Graduate Students’ Perceptions of the Problems in Writing Research Articles in English in Higher Education: A Taiwan-based Study

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Abstract

Writing research articles in English has become one of the most common currencies in higher education. In Taiwan, nowadays issues related to writing research articles in English have attracted considerable attention from the Taiwanese government authorities, particularly Ministry of Education, Ministry of Science and Technology, as well as universities, teachers and students. The present study seeks to explore Taiwanese graduate students’ perceptions of the problems in writing research articles in English. Through semi-structured in-depth interviews with 30 students, the findings reveal that the students’ perceived difficulties can be in general categorized into two types. The first type is the subject knowledge in their own field, such as not good at selecting an appropriate topic and reviewing literature well. The second type is related to English language use, such as inadequate command of academic written English and lack of writing skills to develop their articles at levels of lexis, syntax and discourse. Their writing processes are largely influenced by their first language. Despite such disadvantages, they are motivated to remedy the situation as English plays an important role in research writing. In terms of helping graduate students in writing research articles in English, the students in this study suggest that the school should offer more opportunities for them to write academic English. Writing training through a series of related writing courses, workshops and individualized guidance could be beneficial to them. Implications in light of the findings of this study are discussed and concluded.

Keywords: graduate students; perception; writing; research articles; semi-structured interviews; Taiwan
**Introduction**

Graduate student training aims at both expert knowledge in a specific field and the ability of doing and reporting research. Prior to students earning their degrees, especially for doctoral students, they are often required to write and publish some research papers. It has been indicated that academic competence, which is mostly shown by the ability to write and publish research findings in the academic discourse, is critical to the career development of graduate students (Swales & Feak, 2012).

In view of the increasingly global nature of higher education, writing research articles in English has become one of the most common currencies in higher education. In Taiwan, nowadays issues related to writing research articles in English have attracted considerable attention from the Taiwanese government authorities, particularly Ministry of Education, Ministry of Science and Technology, as well as universities, teachers and students. For example, in some universities, publication in international English language journals has become a prerequisite to doctoral graduation. Graduate students often have to prepare not only a thesis but also some publication in international English language journals to fulfill degree requirements. As English has increasingly become the major international language of research and publication, there is a need to explore the problems in writing research articles in English for non-native speakers of English.

In the past, despite the relatively rich literature on graduate students’ perceptions of the problems for writing research articles in English, nevertheless, these studies were mainly conducted with the students either in the Western World such as US, UK and Australasia (e.g., Casanave, 2010; Gazza et al., 2013; Kamler & Thomson, 2014; Paltridge et al., 2012a; Paltridge et al., 2012b) or Hong Kong (e.g., Flowerdew & Li, 2009; Kwan, 2008; Li, 2009; Li & Flowerdew, 2009) where teachers use English as their instructional language, a significant contrast to the teaching context in Taiwan. The problems in a non-English-medium education system or an EFL context where English is not an instructional language are less addressed.

In other words, while there is a considerable literature both on academic writing and the particular nature of developing English for academic purposes, there has been relatively little on this topic from the perspective of aspiring academics seeking to make their mark as a researcher in a non-English-medium education system. Specifically, the core problem being addressed in the paper (i.e. the difficulties of publishing in English journals for graduate students in a non-English medium of
instruction system) is a gap in the literature which this paper aims to fill focusing on the specific case study of Taiwan. More research is needed about how novice researchers, particularly for graduate students handling difficulties and engaging in writing research articles. In addition, research into student experiences can enable teachers to rethink in order to provide students with better writing support. As stated by Leki et al. (2008), empirical studies from a variety of socio-culturally situated contexts enrich the research of academic writing. For all these reasons, the current study seeks to stimulate inquiry into an under-explored field and sets out to investigate Taiwanese EFL students’ perceptions of difficulties and needs for writing successful research articles.

