

# **Painful or Fruitful Experiences?**

## **— Students' Perspectives on Research Paper Writing**

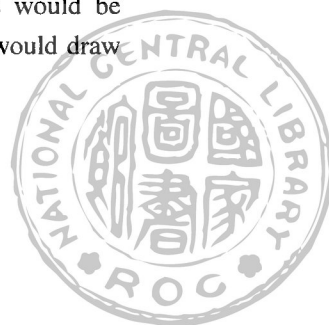
**Li-Te Li<sup>1</sup>**

### **Abstract**

Academic English writing has been considered essential for higher education. No matter what disciplines students belong to, writing English research paper seems to be the key to access the international academic world. Many studies on undergraduate research experiences focused on science students and lab research experiences. However, few studies focused on students in the field of social science, and much fewer discussed the research experiences of students in the field of applied linguistics. This paper investigated how English majors in the EFL context viewed academic research, in terms of the difficulties and the benefits they experienced in the learning process. The participants were 43 Applied English majors, including 40 juniors and 3 seniors, who took the course of Research Methodology and Writing in a private university in Northern Taipei. The participants' reflective journals were the main data for this study, and 99 journal entries in total were collected throughout the semester. The qualitative content analysis was conducted. A number of issues were emerged from the learners' perspectives and were discussed with reference to current practices in the teaching of Research Paper Writing. The results revealed that information searching, synthesis of previous studies, and convention of academic English writing were major challenges; whereas, collaboration, the sense of responsibility, and supports from the instructor played crucial roles in overcoming the difficulties. It is believed that with proper guidelines, undergraduates would be capable of conducting their own research, and that the primary research would draw

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<sup>1</sup>Associate Professor, Department of Applied Foreign Languages, Shih Chien University.



more engagement from students than typical synthesis or summary papers. The findings reflected that the course-based undergraduate research experiences facilitated both professional development and personal growth of English majors in the EFL context. It is hoped that the findings would bring insights to both EFL educators and learners of academic English writing.

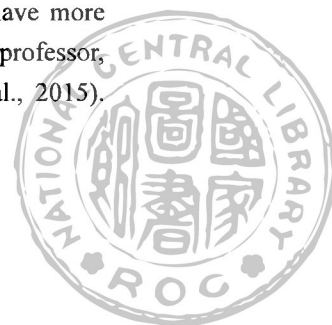
**Keywords:** Research Paper Writing, Course-based Undergraduate Research Experiences, Reflective Journal, Primary Research, EFL Context, Applied English Majors.



## INTRODUCTION

Academic English writing has been considered essential for higher education. No matter what disciplines students belong to, writing English research paper seems to be the key to access the international academic world (Healey, 2005; Willison, 2012; Willison & O'Regan, 2007). However, this requirement seems to bring huge torture to university students (Kinkead, 2003; Knutson, Dozier, & Migotsky, 1995; Linn, Palmer, Baranger, Gerard, & Stone, 2015; Streitenberger & McGregor, 1999). Not like their professors or mentors, university students cannot see the value of research paper writing and even sometimes consider “research is boring” or “doing research is frustrating” (Knutson et al., 1995, p. 1). Knutson and her colleagues (1995) noted that students' frustration was mainly from the failure of locating the materials they needed. Other researchers found that students' negative attitude toward research may come from their misconception of research paper and their insufficient knowledge and skills on either information collection and analysis or English writing (Johanson, 2001; Orgeorn, 2018; Shao & Purpur, 2016; Streitenberger & McGregor, 1999). Schneider and Fujishima (1995) found that Taiwanese graduate students in the States were usually lack of English proficiency and often misunderstood the integral role of academic writing in the U.S. university. Yao (1996) and Johanson (2001) also noted that Taiwanese graduate students in the States encountered difficulties in academic English writing. The former emphasized the lack of exposure to research paper genre, and the latter revealed that the inadequate preparation when those students were in undergraduate programs in Taiwan.

In general, students' research experiences include undergraduate research experiences (UREs) and course-based undergraduate research experiences (CUREs) (Auchincloss et al., 2014; Linn et al., 2015). UREs are more like students as apprentice, working with professors or mentors in the laboratory; whereas, CUREs refer to students learning research in a course instructed by a professor (Auchincloss et al., 2014; Linn et al., 2015). The discussion of different benefits from UREs and CUREs clearly showed that more students would be involved in and benefit from CUREs because UREs usually only selected elites to enter the university laboratory. Moreover, compared with UREs, in which students are led mostly by the post-docs and gain fragments of concepts of research, students in CUREs usually have more opportunities to learn complete concepts of academic research from the professor, who is usually the course instructor (Auchincloss et al., 2014; Linn et al., 2015).

