

【附件三】 成果報告 (系統端上傳 PDF 檔)

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精進學術寫作之課程設計：對話式批判思考融入學術閱讀與寫作教學

**A Course Design to Improve Academic Writing: Integrating
Dialogical Critical Thinking into Academic Reading and Writing Instruction**

配合課程：進階英文寫作技巧 (English Written Communication – High Intermediate)

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A Course Design to Improve Academic Writing: Integrating Dialogical Critical Thinking into Academic Reading and Writing Instruction

A. Research Motive, Purpose and Research Question (研究動機、目的與研究問題)

Because of the trend of internationalization and globalization, universities all over the world have strived to launch programs and projects, such as exchange student programs, international conferences and workshops, exchange of visits in teaching and research, or joint dual-degree programs, to provide students opportunities to participate in this trend. In addition to these programs and projects, many university students have realized the importance of being a part of this trend, and thus, are now actively seeking for opportunities to study abroad to cultivate the skills for international and global mobility.

In order to succeed in the abovementioned academic contexts, students need to have a variety of academic skills. One of which is academic writing skills. Although writing has been recognized as an extremely important skill especially in the EAP contexts, it fails to occupy a deserving status in language program (Andrade, 2006; Dempsey, PytlikZillig, & Burning, 2009), and the literature with respect to the instructional design or pedagogical model to develop academic writing skills for EFL university students is sparse (Ravichandran et al., 2017). Also, according to Canagarajah (2011), we still have a long way to go in developing instructional strategies (out of the broadly conceived pedagogical models) to improve EFL students' academic writing skills.

Specifically, there were many challenges and problems for EFL students in developing academic writing skills. For example, Chou (2011) claimed that the most common problem of academic writing for EFL students was related to coherence (i.e., illogical organization) and cohesion (i.e., misinterpretation of essay topics, or irrelevant information). In addition, according to Al Murshidi (2014), generating and searching for reliable and significant ideas about their topics could be also a barrier, too. Very often, students had difficulties generating ideas, so they relied on what they were familiar with to write their essays. Even when students took the efforts to search for information online, the vast amount of information made it difficult for them to decide which one would be more appropriate to use. As a result, they would select the ones based on familiarity, but not on reliability or significance of the information.

The writing problems and difficulties mentioned above might be rooted in the students' inability to think critically. Chou's (2011) supported this speculation. In her investigation of academic writing difficulties of Taiwanese students, Chou (2011) claimed that because of cultural and educational differences, Taiwanese students were not equipped with critical thinking skills. Other studies (Bahasa, 2020; Choy & Cheah, 2009; Rahmat, 2020) have also supported this. For example, in her study to explore connections between critical thinking and academic writing, Bahasa (2020) claimed that thinking and writing were inter-connected in many ways, such as locating appropriate evidences to support the claims and exploring different point of view. Thus, embedding the instruction of critical thinking skills in the instruction of writing skills in the classroom was essential. Similarly, Rahmat (2020) explored the connection between thinking and writing. According to Rahmat (2020), good writing began with proper planning, which involved thinking critically about the reading materials. During reading, students needed to use critical thinking skills to make decisions on the usefulness of content, and how the content fit into their

needs in the essays. After drafting their essays, the students then needed to use critical thinking skills to evaluate the draft by reading critically to improve their essays. Figure 1 shows the cycle of thinking and writing (Rahmat, 2020).

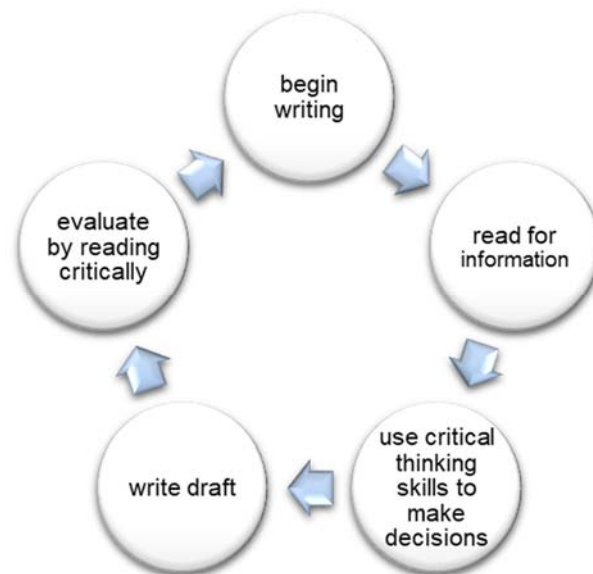


Figure 1. The Cycle of Thinking and Writing (adapted from Rahmat, 2020)

After reviewing the literature on the connection between thinking and writing, it became clear that the integration of critical thinking instruction into language instruction could begin with reading instruction, since the abovementioned writing problems and difficulties were all related to both reading and writing. This was especially true in the academic contexts. According to (Hirvela, 2016), in the academic contexts, students are expected to read for writing (RFW) because students are often asked to write with some kind input, usually in form of reading materials. Therefore, the role of reading should be emphasized in academic writing because RFW is “an index of successful academic achievement for students” (Shaw & Pecorari, 2013, A1).

Therefore, this project aims to explore the possibility of an instructional design to integrate the instruction of critical thinking skills, particularly, dialogical critical thinking skills, into the academic reading and writing instruction to help Taiwanese EFL university students improve their academic writing. The research question of this project is:

1. How does integrating dialogical critical thinking into academic reading and writing instruction help improve the EFL Taiwanese university students’ academic writing?

B. Literature Review (文獻探討)

1. Theoretical Framework

The theoretical framework in this project is Constructivism. Constructivism is a theory of learning rooted in philosophy and psychology, and it emphasizes that the students taking an active role in the knowledge creation process (Amineh1 & Asl, 2015). In other words, constructivists stance maintains that learning should be learner-centered. This active participation in the process of creating or constructing knowledge and meaning, according to Constructivism, helps the students make sense of the materials taught, and at the same time, it also describes how the materials can be taught effectively. Viewing Constructivism this way, instructors should consider what students

know, and allow them to be actively involved in the learning process (Amineh1 & Asl, 2015; Kalpana, 2014; Mvududu & Thiel-Burgess, 2012).

Constructivism can be divided into two strands: Cognitive Constructivism and Social Constructivism. The strand of Social Constructivism provides a guide for the instructional design of this project. In Social Constructivism, students learn through social interaction (Bonk & Cunningham, 1998; Jenkin, 2000). Therefore, the social nature of learning or knowledge is maintained; that is, rather than as an individual process, the cognitive processing is shared because it is the result of social interaction and language usage (Amineh1 & Asl, 2015; Kalpana, 2014; Mvududu & Thiel-Burgess, 2012).

2. Academic Writing and Connection to Academic Reading

According to Grami (2010), academic writing is a complicated cognitive task, which involves careful thought, discipline and concentration, and it is not just a simple direct product of what the brain knows or can do at a particular moment. Some scholars (Cremin & Myhill 2012; Lea & Street, 2000) have viewed academic writing as a socio-cultural practice.

For EFL university students in Taiwan, entering the territory of academic writing in higher education involves acculturation into a discourse characterized by these new and unfamiliar social, cultural, and academic conventions. This process of academic socialization involves adapting to new ways of thinking, such as new ways of understanding, interpreting, and organizing information and knowledge (Lea & Street, 2000). New ways of using information to one's advantage is also a key part of this process. In fact, success in academic writing depends on the students' ability to access, evaluate, and synthesize the words, ideas, and opinions of others in order to develop their own academic voice (Bristol Business School, 2006). This, again, reiterates the idea of RFW, reading for writing, in academic contexts, as previously mentioned. That is, students use the texts they read as a basis for the text they write, as "the reading process is guided by the need to produce a text of one's own" (Flower, 1990, p. 5-6).

As illustrated, reading and writing are closely connected in the academic contexts. What and how the students read would affect what and how the students write in their essays. Therefore, it seems sensible to begin integrating critical thinking skills into the reading process. When the students finish drafting their essays, critical thinking skills can then be integrated and applied again as students are involved in the writing process of revising and editing their essays. Integrating critical thinking instruction into both academic reading and writing instruction seems like an effective way to help students meet the cognitive challenges in academic writing.

3. Dialogical Critical Thinking and Critical Thinking Model

In this project, the dialogic approach to critical thinking is used. The term "dialogic" comes from the actual engagement in dialogues. And dialogues, according to Shor and Freire (1987), can be defined as "a moment where humans meet to reflect on their reality as they make and remake it" (p. 13). In this approach, critical thinking and dialogues are closely interconnected, and hence the term dialogical critical thinking. It is believed that when students are engaged in dialogues, they are involved in evaluating their own perspectives, and considering different cognitive domains, or frames of references (Benesch, 1999).

One of the scholars who has done most to connect dialogical critical thinking with the EAP instruction has been Benesch (2001). She claims that EAP instruction should encourage students to "question and, in some cases, to transform practices as well as the conditions from which they arise" (p. xv). Specifically, by engaging in questions, dialogues or social interactions with peers or

instructors, students are exposed to different point of view. This helps them assess their own ideas and consider alternatives; that is, they may begin to realize some information source may be unreliable, or some evidences may sound insignificant or irrelevant, or the organization of ideas may seem illogical.