**Literature Review**

**Research Writing for Second Language (L2) Graduate Students**

Research writing plays an important role for graduate students in the academic community. As suggested by Lea and Street (1998), it is of great value to understand diverse student writing practices in academic literacy across the university. Nonetheless, academic writing is far from a natural ability. Centering on student writing difficulties, predominantly for student writers at the stage of writing dissertation, studies have revealed that language usually presented a main problem for L2 students (e.g., Flowerdew & Li, 2009; Kwan, 2008). Chief among them are students writing in English where it is not their mother tongue, language of instruction or language of habitual use, in that there is ever greater competition to publish in reputable peer-reviewed English journals. As stated by Bartholomae (1985), students in the university have to learn “the peculiar ways of knowing, selecting, evaluating, reporting, concluding, and arguing” (p. 134) in writing that define the discourses of the academic community.

With regard to the written discourse, studies have examined student perceptions of writing different parts of research articles. For example, students in Shaw (1991) indicated that while there were various reactions in Literature Review, Introduction and Discussion were the most difficult sections to write. It was reported that students who considered Literature Review easy to write just repeated other people’s ideas in paper writing, while those feeling more difficult in Literature Review tended to be more selective and critical in this section. Concerning Discussion, Bitchener and Basturkmen (2006) suggested that students’ understanding of the role of the part was inadequate, probably because students did not have “macro feedback on the overall
structure and content parameters” (p. 13). This interpretation is in line with Dong’s (1998) and Swales and Feak’s (2012) findings that teachers tended to give more error correction on word usage, grammar and mechanics, while ignoring, to some degree, areas such as rhetorical structure or discourse organization, or other areas of the research such as selecting a topic and reading literature.

In terms of language problems, in Cooley and Lewkovicz’s study (1995) of graduate students at the University of Hong Kong, 50% students indicated having lots of difficulties in writing English. Shaw’s study (1991) also suggested that L2 students were usually concerned about their English language proficiency. Semi-technical vocabulary and choosing the right word for the context were selected as the most difficult areas of research writing, while some students stated their concerns about the use of formal language. Compared with L1 and L2 graduate students, Dong (1998) pointed out that the latter tended to indicate vocabulary as a weak area. As a matter of fact, full-fledged L2 researchers also had difficulties with language (Flowerdew & Li, 2009; Li & Flowerdew, 2009), revealing that the language problem is a widespread concern for many L2 writers.

Successful and Unsuccessful Stories in Research Writing

Casanave (2002) explored how graduate students, both L1 and L2 speakers, dealt with a number of academic writing tasks, such as dissertation writing. Her study reveals that students learned to write successfully partly through carefully following assignment guidelines, and partly through paying attention to their teachers’ written feedback on their papers. These students not only understood the major role that writing played, but also gladly made changes in writing after the study. In Casanave’s (2010) study, she also indicated that the role of graduate advisors is important in helping students face risks in dissertation writing. What graduate students need is not only how to design and carry out their research but also how to present their research in an acceptable standard of English. The consultation between graduate students and graduate advisors is a dynamic exchange that a variety of meanings are negotiated. While Casanave (2002) is a successful survival story, Zhang in Schneider and Fujishima’s (1995) study did not seem to be so. With all his hardworking, Zhang, a Chinese speaker enrolling a number of courses in a US university, failed the graduate course work after a year’s struggle. Potential explanations for the failure included his inadequate English proficiency, little interest in American culture, and inappropriate strategies to solve language problems. Schneider and Fujishima (1995) therefore called for teachers to meet students’ individual needs. As indicated by Fernsten and
Reda (2011), teachers need to help “students in meeting the challenges of academic writing more effectively” (p. 171).

In Taiwan, although writing research papers in English is gradually becoming a requirement for graduate students in a number of universities, nonetheless, it often places an additional burden on them due to their lack of writing experiences and English proficiency. For graduate programs in Taiwan in general, in addition to some credit-bearing subjects, such as ‘Thesis Writing’ and ‘Advanced English Writing’, students often do not need to take any other English or writing courses. In view of this, to ensure that students are provided with the best possible start in graduate programs, it is crucial to understand graduate students’ experience in the learning of research writing. With this purpose in mind, this study set out to investigate graduate students’ experience in research writing in English, with a specific focus on their major concerns and difficulties encountered in the research and writing process, as well as their perceived needs in research writing support in an EFL context, Taiwan. As suggested by Woodward-Kron (2007), “more research is needed in different teaching contexts and at various stages of students’ writing in order to provide a greater understanding of the writing support” (p. 253).