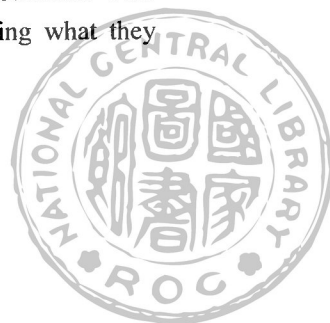


Different from learners in science disciplines, who usually work with professors or mentors in science labs, learning to conduct an experiment and write a research paper, students in social science disciplines seem lack of the opportunities to really step into the territory of academic research and writing. For English majors, even though some English departments offer the course of research methodology, the goal usually focuses on the understanding of certain research designs but not the ability in producing a research paper based on a primary study done by students themselves. English majors indeed practice different modes of essay writing in series of English writing classes; however, writing a primary research paper is usually not the objective of EFL writing class. This phenomenon has been reported in different studies (Schneider and Fujishima, 1995; Yao, 1996; Johanson, 2001).

Many studies on undergraduate research experiences focused on science students and lab research experiences. However, few studies focused on students in the field of social science, and much fewer discussed the research experiences of students in the field of applied linguistics. Since English majors are not required to work in science labs, CUREs may be the only channel for them to build the knowledge of academic research. This study, therefore, aims to hear the voices of English majors with CUREs in the EFL context about 1) how they viewed academic research, 2) what difficulties they encountered in the process of learning research methods and writing English research paper, 3) what benefits they gained in the learning process. It is hoped that the findings would bring insights to instructors who teach research methods and research paper writing.

## METHOD

This study was implemented in the course of Research Methodology and Writing in a private university in northern Taiwan. The course aimed to help students to get basic knowledge about research methodology, to be able to search information via libraries and academic database, to be familiar with APA documentation, to conduct a primary research with students' self-designed questionnaire, and to write a research paper. The process of research paper writing was divided into several stages, starting from annotated bibliography, literature review, survey design and method, results and discussion, complete research paper and presentation. Students were encouraged to keep reflective journals at different stages, summarizing what they learned and how they felt in the process.



## Participants

Forty-three undergraduates, 40 juniors and 3 seniors, majoring in Applied English in a private university in northern Taiwan, participated in this study. They have formally learned English for more than 10 years, and specifically learned English writing from freshman year to junior year in the department. The content of the series of writing courses covered from grammar practice, paragraph writing, to essay writing. The rhetoric modes of essay, such as process, definition, classification, narration, description, cause-effect, comparison-contrast, argumentation, have been practiced. However, they have never learned research methodology, never heard of APA citation, never accessed library database, never read academic journal articles, never designed a questionnaire, never conducted primary research, never wrote research paper. They experienced many of their “firsts” in this course.

## Materials

The reflective journals written by the participants were the main materials in this study. In order to encourage students to share their understanding of newly learned knowledge and their feelings toward research experiences, the prompts designed by the researcher were distributed to students at different stages (see Table 1 and Table 2).

Table 1

*Prompt for Learning Reflection in the Process*

Prompt
Look back at whatever you have learned so far in this course, and share your reflection on your learning!

Table 2

*Prompt for Writing Final Reflection*

Prompt
Look back at the whole semester and then share the process you went through. For example, what did you learn from this research experience? What might be the differences in you after conducting the survey research and accomplishing the research paper? How did you grow professionally and personally? Welcome the profound reflection on your learning!!



## Data Collection

In the beginning of the course, students were informed that they were encouraged to keep the reflective journals, so that their learning process and their feelings could be better reviewed and refined. About every three weeks, the researcher distributed the prompts to students, helping them have retrospection and introspection on the learning. In the end of the semester, the researcher designed the prompt for students' final reflection, focusing on their gains, loss, and changes in this journey.

The reflective journals were collected throughout the entire semester, approximately 18 weeks. In total, 99 journal entries were collected, including 25 on week 1-5, 21 on week 6-9, 15 on week 10-13, and 38 on week 14-18 (see Table 3).

Table 3

### *Timetable and Entries of Journal Collection*

Duration	Week 1-5	Week 6-9	Week 10-13	Week 14-18	Total
Journal No.	Journal-1	Journal-2	Journal-3	Final Reflection	
Number of entries	25	21	15	38	99

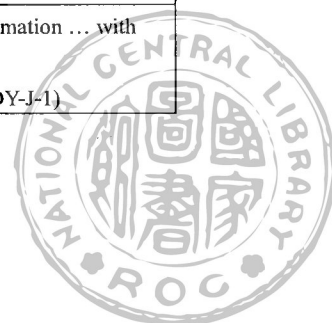
## Data Analysis

The qualitative content analysis was applied to analyze students' reflective journals. As suggested in Creswell (2016), "... the [raw] data are ... coded through the process of reading through the text ... and assigning code labels to the text .... These codes are then collapsed into themes, ... and the themes ... might [provide] an explanation for the central phenomenon ..." (p. 175). Instead of being determined beforehand, the codes, categories, themes in this study emerged from the examination of the data. By reading through the complete 99 journal entries, the researcher scrutinized the perspectives on research experiences shared by English majors in the EFL context. Table 4 showed some samples of raw data, codes and themes.

