feeling that I like, I feel that day or when I finished those activities. It's like the journal of my portfolio. So, when I when it comes to doing the e-portfolio, it's easier for me to just pick it up and choose which one is more representing myself and which one that I like most to show it to you guys. And this is the thing that I learned from the last time. And then I cope with it and. And I will do this. And now in future to make it better.

Interviewer

What about you?

Student 7

What's challenged me when I compiled the learning evidence. Although I told you, I always keep the photos, but I usually don't take notes. I don't take any notes and some activities I provide. It's long time this was long time ago. It's like 1 year, maybe one year and I totally forgot the details. I only got the photos so it's quite hard to me to just review the memories. What I have done. And also, yeah, has to tell you, I have to many, many things I have to do, a lot of activities outside the campus, inside the campus and what is hard for me is to make decisions which should I, which should I put in the portfolio which should not. And how to cope with it? say. For the first thing I just like have to take notes, just have to just have to gather more information than the photos, not just take the photos, but maybe take notes, write diary, for example. What have I done? what's the result of it? Something like that. And how could I avoid it just? How could I avoid this future? Yeah, just have to just maybe take more notes. Makes make just notes. Just take note, but, like, just make some anything that would remind me what I have done this.

Interviewer

So, the last question, when you look at your artifacts or your profile, what surprises you the most and what would you have done it differently or better?

Student 7

You have a look, but look at my artifacts. I was just very surprised because I have done many many things than I ever think of it. So let me say something so. Before I am what I am right now. I am kind of ambivert guy. I don't know. You know this or not, but it's in the middle of introvert and extrovert. I am ambivert guy, but more in the introvert side, so I enjoy spending time with friends with people. I also hate lots of people because like it's it's. Yeah, it's very annoying sometimes. So if it's all me, I would never do any of that activity. And I still don't know. I still don't know why I have done this or all of these activities. Maybe there is some point of change, I don't know. I don't recognize it, but I just do it. That's totally surprise me and it's made me what I am right now. that's that's very surprised meter.

Interviewer

OK, what would you have done it better?

Student 6

I think that the thing that surprised me in the e-portfolio is that. There are actually a lot of topics that we have presented in the project before like some, some of the topic is actually hard topic and I don't really know about it a lot, but when it's come to the project that we really have to do it. I was excited when I see my e-portfolio when I turn it in and I think it's quite better than I have planned. And what would I have done differently? I would say I would. I wouldn't have changed a thing at all.

Interviewer

OK. Thank you, what about you?

Student 8

What surprised me is that when I look at all of my learning evidence as like my artifacts like, well, we have done a lot of thing is have like several topic that we have to research and try to present at the in front of the class and I feel like our presentation

is getting better every single time when we stand in front of the class. Like I'm less nervous, I feel more confident and I'm really proud of all team working skill because we stick with the same team all the time, right? So, at first we have to do our work like, OK, you do this and you do that and we have to have a lot of conversation with each other like. OK, we will. OK, you do this and. Ohh this is my part and this is yours. We have to talk a lot. But when it comes to like big class assignments, like when the more assignment we do the better, the more assignment we had, the team working is better. OK, as I mean you do 1, I do 2, you do 2, you do 3, and you do, and we just collect everything together. Everything is just so much smoother and everything is much easier when we working together. So that what I have seen the improvement in our team working skill. So what I would done differently for me personally, I have in my profile. I have to write what I feel about what I learned in that class too, so if I have a chance to this is again, I will try to write it as early as possible, like after the class write it immediately so I can literally keep everything and not just like try to help. I have to recognize and recognizing like ohh what I feel about it, have learned on that. During that class and I may lose something during that time. So, this is the only thing that I will share, yeah.

Interviewer

What language skill did you improve from this project and then how did you know if this, if you improve it?

Student 9

For this question, I think the language skills that I have improved from the project is that I got to prepare my presentation skills like in in this course. It helps me a lot with the presentation skills like there are several technique techniques that it is taught through the course, like for example I got to know how to organize my speech and also from the E portfolio project I got to reflect on what I have. I have learned from the course, such as like I got to review on the artifacts that I learned from the course and. Then I got to like see if I really got something from that task. So it helps me with the reflection skills a lot.