Research Method

The present study aims to explore Taiwanese graduate students’ perceptions of the problems in writing research articles in English. The purpose of the study was twofold: (1) to identify difficulties encountered by Taiwanese graduate students writing research papers; and (2) to make recommendations that address Taiwanese graduate students’ writing needs so that it may make them feel confident and become lifelong writers in English. It seeks answers to the following questions:

1. What are Taiwanese graduate students’ perceptions of writing research articles in English?
2. What are their problems of writing in English?
3. What are their needs for writing successful research articles?

Data Collection

In this study, semi-structured in-depth interviews of between 1 and 1.5 hours were conducted with 30 Taiwanese EFL graduate students, who attended doctoral and master’s programs across a range of different disciplines, including linguistics, economics, sociology, psychology, business management, civil engineering, electrical
engineering, and life science from five academic institutions in Taiwan. The interviews, conducted in the students’ first language (Mandarin Chinese), were carried out in university classrooms. All the interviews were audio-recorded, with the students’ consent.

The purpose of the interviews sought to find out what challenges graduate students experienced and how they coped with the challenges in writing research papers in English. The format of interviews consisted of three parts. The first part was demographic information, including fields of research and experience in English academic writing. The second part focused on academic writing difficulties encountered by graduate students in language, content development, organization, structure, and writing different sections in a research paper. The third part involved graduate students’ perceived needs for help during the academic writing process. Open-ended explanatory questions were used for graduate students to reflect on the role of English in their academic writing and their perceptions of the possibilities and limitations for their attempts in writing English articles. The interview questions, designed to address the three research questions presented above, are listed in Appendix 1.

Data Analysis

The data analysis was a trial-and-error and continuing process. In this study, from the data collected, the major points were first identified and marked with different codes, which were from the interviewees’ transcription. Coding was open and all the data were coded in order to find out the concepts line by line and how they could be categorized. The concepts were then compared and contrasted back and forth when data were coded further, and at the same time combined into different concepts, and finally modified, sharpened and renamed. Based on the groups of similar concepts, categories were established, which were the beginning for the generation of an explanation of the data in research (Kelle, 2005). The stopping point was finalized when there was no emerging category anymore.

Three main categories in the present study were students’ perceived difficulties in the subject knowledge, students’ perceived difficulties of the problems in English language use, and students’ perceived needs in research writing support.
When the data in an interview were reported in this study, they were indicated by the pseudonym of the interviewee, e.g., student 5. Table 1 provides coding categories, number of occurrences, and a small sample of the raw data coded (in both English and Chinese).

Results

The following three main categories resulting from the transcription and coding of student responses in the interview data showed students’ perceptions of the problems in writing research articles in English in higher education in different aspects.

Students’ Perceived Difficulties in the Subject Knowledge

Selecting a Topic

When asked to name their concerns about research writing, all the students pointed out that topic selection was one of their major concerns. They tended to hold a similar view as to what could be considered a good or worthwhile research topic. Creativity or originality is important in selecting a topic. For instance, a representative example given by student 13 is as follows:

"In light of the current trend for students to write and get published in international journals, such as journals listed on Sciences Citation Index and Social Sciences Citation Index, I need to be creative in selecting my topic. In other words, I need to have something new or original in my research writing. Nonetheless, I know it is usually not easy. (student 13)"

Her saying of “something new or original” was further explained by her later remarks: “Probably I can try some unconventional, but still acceptable topics. Searching different ideas can help in my thinking.” Similarly, student 5 wanted her research writing to be different from others. Referring to her future work, she articulated her concern that her research may turn out to be not significant:

"There are many research articles around. I am thinking is it possible that I can write something that makes a difference? I do not want my research to be merely another thesis or research article. For instance, in the school I pass the oral defense and get the degree. That is all of it. My thesis still sits unnoticed and quietly on the bookshelf in the school library. Or, if my research article gets"
published, only a few researchers notice it. I regard an innovative or significant research topic as the most important factor in research. (student 5)