Table 4

### *Samples of Codes, Themes, and Examples of Quotations*

Themes	Codes	Examples of Quotations
Professional challenges	- Lack of knowledge	- "... hard to collect and organize all the information ... with our own words" (Tina-J-1)
	- Lack of skills	- "I could not find a book or the article ..." (DY-J-1)



Personal struggles and growth	- Collaboration	- "... we had argued and fought seriously ..., but we solved the embarrassing situation finally" (Chu-FR)
	- Patience	- "... I learned how to be patient to finish the work" (Cody-FR)
Attitude change	- Ignorance	- "In the beginning, I didn't pay much attention on this project" (Miao-FR)
	- Engagement	- "... compare the course to baby-raising ... take care of the baby ... like doing the research step by step until it is completed" (Tina-J-3)
	- Achievement	- "After completing this tough and complicated research, I am really happy and excited" (Wen-FR) - "I felt unbelievable. ... Although the process was hard, the outcome was worthy" (Miao-FR)

Note: J-1 refers to Journal-1; FR refers to Final Reflection

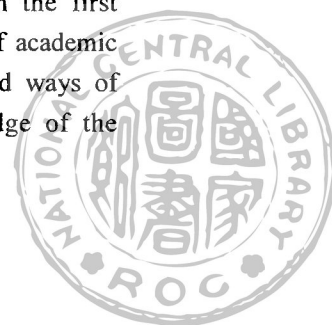
## RESULTS AND DISCUSSION

Students' reflective journals showed their perspectives on learning research methodology and research paper writing. The analysis of collected data revealed that they considered this course-based research experiences were full of difficulties and challenges, in both professional and personal domains. However, with the engagement of individuals, the supports from the instructor, and the collaboration with teammates, the difficulties would eventually turn into the force to help professional development, to facilitate personal growth, and to bring attitude changes.

### Difficulties and Gains in Professional Domain

The lack of research concepts and skills caused huge difficulties in the learning process. At the initial stage of learning, students had no ideas about what research would be like. They had never read any journal articles; they had never tried library on-line database; they had never heard of specific citation style like APA. With zero background knowledge, they started the lesson. Everything was totally new to them and that obviously increased the level of difficulty.

**Information searching and synthesis.** In order to accomplish the first assignment—Annotated Bibliography, they had to gain basic concepts of academic research, library resources, reference searching, APA citation style, and ways of writing annotated bibliography. However, having no prior knowledge of the



research, they seemed to get done the assigned work without exactly knowing what they were doing. Yu's first journal seemed to speak for many of her classmates, *When I did the first assignment, I felt hard to start finding the resources that could help us with our study. We went to the library to find out some reports ... However, we were lack of skills about searching for the resources in the library; we spent so much time reading magazines and books but didn't find out much useful information. Also, we were not familiar with the APA form and had no idea whether our writing is right or not ...* (Yu-J-1).

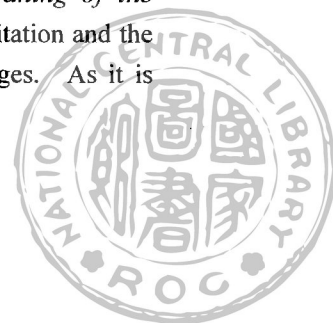
Choosing a research topic, forming research inquiries, searching relevant information, understanding APA citation, drafting Annotated Bibliography, writing Literature Review, were overwhelmingly pressing the students. Students usually could not find the needed references due to their unfamiliarity of library database and lack of skills in information searching. As DY stated,

*Research Methodology is totally a new subject to me, and I think doing the information research is a little difficult to me. At first, I could not find a book or the article on the Internet that is related to our group's research topic ...* (DY-J-1).

Lo shared similar difficulties,

*We needed to find out the studies that could help us to know more about the information of our topic. Many research papers had been found but few of them could be used. ... we had to read almost the whole study in order to get the main ideas that could help our research. ... I felt really frustrated because there were so many things to read and I was not sure that I could handle it ...* (Lo-J-1)

**Convention of English research paper writing.** For those who were able to find relevant references, they also had difficulty combining all the references into one or two condense passages logically. The stress was obviously revealed in Shuan's reflection, *"I would try my best to use my own words to describe their opinions, but I am afraid my words would fail to express what the original meaning of the [scholars]"* (Shuan-J-2). While writing literature review, the in-text citation and the rhetorical expression in academic writing were the other two challenges. As it is



stated,

*The most difficult part for me is the Introduction and Literature Review. ... It is too hard to collect and organize all the information together and write down with our own words. We are still trying to figure out how to do this part. ... (Tsao-J-1).*

Melody also worried about the tough task,

*I think the most difficult part is to read all the [journal articles] that I found but they were not the documents I wanted most of the time. Also, it is hard to completely understand the content of whole paragraph and organize the main idea of every article. We can't distort the meaning of authors and we should be careful to cite their sentences, or we will be accused of plagiarism. ... to follow the APA style ..., it is complicated... (Melody-J-1).*

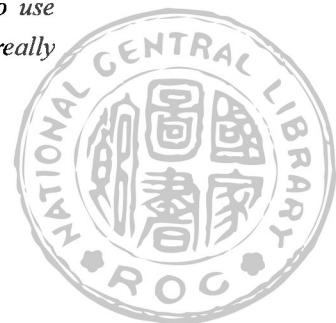
It seems that among all the challenges, writing literature review was considered the most challenging task and even the biggest torture.