Interviewer

OK. So, what about you?

Student 10

Well, my answer I would basically divide this into two parts. The first part is all about what I did in class about the presentation course of ENL 128. Yeah, that is the. The course is basically based on conventional presentations. So, being the term conventional, that's mean there is consistencies and there is all of these restrictions and rules and the patterns we need to follow through each time. But I think during this course is a course that I try to challenge myself the most from trying to add something that is different or something that's refreshing to this whole thing of conventional presentations like I tried using video clips instead of just a picture that cannot move, or I try to involve something like involving the audience like playing kahoot or quizzes or some sort of things like that. And the second part I'm talking about here is the E portfolio, which is all about the reflection progress. What I improved on the skills that I think is has gotten better a lot is the reflections considering the numbers of projects we have gotten in this semester is almost like 10 projects all together and. That was a lot. And hopefully I guess it's enough for me to practice my reflection skills as well as my writing skills to explain things and try to challenge myself if I can write something more creative than just a paragraph?

Interviewer

OK, so if I have to be specific about the language skill you mentioned about writing skill right, that you have improved right Pinky? OK. What about other skill? Donut and pinky. Do you have other skills that improve? For example, listening, speaking and reading, something like that.

Student 9

For me, I think the listening skills. My listening skills improves a little bit from the class where I got to listen to the video or watching the presentation video.

Interviewer

OK. What about your? In addition to writing skill, anything else?

Student 10

Yes, basically, I think all the skills have improved. If I look at the whole pictures of the course and be more specific like the course and the projects are going in the same directions. So the course is based on. English have four skills, right? So writing I've already mentioned and reading is that something that I must do before making each presentations. I have to do some research so reading is a must. Then we got these speaking where we have to go up and present. So that is basically speaking and then. Listening, we also have to listen to your friend's presentations and during class at Aj. Ubon. She's encouraged us to ask our friends questions. So that's more of like. Listening and speaking skills we improve.

Interviewer

OK. Let's move to the second questions here. OK. What are your self-learning techniques for this project? And then how did you feel about it?

Student 10

Self-learning techniques. I don't really have any. I'm going to be most honest here is that I am quite familiar with the whole presentation things because the school I went in my high school years, we used to do a lot of these and to from high school to university, definitely the expectation and the challenge of the task itself, and the grading rubrics have increased a lot. It has become more intense, so myself learning skills is I try to take what I used to learn in high school and try to like figured out a way to make it better because there are skills and skills have to be horned until you are experts about it. I always believe that there is room for improvement and I try to work on with that.

Interviewer

OK. What about you?

Student 9

For me, it's just, it's just my passions on the thing that I'm doing, like for the project that the portfolio. i actually learned from something from it because I want to learn

first like I. I really enjoy the English central thing, so I am actually passionate about doing the application, but it's just only the passions that. That I gain from self-learning, but there's there are no like more techniques for me. Just do I want to do it or not yeah.

Interviewer

Sure, I'm quite interested about the word passion that you mentioned. How did you feel about this word? Passion?

Student 9

I think it comes and goes quickly because. Sometimes I need passion to start doing things, but for certain amount of time I will feel like have less passions and it will get me it will drive me down or sometimes stop, stop me from doing something. So passion is just like the starter. But after that, to be consistent about something I'm doing, I just have to be like, gain my disciplines and just make it to be my route routine in.

Interviewer

OK. So next question, what are your self-learning motivations for this project? And then how did you feel about it?

Student 9

Yes, for the project that you mentioned, maybe I think it is referred to the portfolio thing, right, so. I think the main motivation for me to do the E portfolio honestly is the money. Like the price. Yeah, and also like. When I'm doing the decorations, it's just like I just. I'm just passionate about doing the things, like making the profiles of me and doing the decorations of the portfolio. That's just the passions or the things that I enjoy doing already. So, there are no like. More motivation about it, yeah.

Interviewer

What about you?