In view of this, student 5 would like her thesis and research article to make an impact in the future. An innovative or significant topic can play an important role. She further elaborated that she would first explore the previous literature and see if the topic was already well-researched. She noted: “If it has been already well-researched, it may not be worth spending my time and effort on it.” Nevertheless, it is noted that the students in different disciplines may perceive differently in topic selection. A typical example is as follows:

I think that graduate students in natural sciences generally undergo less difficulty in selecting a research topic since research is usually part of a team project. However, those in humanities and social sciences are in general less constrained on research topics either for course-based or thesis research, but this freedom may create uncertainty or even perplexity concerning what is the genuine meaning of a legitimate, feasible, or significant research topic. (student 26)

**Reviewing the Literature**

Following topic selection, reviewing the literature presented another challenging task for these graduate students. In the present study, the students indicated that they had little experience in searching and reviewing the literature. They stated that their past English writing instruction required them to write mainly personal narratives rather than research-based articles. Particularly before entering a university, their English writing often centered on personal or trivial topics.

In addition, despite the fact that university libraries in Taiwan are generally well-equipped, English language books and articles are still less available, given that English is a foreign language. All the students complained about the limited sources available. For instance, student 15 indicated that the library collection at the university was quite small. While some articles could be downloaded directly from the Internet, others were not available online. In some cases, students had to pay money in order to read an article, but the option was often regarded as a luxury that most students could not afford. Finally, after the students successfully got sources, a majority of which was written in academic English, reading and synthesis were another great hindrance. Student 2 expressed frustration in this part:
There are many articles and books. I need to read and synthesize the information in them. My reading speed is slow. I need to paraphrase and summarize, and write in my own words. I need to get the major points. It is usually not easy for me. Especially the articles are written in academic English. (student 2)

This comment delineates the anxiety experienced by graduate students undertaking the literature review. For novice researchers, such as graduate students, reading and synthesizing a huge amount of literature can be overwhelming and may even be frustrating.

**Students’ Perceived Difficulties of the Problems in English Language Use**

Other than students’ perceived difficulties in their subject knowledge, they also pointed out problems in English language use. Most of them had problems in the use of vocabulary, grammar and discourse organization, and were worried about writing academic English. Some of the representative examples are given as follows. For instance, student 1 showed anxiety and was concerned about academic vocabulary and its usage in English. She said:

In view of the growing global power of English as a research lingua franca, English as foreign language students are generally disadvantaged in global research games, especially for those coming from non-English medium of instruction systems. For me, English writing is much a source of pressure. I am not able to articulate my thoughts well and do not think that I can write fluently due to my lack of vocabulary. My English writing is sloppy. I consider using appropriate and correct academic vocabulary a difficult part in writing a research paper as it not easy for me to master. (student 1)

Based on the interview data, to some extent she lacked confidence and was conscious of her inadequate command of academic English writing. She tended to reveal her alertness to the issue of lack of vocabulary. In addition, when writing in the academic community, she may need to learn how to write like an academic and use formal English rather than colloquial or conversational English, such as using casual words like ‘stuff’ and ‘things’ and phrases like ‘a bit’ and ‘sort of’ in writing assignments.

Second, aside from the problem of insufficient vocabulary and its usage, limited grammar knowledge is also a concern:
My advisor said that my writing is sometimes grammatically incorrect. He recommended that I should read more academic books and journal papers to enhance the use of not only vocabulary but also grammar correctly. (student 13)

This excerpt indicates that she was reminded of the grammar issue during the meeting with her advisor, which may suggest that she should be sensitized to grammar in writing research articles in English and need to cultivate a habit of reading extensively in academic books and journals in order to familiarize herself with the use of vocabulary and grammar in the academic milieu.

Finally, although the students acknowledged the importance of discourse organization in writing research articles in English, they all seemed to have problems with it. For instance, student 2 said: “After I have a rough draft, if the professor says there is a problem with the discourse organization and the article is not structured clearly and logically, I need to make revisions accordingly.” Similarly, student 23 regarded discourse organization as a difficult part to master: “I need to know the functions and rhetorical moves of different sections in research articles. For example, I need to refer to a number of sample writings and therefore have an idea of what the discourse organization is like.”