Moving from literature review to methodology, some students noticed that the detailed description of subjects, questionnaire, data collection and analysis was also a big challenge. Yuan was one of them,

*... When we wrote our methodology, we did not really organize our details. ... The most difficult thing to us was how to describe our procedure clearly. We wanted to convey our ideas to our readers so that they could understand what we would do without any doubts. It was not an easy task to us ... (Yuan-J-2).*

Gradually, while facing the challenges and learning how to overcome the difficulties, they seemed to also see the value of conducting the academic research and the importance of enhancing the professional knowledge and skills.

*Writing literature review was challenging but it indeed helped learn to organize ideas. Also, learning how to quote scholars was a way to use references to prove my own arguments, ... though the format was really tedious! (Michelle-J-2)*



John also mentioned, *“The process taught me to be more careful and cautious toward many things, both doing homework and working in the future, which is good for my life”* (John-J-2).

**Designing and distributing questionnaire.** Survey research was required in this course, so students needed to learn how to design their own questionnaire to collect opinions from the public. Many students considered designing their own questionnaire as getting into the real territory of doing research. However, they had never thought that making a questionnaire needed to be extremely cautious, such as types of questions, styles of options, and overall format of the questionnaire. The worries toward the difficulties were repeatedly presented in their reflections,

*... It sounds easy to make a survey but it doesn't. I should notice [whether] the question is open-ended or close-ended. Besides, I should avoid jargon, slang, abbreviations, ambiguity, confusion, and vagueness. A good survey question is one in which respondents do not know which answer you expect, and they feel totally free to state what they really think or feel ...* (Jill-J-1)

*... For the sake of multiple aspects we are striving to investigate, we need more open-minded questions. ... We didn't know who is more proper to be the participants. How many female or male should we find? Is there an age limit for the participants? ...* (Tsu-J-2)

Though students encountered plenty of difficulties, they seemed to enjoy designing their own questionnaire and expected to see the results. However, the practical act of distributing questionnaires to respondents indeed brought fear and nervousness to some of them, especially for those who would ask strangers to fill out the questionnaire.

*... For our questionnaire, we didn't design well in the first version, so we [re-designed] another one. ... The participants that we designated were the people who had already worked in the job field. ... We had to find more seniors (parents, relatives, teachers, and some strangers) to [fill out] the questionnaire, [and] that's more difficult for us to accomplish this part ...* (Yu-J-2)

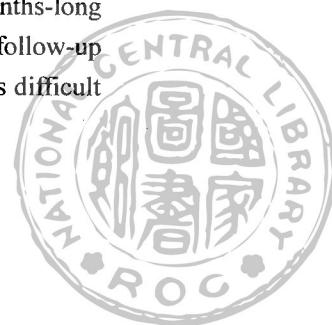


Tina, overcoming the shyness and fear of facing the strangers, even sincerely thanked the respondents, *“Thank all the respondents on street to fill out the questionnaire, because I used to be impatient to people who asked me to do survey in street”* (Tina-J-2).

**Interpretation of data.** When they got the responses from respondents and started writing Results and Discussion, they were extremely happy. If their results perfectly matched the previous studies in the field, they felt safe and confirmed by the scholars. Instead, if their results were different or even contradictory to the literature review, they felt shocked and disappointed. To them, the harmony between their findings and others' results seemed to be a proof that their study was successful. They worried about the differences and could not see the value and significance of their unique findings. Until they started interpreting the results and discussing the findings, they suddenly noticed that they did real research, of which the results could not be predicted or manipulated by the researchers at all. This awareness encouraged them to infer the possible interpretation for their findings. John's reflection was one example,

*... The result of the questionnaire is different [from] our previous expectation. Our previous expectation is [that] the educational background will not have influence on occupation. But, the result of the questionnaire is in the opposite side. It shows that people will find their jobs [relevant to] their educational background. This is really [a shock to] our group members. After hearing teacher saying that it is a good thing for researchers, [we] feel more comfortable and [continue] to write [the paper] ...* (John-J-2)

**Presenting the findings and handling the Q-&-A session.** Like all the researchers seeking the opportunity to present their paper, students had to make oral presentation on their research to the whole class. Though they had times of presentation in other courses, this presentation made them feel like professional presenters. In this presentation, they did not summarize others' findings; instead, they shared their own findings, which came from their own research. Also, the research lasted for the whole semester and they had been involved in the research for months, they considered this presentation was the final product of a months-long study. Similar to formal paper presentation in an academic seminar, the follow-up Q-and-A session was designed for students as well. They felt Q-and-A was difficult



because they needed to answer the questions as real professional presenters. In the beginning, they doubted whether there were any questions raised for them and they doubted whether they would be able to answer those questions. However, surprisingly, almost each presentation drew attention from their classmates and attracted some questions related to either their research design or interpretation of findings. As presenters, they faithfully answered the questions based on their study, and left the unknown to future studies. It seems that they performed just like real researchers. As Ula said, "... *through presenting our research and taking Q-and-A session, we learn to be a professional presenter*" (Ula-J-3). Chiao also revealed, "... *listening to others' presentation interests me, because the topics are life-related. Also, I have learned how to arrange my own presentation from others*" (Chiao-J-3). Charlene was eager to make her presentation and said, "*I cannot wait to present our paper*" (Charlene-J-3). It seems that the tedious revision and the painful writing process had gone when they reached the final stage of sharing their own research findings.