In order to help students think critically in both academic reading and writing instruction, a systematic critical thinking model with substantive and comprehensive concepts that is dialogical in nature is needed. Hence, a critical thinking model called **Elements of Thought** and **Intellectual Standards** proposed by Paul and Elder (2006) is chosen.

The first part of the model is the eight elements, such as Purpose, Question at Issue, Point of View, Information, Concepts, Assumptions, Inferences, and Implications. Here is how all of the elements are tied in together: Whenever we think, we think for a **purpose** within a **point of view** based on **assumptions** leading to consequences and **implications**. We use **information** such as data, facts and experiences to make **inferences** and judgements based on **concepts** and theories in attempting to answer a **question at issue**. So in the process of reading and writing academically, students can think critically by analyzing these eight elements. Figure 2 summarizes the elements in the Elements of Thought (Paul & Elder, 2006).

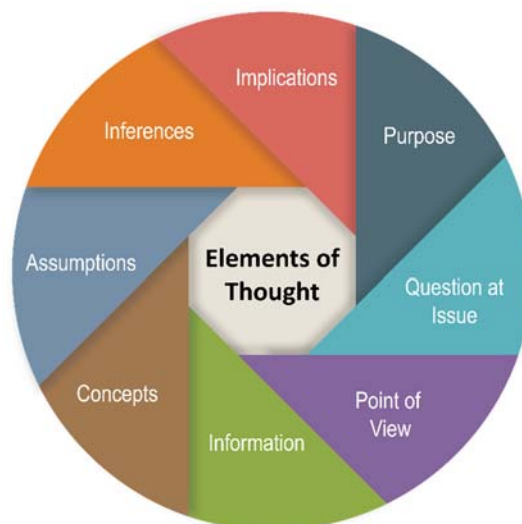


Figure 2. The Elements in Elements of Thought (Paul & Elder, 2006)

The second part of this model is **Intellectual Standards**, which are the criteria used to assess the quality of the thinking. Intellectual Standards include: Clarity, Accuracy, Precision, Relevance, Depth, Breadth, Logic, Significance, and Fairness (Paul & Elder, 2006). In this project, this is especially useful in evaluating what is being written in the essays. **Clarity**, a clear understanding of what is being written, is the first assessment test that has to be passed. If what is being written is not clear, the other standards cannot be applied. Then, another three intellectual standards, namely **accuracy**, **precision**, and **relevance**, can be assessed. These three are about the correctness, specificity and the relatedness of what is being written. After this, **depth** and **breadth**, the complexity and alternative point of view respectively, can be assessed. Finally, **logic**, the logicalness about the conclusion or the inferences made, **significance**, the importance of the concepts used, and **fairness**, the justifiableness of the assumption or the implication made, can be assessed (Paul & Elder, 2006). The sequence of applying these standards to evaluate the thinking or the reasoning is summarized in Figure 3.

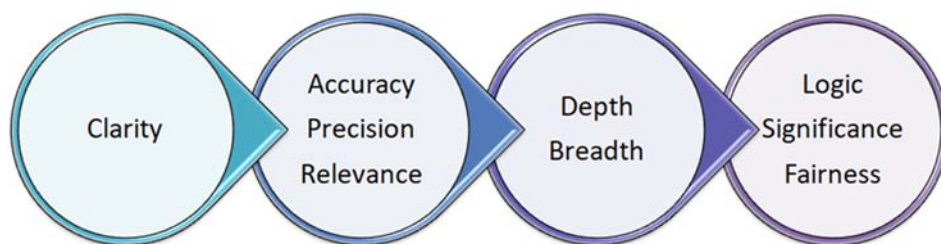


Figure 3. The Sequence of Applying Intellectual Standards to Evaluate Reasoning

In Elements of Thought and Intellectual Standards, the importance of questions in thinking is emphasized. According to Paul and Elder (2006), in order to think critically, one must learn to ask questions because “thinking is not driven by answers but by questions...., [and] questions define tasks, express problems and delineate issues” (p. 84). Paul and Elder (2006) have proposed a comprehensive list of questions for each of the different elements in Elements of Thought for reading and for writing (Appendix 1). The same goes for the Intellectual Standards. To use these standards to evaluate, a comprehensive list of questions for each of the standards can be asked (Appendix 2).

C. Research Methodology (研究設計與方法)

1. Context and Participants

The study for this project took place in the Applied Language Studies (ALS) Program in the Center for Language Studies of a national university in Taiwan. The participants of this project were 26 EFL undergraduate students from different disciplines in the ALS program. The English proficiency level of these students ranged from CEFR B2 to CEFR C1.

2. Pedagogical Intervention

The course, English Written Communication, was a one-year course designed to enhance the students’ development of the academic writing skills. The pedagogical intervention began in the second semester when students started to write their academic essays. In total, students wrote three essays with three different organizational patterns: exemplification, classification, and cause and effect. For each essay, the same instructional cycle was followed. The cycle began with a reading passage. With the pedagogy of questioning and the Elements of Thought, the students analyzed the reading passage by participating in dialogical critical thinking in a group of 3 to 4. Specifically, they explicated the thesis of the passage, and then analyzed the passage by asking, discussing, and answering the questions based on the Elements of Thought (Appendix 1). Also, students evaluated the reading passage by participating in dialogical critical thinking again with the questions from the Intellectual Standards (Appendix 2). Then, students were given the essay topic, which was in the same organizational pattern as the reading passage. Again, students participated in dialogical critical thinking with the questions from the Elements of Thought (Appendix 1) to determine the question at issue, purpose, assumption, and point of view of the essay topic, as well as the information and concepts needed to support different points of view. After completing the draft of the essay, students, in a group of 3 to 4, read each other’s essays. Then, students practiced dialogical critical

thinking and evaluated the essay by asking questions and giving feedback with Intellectual Standards (Appendix 2). Based on the feedback, students finalized their essays.

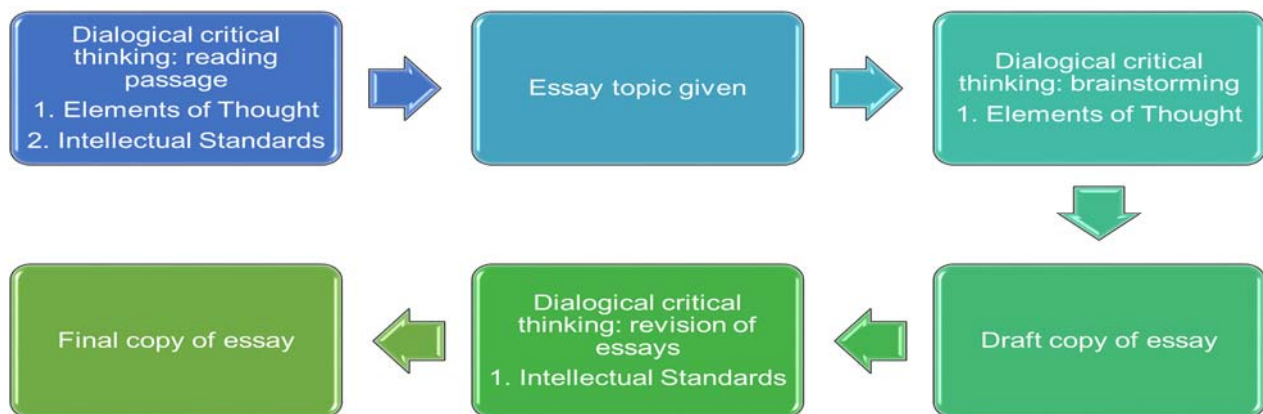


Figure 4. The Cycle of Each Essay Organizational Patterns

3. Data Collection

A number of data were collected in this project:

- a. **Three academic essays:** Three essays in different organizational patterns, each with draft and final copy, were written. Therefore, a total of 156 essays were collected.
- b. **Audio-recording of dialogical critical thinking:** To explore the relationship between the dialogical critical thinking and students' academic essays, the dialogues between the students were analyzed to capture exactly what goes on in the dialogues.
- c. **Follow-up interviews:** Semi-structured interviews were conducted to elicit the in-depth information about the relationship between the students' dialogical critical thinking and their academic essays.
- d. **Field notes on classroom observation:** Descriptive field notes from the classroom observation were collected throughout the semester to shed light on day-to-day activities.

4. Data Analysis:

The data analysis was carried out in several ways:

- a. **Four academic essays:** The academic essays were analyzed both qualitatively and quantitatively. Qualitatively, the essays were coded with the elements and the standards from the critical thinking model for evidence of critical thinking. Quantitatively, two EAP instructors were invited to rate the essays with the rubrics "Magoosh Essay Rubric for the GRE & GMAT". The inter-rater reliability was conducted. And Pair-sample t-test was conducted for statistical significance.
- b. **Audio-recording of dialogical critical thinking:** The qualitative analysis of the dialogues involved transcription and coding. For transcription, a convention adapted from Atkinson and Heritage was used. The analysis of the dialogues followed the process of the deductive thematic analysis.
- c. **Interview and field notes transcriptions:** Both interviews and field notes were also analyzed to identify themes in the data to capture students' perception about the process of integrating dialogical critical thinking into academic reading and writing instruction.