Students’ Perceived Needs in Research Writing Support

For students’ perceived needs in research writing support, in terms of their top choice, half of the students stated that the school should offer more regular academic writing courses as they needed instruction in research writing. For example, student 4 hoped for more writing courses particularly on academic vocabulary, one of her major concerns about research writing. Student 13 also mentioned that she would like to take more writing courses, suggesting that the university could offer more writing opportunities, which she explained, would result in better writing: “I feel that I a bit get lost in the research world. When I have more opportunities to learn how those experienced researchers write for journal articles and to write a lot in the course regularly, I will most likely make improvement in writing.”

While some students such as student 4 and student 13 indicated the need of support through writing courses, the other students (30%) tended to prefer short-term writing workshops rather than long-time or regular writing courses mainly due to time consideration and flexibility. For instance, student 5 said:
Universities can hold a series of writing workshops to improve the skills of student researchers with the aim of getting their work published in journals and books. Primarily because of time consideration and flexibility, I prefer short-term writing workshops. I can select writing topics that I specifically need in a series of writing workshops, such as focusing on academic vocabulary, grammar and discourse organization. (student 5)

Student 8 stated:

I appreciate the need for, and help from, instruction in English academic writing. Every writer has his/her own weakness. In particular I am likely to make certain errors in English writing due to the transfer from Chinese. The issue of poor writing may perhaps be partly solved with the academic writing support from the school, such as holding a series of workshops in different specific writing topics. (student 8)

As evidenced in the interview data, they longed for more short-term writing workshops focusing on a range of writing topics due to the reason that compared with writing courses, the time of workshops is more flexible and they can address her specific academic writing need at hand. Their explanations also revealed that it is not easy to write in another language due to the transfer from Chinese, particularly if the result of not mastering in that language affects one’s chances of getting the work published in journals and books.

Still the other students (20%) preferred individualized writing guidance mainly because they wanted to have tailored feedback. For example, having taken all the required writing courses and most of the workshops provided at the university, student 12 currently looked forward to individualized feedback and more personalized instruction:

I need individualized writing guidance. For instance, in method and results sections, I need to know if I use the correct method to analyze, as well as if I interpret data and discuss the results appropriately. I wonder whether there is something that I can follow, like some kind of one-on-one guidance that can assist me how to write different sections well in a research paper. (student 12)
Discussion

The results in the present study can be interpreted as follows. First, it can be inferred that if the research is not able to make a difference, it may not be worth researching. The research should be able to contribute to society as a whole. These students’ concern with a research topic may also reveal their attempt to make sense of the research culture that they were entering (Kamler & Thomson, 2014). On top of that, based on the interview excerpt, for example, as indicated by student 26, it suggests that compared with students in natural sciences where their research is often part of a team project, students in the field of humanities and social sciences may need more help and guidance with the topic decision from others, such as thesis advisors to help them choose an appropriate topic which is genuinely worth researching.

Second, in term of reviewing the literature, Taiwanese EFL learners generally have little research writing experience before their master’s or doctoral studies. Therefore, for graduate students, reviewing the literature – a task that involves skills such as searching sources, integrating and synthesizing ideas and theories – is often an entirely new experience and constitutes a huge task. In addition, whilst many of them were motivated to use library resources provided by their university because of their need in writing, they reported that the university did not have a good stock of English language books and articles as well as did not offer good demonstrations of electronic database search geared towards their specific disciplines when they were searching the literature.