## **Struggles and Growth in Personal Domain**

Students experienced struggles and growth in several aspects, like collaboration, time management, responsibility. They were also deeply impressed by the value of passion and patience.

**Negotiation and collaboration.** Since they worked in groups, the communication and negotiation became very important. If the group members were passive in collaboration, the group work would be damaged. If the group members were active, the outcome would be a lot more positive. However, none of these students knew how to conduct research, and so most students dared not to take the responsibility, which makes the process delayed. Lillian's reflection seemed to highlight the problems in teamwork,

*In the beginning, we had no idea about how to design the questionnaire and even we seldom get together to discuss [our research], so that we delayed [the assignments] greatly. Actually, every member in our group felt powerless ... because of the lack of courage and group discussions ... [a lot of] debate and misunderstanding among us. This was a big challenge for us. ... (Lillian-J-2)*



Fortunately, later on, students solved the problems and gradually moved on,

*Later, I found that we need to have more empathy and care for our members because we are a group. Selfishness would destroy good atmosphere of communications. Fortunately, we tried to communicate with each other rationally and were able to discuss peacefully afterward. ... (Lillian-J-2)*

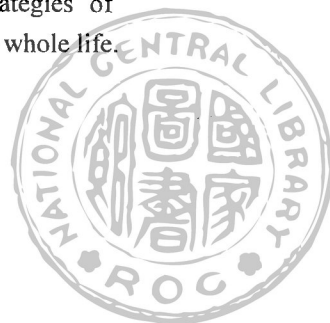
Similar situation happened to other groups as well. The tension was revealed frequently, like “our group members had some problems” (Wen-FR), “... an endless quarrel ..., we might no longer being close friends” (Tsao-FR), and “... we had argued and fought seriously ...” (Chu-FR). Obviously, learning “how to respect others’ suggestions” and “how to cooperate with others rationally and peacefully” became another essential lesson.

**Responsibility taking and time management.** In addition to collaboration, students also learned to take the responsibility. In the process of writing research paper, all the sections required times of revision. They usually started writing a new section while revising the previous sections. The endless and tedious revision made them exhausted, as shared in Alex’s reflective journal,

*... it does take [time] to finish up all the sections. Last Sunday afternoon, for example, was totally spent doing the method and revising the introduction and literature review... It was great finishing these two sections, but we were really tired. Moreover, we even edited our questionnaire and made an English version ... (Alex-J-2).*

Yu’s wailing seemed to echo the reflection of Alex and spoke for her classmates, “I couldn’t imagine that after the first assignment, there were other endless assignments waiting for us ... (Yu-J-2).

However, away from negative and resistant emotions, they started valued the task of revision. As Charlene said, “*Keeping revision was really hard, but we still enjoyed it. We really want our paper to be perfect, and I cannot wait to present our paper*” (Charlene-J-3). In the process of making revision and negotiation with teammates, they cultivated the characteristics of patience and the strategies of collaboration, which they considered as skills and features they need for the whole life. John’s reflection was typical,



*In current week, our group members discuss more than five times. I think this is a good thing to let our group members get together more. And, we learn how to work with other people smartly and efficiently. It can let me use what I learnt to apply to after-school life ... (John-J-3).*

Furthermore, students also learned how to have better time management. Since many of them needed to work part-time after school or at weekends, the time for group discussion was very limited. The conflicts, like “... *we had lots of arguments during our discussion, and we also encountered numerous difficulties, such as the limited time ...*” (Lo-FR) and “... *some have jobs [or] other work to do. How about me? I also got a job and have other classes and work, why wouldn't they think about my feelings ...*” (Tsao-FR), were frequently revealed in their reflective journals. They suffered the schedule conflicts among group members at the initial stage and learned how to solve the problems later on. Some groups set up the fixed time slot for discussion; whereas, others borrowed the discussion room in university library to meet and discuss regularly. Compared with the numerous group tasks they have done in university, this research experience seemed to be considered a lot different. The intensive discussion and gathering helped create a new relationship among peers. John said in his reflection, “*There are many courses [that] can let us experience team work, but this class let us experience [teamwork] strongly and cooperate much well*” (John-J-3). In general, they thought “*doing a research is a tough work, which takes time and needs concentration, intelligence, and harmony among group members*” (Lillian-J-2).