D. Teaching and Research Outcomes (教學暨研究成果)

1. Teaching Process

The course, English Written Communication, was a one-year course, which meant there were two semesters. The focus of the first semester was to lay a solid foundation of what's needed in the pedagogical intervention of this project. Specifically, the instructional focus included lessons on how to write paragraphs, how to cite with APA format, how to paraphrase ideas, and how to ask question with Paul and Elder's (2006) Elements of Thought and Intellectual Standards.

The pedagogical intervention, the integration of critical thinking into academic reading and writing instruction, began in the second semester. The focus of the second semester was for students to use what they learned in the first semester in writing essays. Specifically, students applied the skills of how to write paragraphs, how to cite with APA, how to paraphrase and how to ask critical thinking questions as they went through the process from reading academic passages, brainstorming ideas for essays, drafting essays, revising and finalizing essays. The instructional focus of both semesters are summarized in Figure 5.

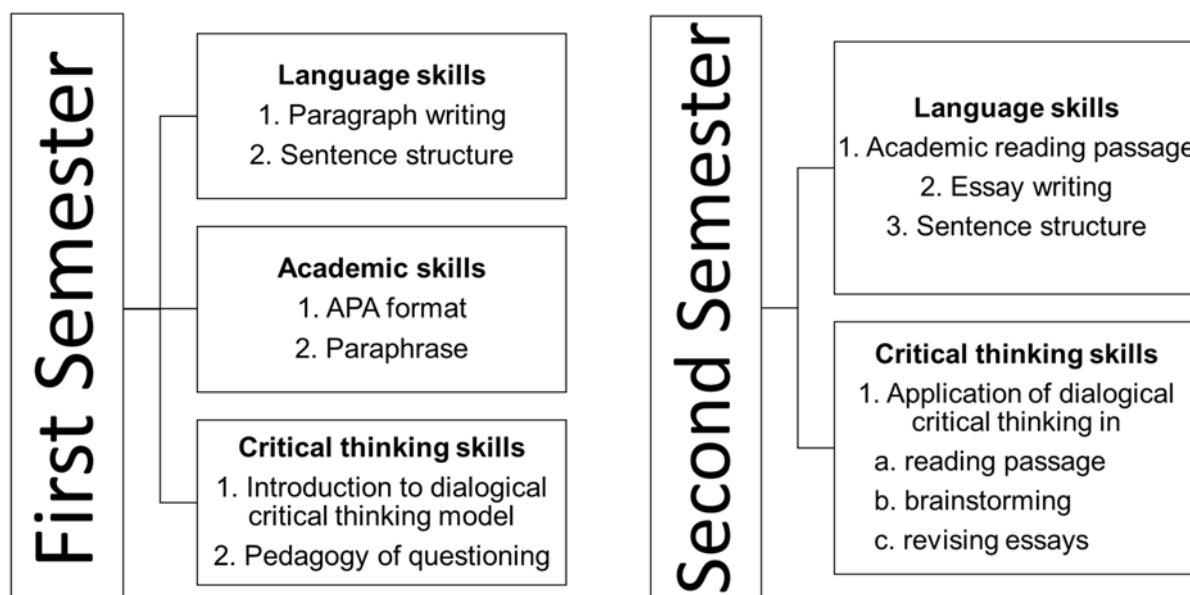


Figure 5. The Instructional Focus of Both Semesters

2. Learning Outcomes

Overall, integrating dialogical critical thinking into academic reading and writing instruction has helped improve the EFL Taiwanese university students' academic writing, both quantitatively and qualitatively.

Quantitatively, the scores (converted into percentage) for all three academic essays using the rubric Magoosh Essay Rubric for the GRE & GMAT (Appendix 3) have improved after dialogical critical thinking. In Essay 1, the average score for the draft copy was 78.12, but after students participated in the dialogical critical thinking session, the average score for the revised or the final copy increased to 86.54. Similarly, the average score for essay 2 increased from 81.15 to 87.03, and the average score for essay 3 increased from 82.54 to 88. It was also worth mentioning that the average scores for draft copies have also increased, 78.12 for Essay 1 and 82.54 for Essay 3. All these indicated that students have shown improvement in how they wrote academic essays.

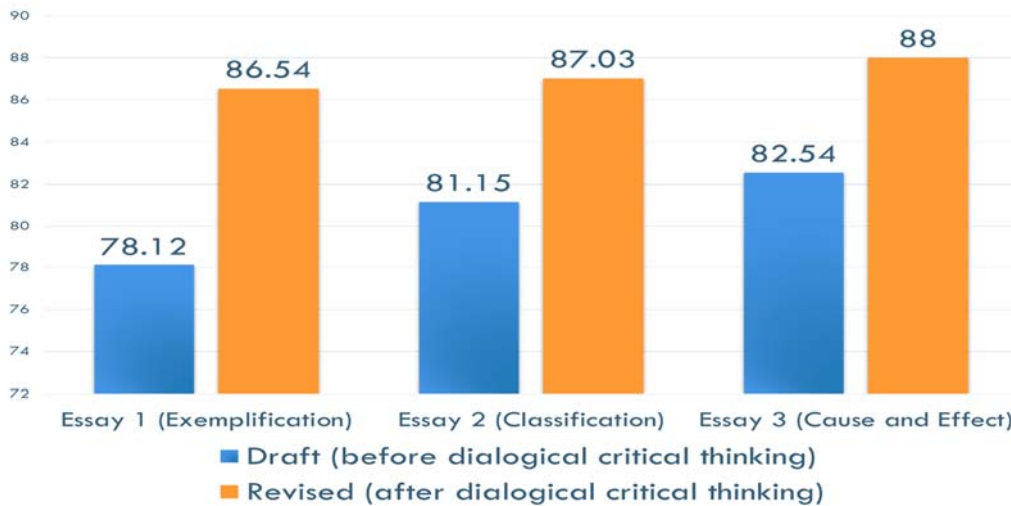


Figure 6. The Average Scores of Academic Essays Before and After Dialogical Critical Thinking

The paired-samples t-test indicated that the improvement for all three academic essays were positively correlated, as shown in Table 1 below.

Table 1. Paired-Samples T-Test Correlation from Essay 1 to Essay 3

	N	Correlation	Sig.
Essay 1 Draft & Revised	26	.590	.002
Essay 2 Draft & Revised	26	.803	.000
Essay 3 Draft & Revised	26	.738	.000

The paired samples t-test also indicated that the improvement for all three academic essays were statistically significant, as shown in Table 2 below.

Table 2. Paired-Samples T-Test from Essay 1 to Essay 3

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Essay 1	Draft - Revised	-8.423	4.002	.785	-10.039	-6.807	-10.733	25	.000
Essay 2	Draft - Revised	-5.855	1.862	.365	-6.637	-5.133	-16.117	25	.000
Essay 3	Draft - Revised	-5.462	2.803	.550	-6.594	-4.329	-9.934	25	.000

The dialogues in the dialogical critical thinking sessions were analyzed for frequent themes. When students analyzed the academic reading passages with the questions from Elements of Thought (Appendix 1) in the dialogical critical thinking, the themes were the eight elements in the Elements of Thought. Thus, the average number of times that the students mentioned the elements was counted for all three academic reading passages, as shown in Figure 7. Among all of the elements, the most frequently mentioned element was Information, followed by Question at Issue, Point of View and Purpose. This indicated that, out of the eight elements, these four elements were the ones students were more familiar with. And overall, the frequency of the elements mentioned in Essay 3 was generally higher than the ones in Essay 1. Again, this indicated that as students

practiced dialogical critical thinking, they became more familiar with these elements.