Student 10

For me it's a little bit different because like, I didn't really consider much about the price, but I in general like. I love to write. I have a really strong passion for writing, even in my free time. I wrote I write novels and post it online. So, e-portfolio for me is always like to do something that I really love because writing to me is something that is really like a close friend that understands me that I believe that I write to explore not only just deeper within me, to explore and learn about myself, more to understand more about my own self, but also to explore the world and how and why the world is and how much more knowledge there is for me to discover in this world. So it's like writing opens the doors to a lot of things for me. So basically, I was really enjoying doing this first project because I get to write and I also get got to write things that I love and could be any creative as much as I want.

Interviewer

OK, thank you. Next question, what were your learning problems or challenges when you were having this kind of project with you? Why is this a problem? And then how would you solve this problem? And then how could you avoid this problem in the future?

Student 10

The problem for this project, my main problem and basically might be the only one is about the decoration cause I'm terrible at art. I you, you know, like in a situation that if my friend asked me if this drawing is beautiful or not. I was like, I couldn't answer any of that so. It is just not my thing.

Interviewer

OK. So, do you think you would solve this kind of problem in the anytime soon?

Interviewer

I don't think it's going to be anytime soon because I tried to solve it for a lot of years, but it hasn't gotten better.

Interviewer

OK.

Student 10

So I just tried to find something as a substitute, like I tried to look up for layer layout in the Internet or sometime. Ask my friends for help.

Interviewer

That's a good choice. Ask your friend for help. Hey, what about you, donut?

Student 9

I have two main problems. The first one is inconsistency and the second one is that it's just the similar thing that I'm lazy and I get bored easily so. I often rely on my passions to do things. For example, I want to learn something. if I want to learn Spanish, for example, I just start right away, but for just like two or three days later, I will get bored of it. So that's the problems that I'm facing. And to solve this problem, I will rely less on my passions and focus on the goals or focus on how I make this my habit like instead or like why do I want to learn something? That's, I mean that's the solution for me to like realizing the purpose of doing the thing, yeah.

Interviewer

OK. OK. Next questions, how did you feel when you were assigned this task? That's the first question. And then how did you feel after you saw your project completed already?

Student 9

I feel it's easy, it's easy task because I just have to collect the artifacts and just like write the reflections in in class after class every class. When I after doing the e-portfolio, I feel it's like it's not that easy because I have to consider more on what to write or. Think more about what I've learned from the class and because of my laziness like I told you. It's my problem, so I just like start on like the last day of the due date. So it's hard for me to write beautifully and to gather, like, collect all the elements from each class in one portfolio. But after I saw it done, I'm really proud of it. Yes, I actually. You I don't know how to say it. I actually like, put more a lot of effort on it even. It's just one day, but yeah.

Interviewer

What about your pinky?

Interviewer

The first time that I hear, I heard that I was assigned this task I have thought that I'm doomed because like I did the portfolio contest last semester. The semester before, and I was thinking like, what if I couldn't make it as the last one? If I couldn't come up with a new thing of my foil to make it interesting and not looking like my previous one and that you know, like not to make the two of them too similar. To the fact that it gets boring. So I asked myself a lot of questions and then at the end I still choose to go for a same thing. But I thought like books hadn't have their own series, and if I just stick to the scene like I compared my life to a on a story book that is filled with blank pages. Then I could continue. Like writing on my own stories and each book, each volume of the whole series represents these years of my life. So this is what I thought, so I thought I'd. I'd feel OK. And after I was assigned after I saw my own E portfolio done, it was like. I was really happy about it. So that's why I feel really good about it.

Interviewer

OK, thank you. Next questions, how did you compile your artifacts or learning evidence in your E portfolio? I'd like to know about your technique about compiling.

Student 10

I didn't compile because like I tried to tell myself and yeah, I followed Aj. Ubonl once suggestions that we should write each of the chapter. The reflections for each project as soon as we finish the project. So I tried to when I did the presentations each day that day I went back home and then I tried to write all the reflection down and finished it page by page. So, there's no compiling in this process.

Interviewer

OK. What about you, donut?

Student 9

I just go through on my chats and I went through textbooks the textbooks that we use in the class and. Actually, I just like do it right away, so I write the answers and the textbook and I captured it and I put. It in the new portfolio to make. And another one. Is that just that that I looked through the chats that I've talked to my groupmates in each task. And just captured it.