**Passion and patience.** In addition, they had profound thoughts on “passion” and “patience”!! For passion, many students mentioned that having passion on the topic they chose for research was a must. If they lost the passion, they would lose the motivation to continue the research. Alice’s reflection was an example, “*I think the most important thing is [that] the topic must be [what] you are really interested [in]. Because your passion and [curiosity] will be the significant aid when you encounter the difficulties*” (Alice-FR). Marvel also said, “*The curiosity leads me to continue and accomplish the paper. Knowledge is GREAT!*” (Marvel-J-3)

As for patience, Sandy’s reflection seemed to explain why they desperately needed patience,

*... It also required a lot of patience to finish this research ... We had to*



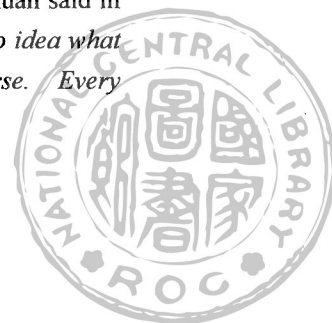
*revise it again, again, and again even the new part of the research was still working on, not to mention the assignments of other courses. Moreover, I have to read a lot of professional journals or essays to support our study, especially, the literature review. Actually, the APA format is really annoying. I have to be careful of the order of the alphabets, the punctuation, even the space. ... Moreover, it was really tiring to read the on-line journal because all of the alphabets are so tiny. They are just like ants rather than words. ... when we finished [writing our own part,] we would send it to other group members to [see] whether any places have to be corrected, and they would send [back] to [the writer] after they corrected. ... The procedure made me feel exhausted and painful. However, I still learned a lot from it. I accomplished all of my first-time experiences in this research paper. And we also conquered the [fear] and unsatisfactory thoughts [that we may not be able to] finish this impossible mission. ... (Sandy-FR).*

This long quote depicted the entire learning process and pointed out the need of patience for successfully walking through this course-based research experience. At every single stage, students faced the challenges of new knowledge, unfamiliar writing convention, a great deal of reading, a huge amount of writing, endless revision, and frequent negotiation and discussion. Many students shared the similar awareness, and Cody echoed Sandy with one firm concluding sentence, “*The most important [thing] is [that] I learned how to be patient to finish the work*” (Cody-FR).

## Attitude Change

Students' attitude changed along with the process of learning, basically, from resistance or ignorance to appreciation. The clear instruction and constant supports from the instructor played an important role to facilitate the attitude change.

**From resistance and ignorance to appreciation and engagement.** Their first journal reflected their feelings toward research at the initial stage. “Difficult” and “confusing” were the best adjectives to describe this stage, while some others might hold the attitude like “not really care about this course”! Students had heard this was a difficult course, but they did not know how difficult it might be. As Shuan said in the very beginning, “*It was just the beginning of this semester. We had no idea what kind of situation that we would face. It seemed to be a complicated course.* Every



*time when I open our textbook, I feel there are still so many things that I need to learn. ...”* (Shuan-J-1). Marvel’s sharing revealed her worries, *“I was confused at the very beginning. ‘Confuse’ is not enough to describe my feeling; I also felt extremely anxious and nervous ...”* (Marvel-J-1).

However, their final reflection, collected at the time when they accomplished all the tasks, showed that the difficulty, struggles, and resistance seemed to be disappeared; instead, the sense of achievement appeared.

Looking back at the learning process, students were surprised to see the positive meaning of this course. As Sandy mentioned,

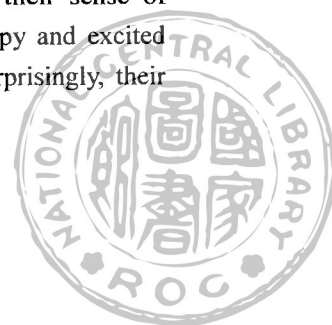
*Finally, we finished all of the research papers. It’s really hard but interesting. I have a lot of first time in this research. This is the first time I did the professional research. This is the first time I distributed the questionnaire and requested [people] to fill it. This is the first time I used Google scholar. This is the first time I read some professors’ essays and professional journals. This is the first time I arranged my collected information in APA format. This is the first time I applied EXCEL to finish my assignment* (Sandy-FR).

Also, students used different analogy to describe the process and their paper. The most popular one was the notion of baby delivery or baby raising. Tina’s Final Reflection said,

*I would like to compare the course to baby-raising. The baby is like the research. I need to take care of the baby till she/he grows up just like doing the research step by step until it is completed. I really learned a lot from this class* (Tina-J-3).

Sandy also compared the paper writing as baby delivery, *“... it’s just like your baby. ... Now, the baby is out. Our baby would probably not perfect, however, I still loved and satisfied with it”* (Sandy-FR).

**Sense of Achievement.** The change of attitude from resistance to appreciation and from ignorance to engagement seemed to pave the way for their sense of achievement. Students with the CUREs in this study felt very happy and excited when they reached the goal of completing this research paper. Surprisingly, their



excitement was not just the feelings of getting rid of the tedious work; more meaningfully, they felt proud of themselves and strongly experienced the sense of achievement. Miao said,

*Before doing the research paper, I was lack of interest. ... In the beginning, I didn't pay much attention on this project. ... [However,] looking at the research paper we wrote, I felt [it was] unbelievable. I could not imagine that I had written so many things. Although the process was hard, the outcome was worthy (Miao-FR).*