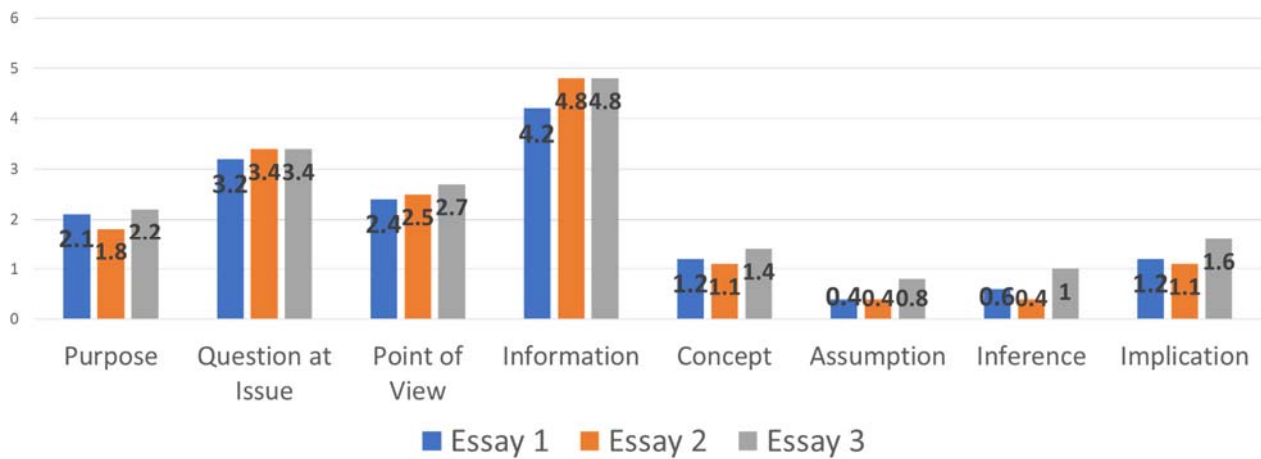


Figure 7. Frequency of Themes in Dialogical Critical Thinking when Analyzing Reading Passages

Similarly, when students evaluated the information or the evidence used in the academic reading passages in dialogical critical thinking, the themes were the criteria in the Intellectual Standards. The average number of times that the students mentioned the criteria was also counted for all three academic reading passages, as shown in Figure 8. Among all of the criteria, the top four most frequently mentioned criteria were Clarity, Precision, Relevance and Significance. This indicated that, out of the nine criteria, these four criteria were the ones students were more familiar with. In these four criteria, the frequency of the criteria mentioned in Essay 3 was higher than the ones in Essay 1, except for Clarity, where the frequency of the criteria mentioned in Essay 1 was higher than the ones in Essay 3. Since Clarity was the first assessment test that had to be passed, all groups began with Clarity in their dialogical critical thinking. In the first essay, students struggled with whether the information was clear. As students improved in their critical thinking, they became better in identifying whether the information was clear, and were able to move on to other criteria to evaluate the information or evidence.

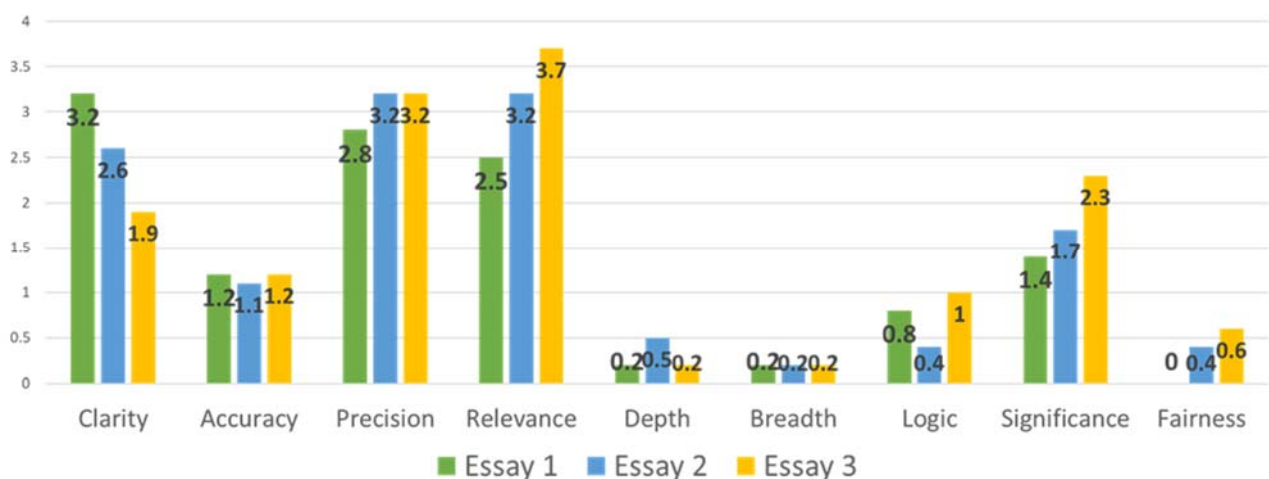


Figure 8. Frequency of Themes in Dialogical Critical Thinking when Evaluating Reading Passages

When students used the questions from Elements of Thought (Appendix 1) to brainstorm ideas for the essays, they participated in dialogical critical thinking again. Figure 9 showed the average

number of times that the students mentioned the elements when their brainstormed for ideas for all three academic essays. It was clear that the students spent most of their time thinking critically about the Purpose of the essay, the main Question at Issue in the essay, the various Point of View needed to discuss the Question at Issue and the Information or the evidence needed to support the Point of View.

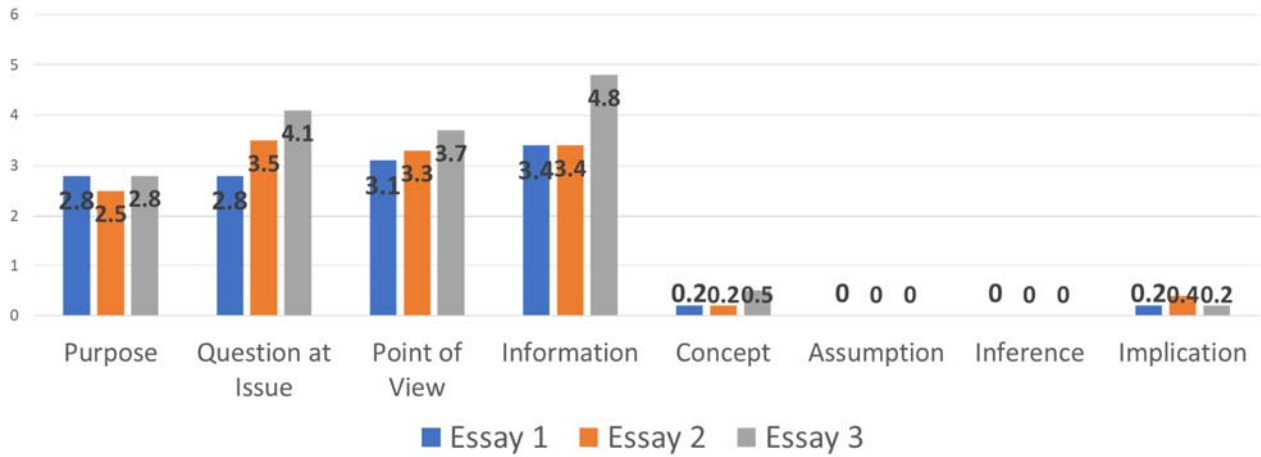


Figure 9. Frequency of Themes in Dialogical Critical Thinking when Brainstorming

In the evaluation of the draft copy of the essays, students also participated in dialogical critical thinking with the questions from Intellectual Standards (Appendix 2). Figure 10 showed the average number of times that the students mentioned the criteria when their evaluated the draft copy of the essays written by group members. It was clear that the students spent most of their time thinking critically about the Clarity, Precision, Relevance, Logic and Significance of information or evidence used in the essays.

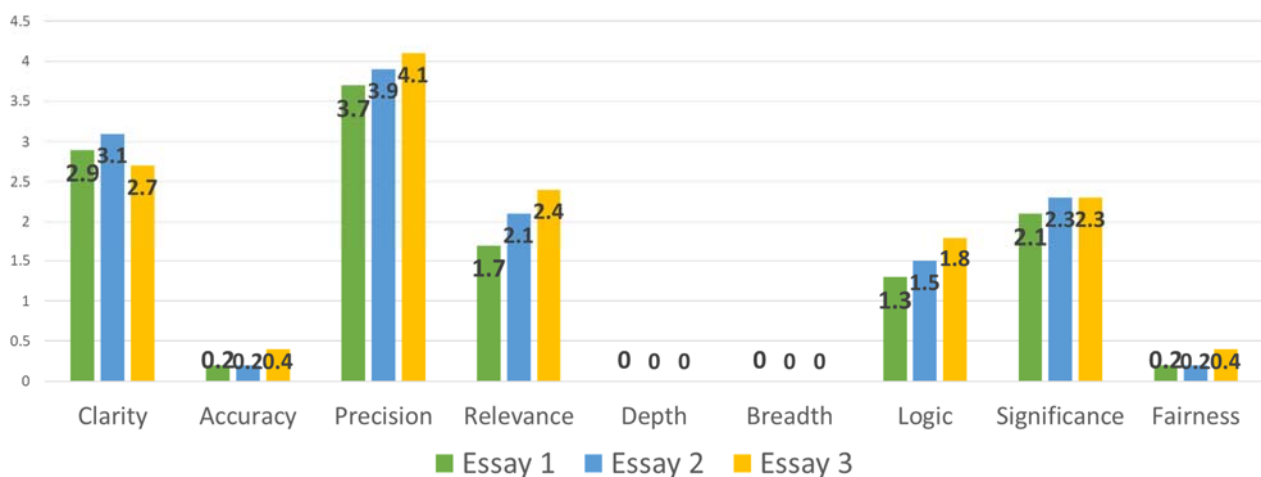


Figure 10. Frequency of Themes in Dialogical Critical Thinking when Evaluating Draft Essays

Qualitatively, integrating dialogical critical thinking into academic reading and writing instruction has helped students improve the quality of the content in all three academic essays. Specifically, students' understanding or interpretation of the essay topics has improved, as they had questioned about the Purpose and the Question at Issue in dialogical critical thinking. In addition, the Point of View and the Information used to support the essays were clearer, more precise, more relevant, more logical and more significant, as students had used the criteria in the Intellectual

Standards to question each other in the group when they practiced dialogical critical thinking. To illustrate, in one of the essays about and effects of plastic packaging, the last sentence in the paragraph was not clear and also not precise. In dialogical critical thinking, students asked the writer whether she could provide an example or give more details. So in the finalized version, the writer added a clear and precise example to support her point. An example of a student’s academic essay can be found in Appendix 4.