Third, in the present study the students indicated that in vocabulary, grammar and discourse organization, Chinese writing is quite different from English writing. There may be several reasons to explain why the transfer of Chinese poses problems for them when writing English. The first major reason is their confusion of specific word or phrase usages. They may not express their thoughts with correct words or phrases. Another reason is that they have insufficient understanding of English grammar rules and are not aware of differences between Chinese and English. Moreover, in terms of discourse organization, transfer of the induction structure, from specific to general may be a text logic found in Chinese students’ English writing. Compared with English discourse organization which is often considered linear, in the eyes of English speakers, Chinese students’ thoughts or patterns in English writing may be regarded as being organized in an indirect way (Connor et al., 2008; Swales and Feak, 2012). As suggested by Paltridge et al. (2012b), the discourse organization remains “stabilized for now in terms of its social action and purpose” (p. 332).
Fourth, contrary to Casanave’s (2010) and Woodward-Kron’s (2007) findings which show the important role of graduate advisors in helping students to face risks on account of the formulaic styles of dissertation writing and scaffold their academic writing, in the present study, in Taiwan where English in most cases is graduate advisor’s and students’ foreign language, graduate advisors may not be of great help in helping students’ academic writing in English, such as in the areas of vocabulary, grammar and discourse organization. On the other hand, the present study reveals that students’ perceived top needs in research writing support are writing courses, writing workshops, and individualized writing guidance.

Finally, concerning the need for academic writing support, students may have a rich knowledge in their field of study. Nonetheless, they still need assistance to apply the knowledge, particularly in cases where their first language is very different from that of English. Based on the interview data, to facilitate students’ academic writing, they need support not only in content but also in language.

**Implications and Conclusion**

The present study set out to explore graduate students’ concerns, their difficulties and perceived needs in research writing in Taiwan. The findings indicate that subject-knowledge related issues such as selecting an appropriate topic and reviewing the literature well were all the students’ concerns about research writing. When reviewing the literature, the students faced difficulties such as resource constraints in English, problems with using sources in English, and difficulties with synthesizing and integrating information from various sources. In addition, regarding language use, they experienced difficulties at the levels of lexis, syntax and discourse organization in research writing. Due to these persistent problems in writing, when compared with native speakers, the students considered themselves disadvantaged.

Despite such disadvantages, they were motivated to remedy the situation due to the reason that English played an important role in research writing. More specifically, their inclination to learn to write research articles was influenced by their perceptions of the need to learn and improve the academic writing skills necessary for scholarly publication. On the level of pedagogy, the present study advances our current understanding of how Taiwanese graduate students learn to write in the academic community. It reveals the importance of the awareness of university policy makers and teachers of English for academic purposes concerning the potential discrepancies between students’ needs for effective language support and universities’ actual
language affordance. This prompts university policy makers and teachers to reflect critically on their planning, preparation and delivery of relevant courses so as to meet these students’ expectations through research writing in English.

Finally, in terms of writing pedagogy, teachers can use a contrastive rhetorical approach to teaching English writing (Kubota, 2010). For instance, teachers and students can brainstorm and collaborate with each other to build a cross-linguistic and cross-cultural understanding of English and Chinese writing traditions. The teacher can ask students to share some important features of their writing traditions, illustrating with a model research paper. This kind of writing exercise is without making true or false presupposition and gives students an opportunity to see how native English speakers write in their own language. After that, the teacher and students can discuss the differences and similarities between English and Chinese writing traditions. By comparing and contrasting Chinese and English, such as academic writing conventions is a useful exercise to help students to learn a language in another culture, particularly for college and graduate students who are beginning to write research papers.
References


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**Appendix 1**

**Interview Questions**

1. What do you think about the role of English writing at your university?
2. What do you think about your level of English writing proficiency?
3. Would you please illustrate your experience in writing research articles in English?
4. What are similarities and differences when you write research articles in English and Chinese?
5. In writing English and Chinese papers, which part(s) of the paper are the easiest/most difficult for you? Why?
6. When compared with native speakers, do you feel at a disadvantaged position in writing research articles in English?
7. Do you have any personal problems in writing English papers? If yes, in which aspects?
8. Do you think you would write ‘Chinese English’? If yes, can you specify and give me some examples?
9. What are your strengths and weaknesses in writing English papers?
10. Do you have any strategies that can make your English papers better?
11. How do you improve and revise your English papers?
12. What are your needs for writing successful research articles?
13. If you have any problems or obstacles in writing research articles in English, what would you do?