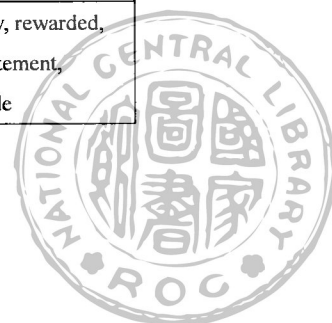
Chu also stated,

*This course is really tiring and exhausting, but knowledgeable and professional ... At the beginning, I have no idea ... I really think of quitting this course. However, when I do assignments with my classmates step by step, I find it [could be a big harvest]. I not only learn how to work with team but also learn something professional and skillful ... I feel really proud and satisfied. Actually, we had argued and fought seriously ..., but we solved the embarrassing situation finally. I'm glad we end this course with such harmonious and fruitful ending (Chu-FR).*

Compared with their first reflective journals full of negative expression, like “difficult,” “hard,” “painful,” “tedious,” “tiring and exhausting,” “frustration,” “fearful,” “giving up” ..., their final reflection showed opposite viewpoints. In their final reflection, words like “great,” “proud,” “appreciated,” “happy,” “rewarded,” “worth it,” “satisfied,” “fruitful,” “excitement,” “fulfillment,” “impressive,” “gratitude” ... appeared frequently, almost in every student’s reflection (See Table 5). It seems that going through this challenging journey, turning mission impossible to possible, students would like to search for the most appropriate words to describe their strong sense of achievements.

Table 5  
*Frequently-Used Descriptors in First and Final Reflective Journals*

	First Reflective Journals	Final Reflection
Frequently-used descriptors	difficult, hard, painful, tedious, tiring and exhausting, frustration, fearful, giving up	great, proud, appreciated, happy, rewarded, worth it, satisfied, fruitful, excitement, impressive, fulfillment, gratitude



**Constant supports from the instructor.** The instructor's clear instruction and effective supports played an important role in students' learning process. The clear instruction helped construct the knowledge needed for academic research, and the effective supports helped solve the problems encountered in primary research and paper writing. With the company of the professional mentor along the way, the resistance and ignorance caused by the fear and anxiety was gradually replaced by their engagement and appreciation. As Miao reflected on her learning process,

*... I didn't know what to do. I just could look at the examples the teacher gave us. With the teacher's correction, I began to know how to write. ... I read the examples again and again. Finally, I wrote it out, even though it was not perfect. ... Although the process was hard, the outcome was worthy ... (Miao-FR).*

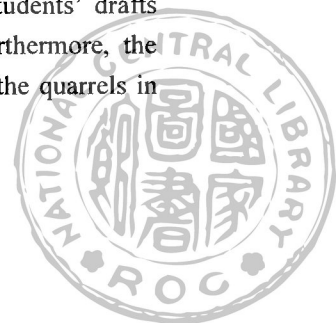
Fang shared similar feelings,

*In the beginning, we had totally no clue about doing this research. ... I appreciated for professor's patience while we kept asking for the help. I found fulfillment in doing this paper, and it was really impressive ... (Fang-FR).*

Ya's reflection reinforced the value of the instructor's supports,

*In the process of completing this paper, I learned lot of things. ... Knowing that I can learn not only the knowledge but also many things [that] would be useful in the rest of my life ... was the biggest benefit. Finally, I have to thank [the] professor for [the] patience and encouragement. Without that, I could not conquer all the difficulties that I encountered. (Ya-FR)*

In the whole semester, students were not only instructed with the concepts of research design and paper writing, but also provided with plenty of sample papers to learn how to write each section of their paper. Moreover, frequent appointments with the instructor to discuss each stage of their research helped them clarify the doubts, ease the anxiety, and build the confidence. The instant feedback on students' drafts provided them with the useful suggestions for paper revision. Furthermore, the drop-in chat-talks strongly provided emotional supports to overcome the quarrels in

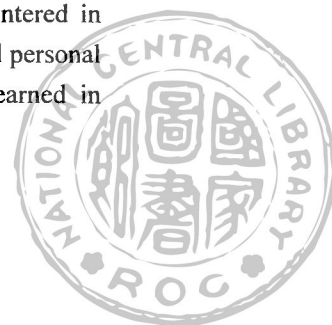


teamwork, lack of confidence, feeling of giving up. It seems that the constant supports from the instructor helped facilitating the attitude change in this course-based research experience.

## **Discussion**

The findings revealed that the major difficulties in writing research paper were information searching, synthesis of relevant studies, and academic writing convention, which is similar to the findings from the previous studies (Johanson, 2001; Knutson et al., 1995; Streinberger & McGregor, 1999). Students in Knutson et al.'s study (1995) also reported that they had difficulty finding the materials they needed, and the main reason would be students' not knowing what materials may or may not help their paper. Moreover, while reading academic journal articles, students usually only read introduction, results and conclusion, but skimmed or completely ignore the section of literature review and methodology because they were rarely or even never asked to read articles related to primary research including literature review and methodology (Knutson et al., 1995). That causes the difficulty for students to synthesize relevant studies into their literature review and to describe their methodology with needed details. Therefore, the clear instruction in class and the timely efficient supports from the professor are essential (Auchincloss et al., 2014; Johanson, 2001; Leckie, 1996). Along with the expansion of conceptual understanding of research, students usually feel braver and more willing to step forward, as Johanson (2001) reported, eventually students would try to read extensively, "to maximize input and become familiar with the appropriate register of the genre" (p. 11). Furthermore, as suggested by the previous studies, conducting a primary research, such as "survey research, historiography, and ethnography" (Knutson et al., 1995, p. 9), instead of resource-based paper writing or observation reports (Streitenberger & McGregor, 1999), helps students realize the importance of the methodology and understand the review of literature actually "establish a need for the primary research" (Knutson et al., 1995, p. 9). This awareness, in turn, makes students read academic journal articles more carefully and critically. In this study, obviously, students involved in their self-designed survey research gradually noticed the connection between literature review and methodology.