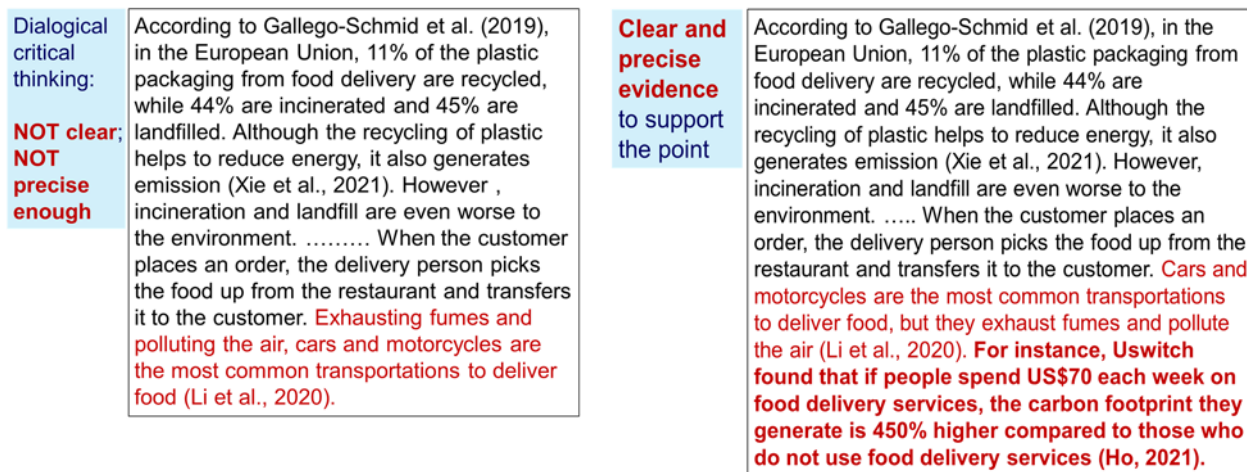


Figure 11. Example of How Students Revised Essays after Dialogical Critical Thinking

3. Students’ Feedback

Quantitatively, a simple survey using the 5-point Likert Scale was conducted. There were four statements in this survey:

1. Dialogical critical thinking helps comprehend reading passage.
2. Reading passage helps provide a model for the writing tasks.
3. Dialogical critical thinking helps understand and organize writing tasks at hand.
4. Dialogical critical thinking helps revise academic essays.

The results of the indicated that about 90% of the student agreed with statement 1 and 3, and all of the students agreed with statement 2 and 4. Especially with statement 4, all of the students strongly agreed that dialogical critical thinking helped them revise their academic essays.

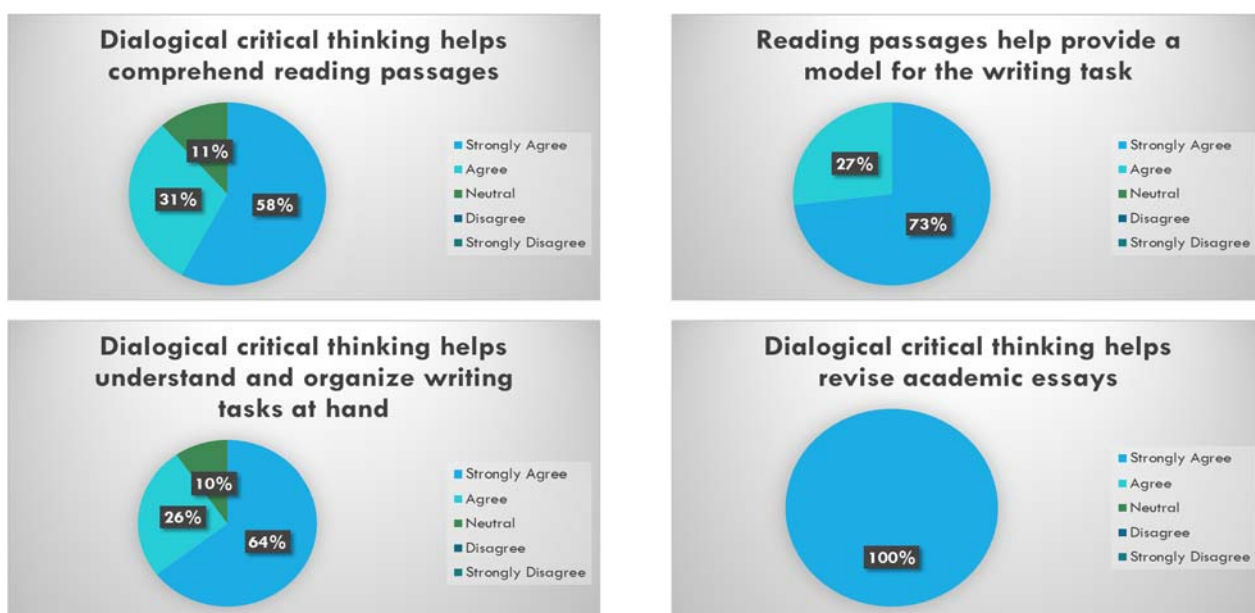


Figure 12. Survey Results about Students' Perception of Dialogical Critical Thinking

Qualitatively, a semi-structured interview was conducted (interview questions in Appendix 5). Overall, students expressed that they have learned structure and the skills of academic essay writing. They have understood that writing was not just about correcting grammar, but also involved lots of thinking. Many of them also expressed that they learned to apply critical thinking in academic reading and writing. Some even specifically indicated that dialogical critical thinking was fun. In terms of the elements or the criteria, students mentioned that they have learned to think critically about the purpose, question at issue, point of view and information of the academic essays.

In addition to the positive feedback above, some students provided some reflection. For example, one students specifically indicated that she needed more practices with writing in different point of view. Another students also indicated that some of the elements or criteria were not applicable, and it was hard to use them in academic reading and writing. Table 3 showed some of the examples of the responses from the semi-structured interview.

Table 3. Example Responses from Semi-Structured Interview

Academic Reading & Writing	<ul style="list-style-type: none"> In the beginning of the course, I thought that writing is just about expressing one self's opinion, not knowing that writing with structures and critical thinking can help convey ideas more clearly and precisely. It is funny that when I looked back in my first writing, I found that there was no structure at all! I learned a lot about writing academic essays this semester. First, I learned the structure of the essay, including introduction, body paragraphs, and concluding paragraph. Second, I learned various essay patterns. For instance, cause and effect, classification, and exemplification. In addition, I wrote 3 essay and revised them. During the entire writing process, I learned how to organize my ideas, and critically evaluated my own ideas. I think the dialogical critical thinking practices we have in class and the essays we write at home have been very helpful to me. I not only learn the ideas about writing and critical thinking but also make them into practice. With the practices, I started to use the writing skills automatically in reading and writing. And with the discussion and feedback from group members, I can evaluate my writing from other viewpoints, and that is critical for improvement.
Dialogical Critical Thinking	<ul style="list-style-type: none"> I've learned a lot about writing academic essays and critical thinking. Before taking this class, I didn't know much about academic essays. And with this course, I not only understand the question at issue and the purpose of essays but convey opinions and ideas with appropriate information, point of view and concept. In the beginning, my essay is terrible, and I don't care a lot about how to make my essay variable and interesting for the readers. Now, I can choose more precise, relevant and significant supports. I like the dialogical critical thinking, or the peer feedback part especially, as we are able to discover others' writing style and point of view; there's so much fun in this part. In academic essay writing, what I have improved the most is the logical flow and the use of precise and significant information.
Reflection	<ul style="list-style-type: none"> Sometimes the supports are wide but lacks depth; I have to improve on how to illustrate a point further or with multiple perspectives. Some of the elements or the criteria were not helpful. They cannot be applied to academic reading and writing, or at least I found it hard to ask questions in dialogical critical thinking.