Interviewer

OK, thank you. Next question, what were challenges when you compile e-portfolio and how did you cope with them?

Student 9

Yeah, I think I've. I just feel like it's hard and sometimes I don't have the answers for the pages and like in in My Portfolio, I collect 4 pictures each for each task and each unit. So, I just have to do it 4 pages for each unit. It's like it's hard for me to write the answer for some units because it's hard. So, I have to search it or just guess the answers for those exercises. That's only the challenge I faced, yeah.

Interviewer

OK, how could you avoid this problem in the future?

Student 9

I'll just like do it after class and be. Yeah, be consistent about it. Not just last day, yeah.

Interviewer

OK. Yeah. What about you, Pinky?

Student 10

Well, my only challenge while I was compiling my own E portfolio is that I didn't really know where I get the number of 20 pages long from. But like that number has been stuck in my head in the whole semester until the last day of this submission that I went through the course syllabus again and I. Like there wasn't any 20 pages long in there. But yeah, when I was doing the E portfolio, I got this number stuck in my head.

And then I was like, how am I going to make it 20 pages long? I tried, but the maximum I could go is like 14 pages or so. I tried to. Yeah, I tried to add in more things like side stories like to tell some interesting stories about me and my friend in our working scenarios, preparing for each project and some sort of a letter to my friends to show the gratitude of finishing the first year of medical school with them. So, I tried to add in stuff like this.

Interviewer

OK, if you happen to encounter this kind of problem again, what would you do?

Interviewer

I think I would have to fix the thing that I should have. I should have read it the instructions more clearly and more truly so I don't have those 20 pages stuck in my head from the first place.

Interviewer

When you look at your artifacts, what's the price you and what would you have done differently.

Student 10

The thing that surprises me was is that there were much artifacts like considering the number of projects, I, me and my friend had done in this semester, and another thing that surprises me was the consistency of each project like there are this thing like a fixed structure that we always have on our script while we present. I've also gone through the script a little bit and I found that all of our introduction were super similar. Only the hook and the subjects have changed, but the forms are all the same. And what would I have done differently? I would try to figure out a way to do it differently because I found this repeating thing. Not only just actually, not only just the introduction, but the conclusion and the transitions as well. So I think I would find try to find a different way to make it more interesting, more refreshing and do something new.

Interviewer

OK. What about you, donut?

Student 9

I think that techniques that are used in each task surprised me because some, uh, some organizing organizations of the presentations I've never used in my life, just I just use it in this class because I got it from the book and I just want to do it as same as. What the book teach just me or what you taught me. And so after gaining some techniques and to the last test, I see that I have some progress on my organizing skills. At the first time, I don't know what to how to organize it well, but in the last task I really organize it quickly and it's just like, OK for me, it's just really good. And what would have done differently was my. My UM, I think my preparation was short in each task because I was lazy and so I just do it before every class. Sometimes it's just not as good as it should be.

Researcher's Profile

Name	Natakorn Satienchayakorn
Academic Background	B.A. (Business English)
	Dhurakij Pundit University (2002)
	M.M. (International Business Management)
	Chulalongkorn University (2013)
	M.A. (English Language Studies)
	Thammasat University)2018
	Ph.D. (English Language Studies)
	Thammasat University (2022)
Interest	Language and ideology, corpus linguistics, and critical discourse analysis.
Workplace	Rangsit English Language Institute (RELI)
	Rangsit University
Position	Lecturer of English and Deputy Director for Academic and Testing Services

Name	Ubon Sanpatchayapong
Academic Background	B.Ed. Teaching English
	Chulalongkorn University
	M.A. English for Non-Native Speakers
	Central Missouri State University, USA.
	D. Ed. TESOL: Teaching English to Speakers of Other
	Languages, The University of Melbourne, Australia.
Interest	Action research, bilingual education, PLC, active and
	lifelong learning, self-regulated learning as well as
	technology application
Workplace	Rangsit English Language Institute (RELI)
	Rangsit University
Position	Lecturer of English and Deputy Director for
	Administration