Students in this study considered the challenges and struggles encountered in research paper writing paved the way for their professional development and personal growth. Willison, Sabir, and Thomas (2017) reported that the skills learned in



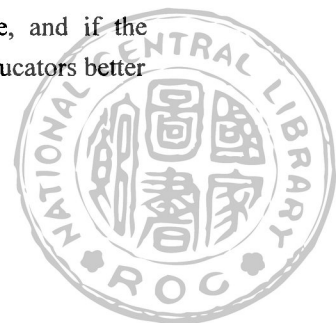
research experiences would be able to shift from academic practice to workplace. Lopatto (2006, 2010) also claimed that students would benefit from research experiences in two main aspects. The first is professional development, including “disciplinary skills, research design, information or data collection and analysis, information literacy, and communication” (Lopatto, 2010, p. 27). The second is personal development, containing “self-confidence, independence of work and thought, and a sense of accomplishment” (Lopatto, 2006, p. 23). Moreover, this study further confirmed that course-based undergraduate research experiences (CUREs) provided students with complete but not fragment knowledge of research directly from the professor, who is usually the course instructor (Auchincloss et al., 2014; Linn et al., 2015). The instructor’s clear guide and intensive supports eased students’ anxiety and helped clarify the doubts and the uncertainty. Furthermore, many scholars noticed that “... contemporary undergraduate researchers have a better experience if they work with other undergraduates as teammates ...” (Lopatto, 2010, p. 28). That this study emphasized teamwork seemed to echo the previous findings, though the ups and downs in collaboration also reminded students of the importance of teammates selection and their own responsibility in a group.

Students’ attitude changed from resistance to appreciation, from ignorance to engagement, from being detached to being attached. Their changes not only confirmed “a research experience helps one to be a better student” (Lopatto, 2010, p.29) but also added further evidence to the statement,

*... undergraduate researchers learn tolerance for obstacles faced in the research process, how knowledge is constructed, independence, increased self-confidence, and a readiness for more demanding research. These benefits are an advantage in any career path ...* (Lopatto, 2010, p. 27)

## CONCLUSION

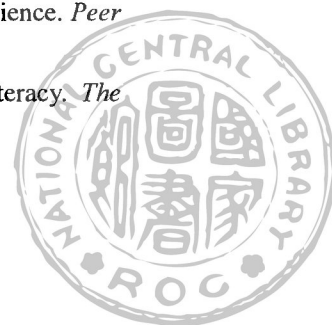
This study investigates students’ perspectives on research paper writing, and the findings show that students benefit from course-based undergraduate research experiences (CUREs) in both professional development and personal growth. The challenges and struggles encountered eventually become a force to push students to move on, if the instruction is clear, if the instructor is supportive, and if the collaboration is effective. It is hoped that the findings help English educators better



design course-based undergraduate research experiences, and encourage English learners to engage in CUREs to better equip themselves for the international academic world.

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# 痛苦或豐收的經歷？ ——從學生的角度看研究論文寫作

李利德<sup>2</sup>

## 摘 要

研究論文寫作已然成為高等教育不可或缺的一環，透過英文研究論文寫作，學生得以與國際學術領域接軌。然而，相較於大量研究探討自然科學領域學生進入實驗室、投入實驗設計、及撰寫研究論文的學習歷程，少有研究著重於社會領域大學生之學術研究經驗，更少有研究深入探討應用外語類科大學生之學術研究經驗。因此，本研究將探究應用外語學系學生對學習英文學術論文寫作的看法，瞭解學生在學習歷程中的困難及是否有任何收穫。本研究之研究對象為43位修習「研究方法」課程之應用外語學系學生。研究資料以學生在修課期間撰寫的反思筆記為主，總共99篇，並進行質性研究內容分析。分析結果顯示文獻蒐集及整合、論文結構、英文學術寫作之語言使用是最大難題。同時，合作關係、責任感、教授的指引與支持是突破困境的關鍵。歷程中，學生體驗專業知識技能的發展與個人性格態度的轉變。期盼此研究發現對英文寫作教育者及以英文為外語的學習者有所助益。

**關鍵詞：**研究論文寫作，大學生學術研究經驗，反思筆記，第一手研究，英語為第二外語學習情境，主修應用英語大學生。

<sup>2</sup>實踐大學應用外語學系專任副教授。