4. Teacher's Reflections

a. A need for a critical thinking model: As seen in the learning outcome and students' feedback, dialogical critical thinking with a model, Elements of Thought and Intellectual Standards,

can be extremely helping in the process of writing an academic essay. For example, asking questions about the Purpose and the Question at Issue helped students better interpret the essay topics better. And asking questions about the Clarity, Precision, Relevance, Logic and Significance of information in the essays helped students provide better support. However, it was also clear that students did not use all of the elements in Elements of Thought, and neither did they use all of the criteria in Intellectual Standards when practicing dialogical critical thinking. It seemed like some of the elements and criteria in the model were more applicable to academic reading and writing instruction. Therefore, instead of integrating the whole model into academic reading and writing instruction, the EAP instructors could perhaps pick and choose the ones more applicable.

b. A need for comprehensive lists of questions in dialogical critical thinking: Since critical thinking instruction was not emphasized in most of the curriculum in Taiwan, many students might now know what to ask or how to ask questions. Therefore, there seemed to be a need to provide students with a comprehensive list of questions when they participated in dialogical critical thinking. At the beginning, students would read the questions from the list when they practiced dialogical critical thinking; however, towards the end of the semester, most of the students knew what to ask and how to ask questions. This might be a good indication that students were becoming better critical thinkers.

c. A need for integration in the second semester: Although this course was a one-year course, the first semester was not a good time to begin this project for several reasons. First of all, the course in the first semester was considered introductory to academic writing, which meant that many students were still learning the basics of academic writing. Demanding students to apply critical thinking while trying to understand the basics might simply be too overwhelming for them, especially when the critical thinking model, Elements of Thought and Intellectual Standards, was quite comprehensive. It is more practical to introduce the elements and the standards step by step in the first semester before asking the students to apply them into academic reading and writing. Secondly, it was more challenging to integrate dialogical critical thinking skills in a paragraph. Since a paragraph was much shorter than an essay, the information or evidences needed to support the claim might not be as much. Thus, it would be more difficult for students to demonstrate how they applied the critical thinking skills in their paragraph writing. Finally, it seemed necessary for students to be familiar with each other before engaging in dialogical critical thinking. Because the critical thinking model in this project was dialogic in nature, and it involved students asking questions about or challenging other people's perspectives, it might be helpful to build trust first so that they would feel more at ease when they engaged in the dialogues.

E. Recommendations and Reflections (建議與省思)

In the 21st century, people are exposed to massive amount of varied and complex online information, which requires cognitive skills, especially higher order thinking skills, to process. One of these skills is critical thinking. In fact, critical thinking has often been referred to as a basic survival skill in the 21st century (Moon, 2008; Pellegrino & Hilton, 2012) and as a crucial factor in one's success in the education of many dynamic and rapidly changing professional academic fields.

The field of English language education is no exception. In the past, discussion of critical thinking instruction in language education tends to focus on L1 education context in the U.S., especially at the primary and secondary levels (McPeck, 1981). Since globalization has resulted in the use of English as a "global language" in the 21st century (Nunan, 2003), critical thinking has

gained more attention within the teaching of English as a second language (ESL) and the teaching of English as a foreign language (EFL). For example, when the Ministry of Education in Taiwan was proposing the 12-year Basic Education Curriculum Guidelines in 2015, critical thinking was listed as one of the curriculum goals in the draft of the curriculum guidelines for the English language education (National Academy for Educational Research, 2015). Although there is no standard curriculum guideline for the English language education in higher education in Taiwan, critical thinking skills are often listed as one of the learning objectives in the English curriculum design.

As an English for Academic Purposes (EAP) instructor, I believe it is important for our Taiwanese EFL university students to learn critical thinking and to apply critical thinking in their future learning. That is, the curriculum at the higher education level should put more emphasize on critical thinking. As part of this project, I have organized 6 professional development workshops related to academic reading, academic writing and critical thinking, and invited EAP professionals to share concepts, methods and teaching practices with those who are interested in helping our Taiwanese EFL university students to improve their academic writing with critical thinking skills. The topics and the summaries of these professional development workshops can be found in Appendix 6 and 7.

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Appendix

Appendix 1. Questions to ask with the Elements of Thought (Paul & Elder, 2006)

1. Questions to Ask when Analyzing Reading Passages

Elements of Thought	Questions Asked
Purpose	<ol style="list-style-type: none"> 1. What is the author's purpose? 2. What is the author trying to accomplish?
Question at Issue	<ol style="list-style-type: none"> 1. What is the most important question or issue in the reading passage? 2. What is the key question the reading passage trying to answer?
Point of View	<ol style="list-style-type: none"> 1. From what point of view is the author looking at this issue? 2. Is there another point of view the author should consider? 3. Is the author's view the only reasonable view?
Information	<ol style="list-style-type: none"> 1. What is the most significant information in the reading passage? 2. What information is the author using in coming to that conclusion? 3. What information does the author need to settle the question?
Concepts	<ol style="list-style-type: none"> 1. What is the most basic concept, theory or idea used by the author?
Assumptions	<ol style="list-style-type: none"> 1. What is the fundamental assumption of the author? 2. Is the author assuming something he or she shouldn't?
Inferences	<ol style="list-style-type: none"> 1. What is the most basic conclusion of the author? 2. How does the author reach this conclusion?
Implications	<ol style="list-style-type: none"> 1. What is the most significant implication of the reading passage? 2. If someone accepted the author's position, what would be the implications? What is the author implying?

2. Questions to Ask when Brainstorming for Essays

Elements of Thought	Questions
Purpose	<ol style="list-style-type: none"> 1. What am I trying to accomplish? What is my central aim or goal? 2. What is the objective of this assignment?
Question at Issue	<ol style="list-style-type: none"> 1. What is the key question I am trying to answer? 2. What important questions are embedded in the issue? 3. Is there a better way to put the question? 4. What would we have to do to settle this question?
Point of View	<ol style="list-style-type: none"> 1. From what point of view am I looking at this issue? 2. Is there another point of view I should consider? 3. What does my point of view ignore? 4. Do I study viewpoints that challenge my personal beliefs?
Information	<ol style="list-style-type: none"> 1. What information am I using in coming to that conclusion? 2. What experience have I had to support this claim? 3. What information do I need to settle the question? 4. Is this information relevant to our purpose or goal?
Concepts	<ol style="list-style-type: none"> 1. What idea am I using in my thinking? 2. What main distinctions should I draw?
Assumptions	<ol style="list-style-type: none"> 1. What am I assuming or taking for granted? 2. What assumption is leading me to this conclusion? 3. What is being presupposed in this theory?
Inferences	<ol style="list-style-type: none"> 1. How did I reach this conclusion? Is my inference logical? 2. Are there other conclusions I should consider?
Implications	<ol style="list-style-type: none"> 1. If someone accepted my position, what would be the implications? 2. What am I implying? 3. How significant are the implications of this decision?

Appendix 2. Questions to ask with the Intellectual Standards (Paul & Elder, 2006)

Questions to Ask when Evaluating Information or Evidence

Intellectual Standard	Questions
Clarity	<ol style="list-style-type: none"> 1. Do we need to elaborate on that point? 2. Can we express that point differently? 3. Should we give an illustration? 4. Should we provide an example?
Accuracy	<ol style="list-style-type: none"> 1. Is that really true? 2. How could we check to see if that is accurate? 3. How could we find out if that is true?
Precision	<ol style="list-style-type: none"> 1. Could we give more details? 2. Could we be more specific?
Relevance	<ol style="list-style-type: none"> 1. How is this idea connected to the question we are asking? 2. How does this fact bear on the issue? 3. How does this idea relate to this other idea? 4. How does the question relate to the issue we are dealing with?
Depth	<ol style="list-style-type: none"> 1. How does our answer address the complexity in the question? 2. How are we taking into account of the problem in the question? 3. How are we dealing with the most significant factor in the problem?
Breadth	<ol style="list-style-type: none"> 1. Do we need to consider another point of view? 2. Is there another way to look at this question? 3. What would this look like from a conservative or a liberal standpoint? 4. What would this look like from the point of view of....?
Logic	<ol style="list-style-type: none"> 1. Does all of this fit together logically? 2. Does this really make sense? 3. Does that conclusion follow from what we said? 4. How does that inference follow from the evidence?
Significance	<ol style="list-style-type: none"> 1. What is the most significant information we need to gather and use in our thinking if we are to address this issue? 2. How is this fact important in context? 3. Which of these questions is the most significant? 4. Which of these ideas or concepts is the most important?
Fair-mindedness	<ol style="list-style-type: none"> 1. Is the thinking justified given the evidence? 2. Are we giving the evidence as much weight as it deserves? 3. Are our assumptions justified? 4. Is the behavior fair, given its implications? 5. Is our selfish interest keeping us from considering the problem from alternative viewpoints? 6. Are we using concepts justifiably, or are we using them unfairly in order to manipulate someone?

Appendix 3. Rubric to evaluate academic essays (Magoosh Essay Rubrics for the GRE & GMAT)

Magoosh Essay Rubric for the GRE & GMAT

Score	Quality of Ideas	Organization	Writing Style	Grammar & Usage	Summary
6	Insightfully develops a position on a topic or argument with compelling, persuasive examples and reasons	A clear organizational structure with a logical progression, linking ideas to supporting points from start to finish, from paragraph to paragraph and sentence to sentence	A wide variety of sentence structures and lengths, showing a superior control of word choice with a clear, concise style	Shows a superior control of writing, with impeccable grammar, mechanics, and usage—yet may have a few minor, non-repeated errors	A 6 response is a precise, well-articulated analysis of the complexities of the issue or argument, and demonstrates mastery of the elements of effective writing.
5	Develops a position on a topic or argument with well-chosen examples and reasons	A well-organized structure with a progression of ideas, linking ideas to supporting points from start to finish	Variety in sentence structures, showing control of word choice with a clear style	Shows a control of language, with strong grammar, mechanics, and usage—yet may have a few minor errors	A 5 response is a well-developed analysis of the complexities of the issue and demonstrates a strong control of the elements of effective writing.
4	Develops a position on a topic or argument with relevant examples and reasons	Organized with some progression of ideas, linking ideas and supporting points with some consistency	Some, to little, variety in sentence structure, showing adequate control of word choice with an inconsistently clear style	Shows control of standard English but contains some flaws	A 4 response is a competent analysis of the issue and demonstrates adequate control of the elements of writing.
3	Develops a vague or limited position on a topic or argument with few examples or reasons of questionable importance	Poorly organized with unclear links between ideas and supporting points	A lack sentence variety, showing imprecise use of word choice with an inconsistent, wordy style	Shows some lack of control in grammar, mechanics and usage, containing occasional major flaws with more frequent minor flaws	A 3 response has some competence in its analysis of the issue and in its control of the elements of writing but is clearly flawed.
2	Ideas on a topic or argument are unclear or seriously limited	Disorganized and provides few, if any, relevant links between ideas and examples	Serious and frequent problems with word choice and sentence structure, showing a lack of style	Shows a lack of control in grammar, mechanics, and usage, containing numerous, repeated errors	A 2 response has serious weaknesses in analytical writing.
1	Provides little evidence of the ability to develop a position in response to a topic or argument	No organization or logic, containing irrelevant details and examples with little to no distinction between the two	Severe and persistent errors in word choice, language, and sentence structure, showing no real style	Shows a complete lack of control in grammar, mechanics, and usage, making the essay unreadable and incomprehensible	A 1 response has fundamental deficiencies in analytical writing skills.
0	Completely off topic, blank, or not written in English	Entire lack of structure, blank, or not written in English	Blank or not in English	Blank response, not written in English, or no regard for English grammar, mechanics and usage	A 0 response has a complete lack of analytical writing skills.

Food Delivery for Us, Pollution Delivery for the Earth

Covid-19 has been affecting people's lives for over two years. To prevent the transmission of the virus, governments encourage people to stay home, and some people are even required to quarantine. Because of the difficulties and risks to dine out, people rely more and more on food delivery service (Janairo, 2021; Li et al., 2020). It not only enables people to have various food choices, but also allows restaurants to operate under the pandemic (Oliveira et al., 2021). Despite the positive impacts, food delivery service also causes several negative effects, such as more packaging wastes and higher greenhouse gas emissions, on the environment, and they should not be neglected.

The single-use plastic packaging is widely used in food delivery because it is convenient and hygienic, but the wastes from single-use plastic packaging pollute the environment. There are three characters involved in a food delivery process, the restaurant, the delivery person, and the customer, and they have different expectation on food. The restaurant and customer expect intact food packaging when it arrives, and the delivery person wishes the food to be easily carried. When it comes to fulfilling their expectations, plastic packaging is preferable because it is inexpensive, durable, and unlimited in sizes and shapes compared to other materials, such as glass and tin-plate (Liu et al., 2020). In addition, people expect the delivery process to be contactless during the pandemic. The single-use plastic packaging is believed to be more hygienic, and therefore widely used (Li et al., 2020; Neo, 2020). However, when the food is finished, its plastic packaging becomes waste. According to Jang (2020), 600 thousand tons of disposed plastics were created annually in Korea by food delivery service. Merely in China, food delivery service generated 1.68 million tons of waste in 2016, including 1.33 million tons of plastic waste (Jia et al., 2018). Although food delivery services facilitate our life, these plastic wastes greatly affect the environment.

Greenhouse gas emissions is a serious issue around the world, but food delivery service worsens it in three ways: the manufacturing of packaging, the disposal of packaging, and the delivery of food. Crawford (2021) found that in Australia, the single-use packaging from food delivery generates 5.6 thousand tons of carbon dioxide-equivalent (CO₂-e), and the number has been growing by more than 15% each year. Moreover, in Beijing, the manufacturing of packaging, the disposal of packaging and the delivery of food are estimated to account for 45%, 50% and 5% of the environmental impact, respectively (Li et al., 2020). First, emissions are generated from the manufacturing process (Essentra, 2021). The packaging is made from raw materials; for instance, plastic is derived from natural gas and petroleum, aluminum is transformed from mined bauxite, and paper is converted from wood (Wolf, 2022), and the process results in energy and non-energy greenhouse gas emissions (ICF International, 2016). Second, the disposal of packaging also emits greenhouse gas. According to Gallego-Schmid et al. (2019), in the European Union, 11% of the plastic packaging from food delivery are recycled, while 44% are incinerated and 45% are landfilled. Although the recycling of plastic helps to reduce energy, it also generates emission (Xie et al., 2021). However, incineration and landfill are even worse to the environment. The incineration of plastic takes a large amount of energy, since it must be incinerated in higher temperature (above 1000 °C) to prevent the generation of toxic chemicals, and landfilling plastic wastes lead to soil and ground water pollution (Jia et al., 2018). Third, delivery of food generates greenhouse gas. When the customer places an order, the delivery person picks the food up from the restaurant and transfers it to the customer. Cars and motorcycles are the most common transportations to deliver food, but they exhaust fumes and pollute the air (Li et al., 2020). For instance, Uswitch found that if people spend US\$70 each week on food delivery services, the carbon footprint they generate is 450% higher compared to those who do not use food delivery services (Ho, 2021).

Food delivery has benefits to the customers, the restaurants, and the delivery people, especially during the period of Covid-19. On the other hand, it also has negative impacts on the

environment, including packaging wastes and carbon emissions. When enjoying the convenience food delivery brings, we should consider how to reduce the harm to the planet, because every effort of environmental protection counts.

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Appendix 5. Semi-structure Interview Questions

The purpose of this interview is to look into your development as a language learner and a thinker. More particularly, the purpose is to determine the extent to which the tools and language of critical thinking have come to play an important part in the way you go about writing academic essays.

Please elaborate on your answer!

1. **What** and **how** is your experience with critical thinking in this class?
 - When did you have to use critical thinking in this class?
 - What did you use critical thinking for?
 - How did you find the experience?
 - Was it easy? Was it difficult?

2. **What** and **how** is your experience with writing academic essays?
 - What was your experience of writing academic essays like?
 - How did you find the experience?
 - Was it easy? Was it difficult?

3. **How** do you use **critical thinking** in reading academic passages?
 - When did you use critical thinking in the process of reading academic passages?
 - What exactly did you do with critical thinking while reading academic passages?

4. **How** do you use **critical thinking** in writing academic essays?
 - When did you use critical thinking in the process of writing academic essays? (Pre-writing? Drafting? Revising?)
 - What exactly did you do with critical thinking while writing academic essays?

Appendix 6. Schedule of Professional Development Workshops

111 學年教學實踐研究計畫成果分享：專業成長工作坊

精進學術寫作之課程設計：對話式批判思考融入學術閱讀與寫作教學

計畫主持人：楊岳龍助理教授（110 學年度實踐計畫經費補助）

日期/時間	講題	講者
111/04/19 (二) 13:00~16:00	Writing Instruction for English Learners in a Translingual Classroom 跨語言課堂情境的英文寫作教學原則	Dr. L. Lin
111/04/25 (一) 9:00~12:00	EAP in Higher Education: Moving from EGP to EGAP 大學中的學術英文教學：從通用英文技巧轉移至學術通用英文的技巧	Dr. C. Lee
111/05/20 (五) 9:00~12:00	Genre pedagogy: Language, literacy and L2 writing instruction 文體寫作教學：語言融入第二語言的教學設計	Dr. L. Lin
111/05/27 (五) 9:00~12:00	Integrating Intercultural Learning in English for Specific Academic Purposes 整合學術英文課程與跨文化學習	Dr. C. Lee
111/06/17 (五) 9:00~12:00	Writing to Persuade: A Systemic Functional View 說服力寫作：結構功能學的理论運用	Dr. C. Lee
111/06/20 (一) 9:00~12:00	Embedding Critical Thinking in Language Learning Programs 融入批判思考的語言課程：學習任務與語言技巧之設計	Dr. L. Lin

111 學年教學實踐研究計畫成果分享：國立中正大學語言中心

精進學術寫作之課程設計：對話式批判思考融入學術閱讀與寫作教學

計畫主持人：楊岳龍助理教授 (110 學年度實踐計畫經費補助)

場次 1

111/04/19

(二)

13:00~16:00

重點

摘述

Writing Instruction for English Learners in a Translingual Classroom 跨語言課堂情境的英文寫作教學原則

Consensus points in writing studies 寫作教學共通觀點

5 threshold concepts regarding the activity of writing to define the discipline (Adler-Kassner & Wardle, 2015):

1. Writing is a social and rhetorical activity
2. Writing speaks to situations through recognizable forms
3. Writing enacts and creates identities and ideologies
4. All writers have more to learn
5. Writing is always a cognitive activity

3 major theoretical orientations of L2 writing (Leki et al) 第二語言寫作的理論

1. **sociocultural theory explains the roles of instruction:** peer feedback, written reflections, and activities that require collaboration
2. **theories of language socialization explain how students develop language identities:** through writing and a wide range of social interactions
3. digital technologies have expanded our understanding of literacy:
multimodal learning processes

Translingual L2 writing instruction in practice 跨語言的寫作教學如何實踐

1. Learners' multiple **languages as resources, not as distractions or deficits:** Learners should apply their prior **linguistic and cultural knowledge strategically** as they acquire a new language, negotiate meaning, invent, and learn.
2. **Translingual practice of writing:** writing instruction would adopt "an orientation of **communicative effectiveness** rather than with conformity to standards of correctness"

Principles in 3 key pedagogical ideas (stance, design, and shifts) 跨語言的寫作三大教學原則 (García, Johnson, & Seltzer, 201.)

1. A translanguaging **stance** sees the bilingual child's complex language repertoire as a resource, never as a deficit.
2. Flexible **design** allows teachers and students to address all content in equitable ways for all students, who may be often marginalized in mainstream classrooms and schools.
3. **Shifts** refer to many moment-by-moment decisions that teachers make all the time, which reflect the teacher's flexibility and willingness to change the course of the lesson and assessment, as well as the language use planned for it, to release and support writers 'voices.

場次 2

111/04/25

(一)

9:00~12:00

重點

摘述

EAP in Higher Education: Moving from EGP to EGAP

大學中的學術英文教學：從通用英文技巧轉移至學術通用英文的技巧

Curriculum development: shifting from EGP to EGAP

1. Changing the curriculum objectives from teaching EGP skills to 1) **developing EGAP skills** and 2) supporting students' **autonomous English learning**.
2. Share the curriculum and course goals, student progress, teaching methods, and

concerns through the professional development.

3. Redesigning the core course syllabus and materials featuring academic listening/reading tasks and explicit instruction of listening/reading strategies.
4. Developing a list of self-access resources to match students' learning progress.

Can-do lists of academic reading

1. predict the content and text organization by the headings.
2. find the sentences that state the purpose and organization of a text.
3. find a definition sentence and explanation of a keyword.
4. understand the language features of an academic text.
5. summarize the entire text or parts of a text.
6. apply the knowledge gained from a text to analyze something.
7. synthesize information from multiple texts.

Course goals and target skills to be learned

1. Reading and reviewing literature on global issues.
2. Describing and interpreting data in graphs.
3. Summarizing opposing views on social issues.
4. Developing primary research skills: designing and conducting a study, analyzing data, giving presentations, and writing a short research paper and making an oral presentation.

場次 3

111/05/20

(五)

9:00~12:00

Genre pedagogy: Language, literacy and L2 writing instruction

文體寫作教學：語言融入第二語言的教學設計

重點

摘述

Genre pedagogy

Genre instruction stresses that genres are specific to particular cultures, urging language professionals to go beyond syntactic structures, vocabulary, and incorporating into our teaching the ways language is used in specific contexts. Genre pedagogies promise very benefits for learners as they pull together language, content, and contexts.

Advantages of genre pedagogy (Hyland, 2004)

1. **Explicit:** Makes clear what is to be learnt to facilitate the acquisition of writing skills
2. **Systematic:** Provides a coherent framework for focusing on both language and contexts
3. **Needs-based:** Ensures that course objectives and content are derived from students' needs
4. **Supportive:** Gives teachers a central role in scaffolding students' learning and creativity
5. **Empowering:** Provides access to the patterns and possibilities of variation in valued texts
6. **Critical:** Provides the resources for students to understand and challenge valued discourses

Principles of Genre-based writing instruction

1. Writing is a social activity
2. Learning to write is a social activity
3. Learning to write is needs-oriented
4. Learning to write requires explicit outcomes and expectations
5. Learning to write involves learning to use language

Stages of designing a genre-based writing course (Burns and Joyce, 1997)

1. Identify the overall contexts in which the language is used.
2. Develop course goals based on this context of use.
3. List the genres used in this sequence.
4. Outline the socio-cognitive knowledge students need to participate in this

- context.
- Analyze genre-based texts.
 - Develop learning objectives to be achieved.

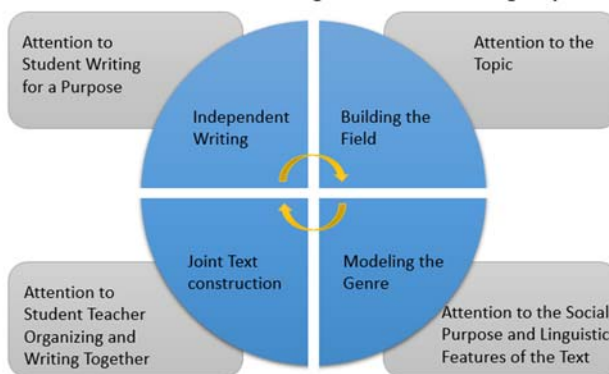
場次 4 111/05/27 (五) 9:00~12:00	Integrating Intercultural Learning in English for Specific Academic Purposes 整合學術英文課程與跨文化學習融入
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重點 摘述	By including both culture general and culture specific learning in language teaching and learning, the integrated approach aim to develop four broad competence areas: 1) Linguistic awareness and competence in the L2; 2) Communicative competence in the L2; 3) Cultural awareness and knowledge of L2 cultures; and 4) Intercultural communication competence. <u>Challenges of teaching ESAP context</u> <ol style="list-style-type: none"> Cope with limited resources within the context of formal instruction Combine discipline-specific language and challenging academic content is an added burden on the limited cognitive resources Learn to use language to communicate relevant content while maintaining a critical perspective of all the speakers' cultural frames Learn to learn new communication skills, new cultural information, and new intercultural skills from the process of intercultural communication
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場次 5 111/06/17 (五) 9:00~12:00	Writing to Persuade: Systemic Functional Approaches to Genre-Based Pedagogy 說服力寫作：結構功能學運用到文體寫作教學模式
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重點 摘述	From an SFL perspective, genre-based pedagogy proposes that language users draw on a range of possible choices to make meaning, rather than simply adhere to grammatical rules, guided by these contextual factors, <u>Register.</u> <ol style="list-style-type: none"> Within social situations and contexts, language's three meta-functions are realized as register. Three main components comprise the framework of appraisal: affect, judgment, and appreciation. Effective persuasive writers call on these resources to make their opinions known using an expert voice. <u>Genre</u> <ol style="list-style-type: none"> Genre as a “staged, goal-oriented social process” to achieve various purposes” and thus normally take a number of steps to achieve their goal. As a text moves through its stages or “schematic structures”, the linguistic, syntactical and textual features typical of the genre work together to realize a text's intended purpose to make genres “goal oriented. Genres are considered to be a social process because participants generally interact in accomplishing the goals.
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Genre Based Teaching and Learning Cycle



Embedding Critical Thinking in Language Learning Programs

融入批判思考的語言課程：學習任務與語言技巧之設計

重點
摘述

Critical thinking skills

1. **Information seeking:** by identifying relevant sources and gathering relevant data.
2. **Applying Standards:** judging by established criteria.
3. **Analyzing:** breaking into parts to discover their nature, function and relationships.
4. **Discriminating:** recognizing differences and similarities and distinguishing carefully to different categories or ranks.
5. **Transforming knowledge:** converting the form, or function of concepts across contexts.

Bridging the gap: task-based performance

The task can be completed using real language, and students learn the language through completing that task. Language acquisition takes place through deliberate building of metalinguistic knowledge through language performance

A Critical thinking model

1. **Pre-task:** To prepare for the task with instructions and a roadmap to the successful completion of the task.
2. **Task:** Students completed in pair- or group-work contexts.
3. **Task performance:** complete the task (without instructor interference).
 - **Planning:** Students prepare to report on the task outcome.
 - **Reporting:** Students report what they have prepared (task outcome)
4. **Language**
 - **Analysis:** Teacher reviews language forms needed for expanding the task.
 - **Practice:** students perform a more complex task for expansion and further practice.

Critical thinking: GRAS stages

Critical thinking skills, can be incorporated in the stages:

1. **Get:** students will identify credible sources of information which is only slightly higher than students' current proficiency level, making it possible to use such skills as **information seeking** and **analyzing**.
2. **Read:** Students employ skills such as **discriminating** and **applying standards**.
3. **Analyze:** students **discriminate** and **apply standards** to provide them with insight on their own cultural practices.
4. **Summarize and Paraphrase:** students **transform knowledge**, not only to create a summary or a paraphrase.