

Discovering Emerging Research in a Qualitative Study of ESL Academic Writing

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This article focuses on the complexities of the qualitative methodology employed in my doctoral study of the academic writing experiences and perceptions of Chinese graduate students in sciences and engineering at the University of British Columbia. In particular, I explain the emerging nature of the study by relating how and why I repeatedly revised the research questions, modified the research locations, re-selected the participants, adjusted the data collection methods, and amended the data analysis coding system. The study concludes that research designs should be elastic to accommodate the dynamic and emerging nature of qualitative studies. Key Words: Multi-Case Study, ESL Academic Writing, and International Graduate Students

Introduction

Background

Large numbers of students from Mainland China are pursuing graduate studies in English-speaking countries and many of them study at the doctoral level. For instance, according to its Faculty of Graduate Studies, in January 1997, the University of British Columbia (UBC), Canada had 251 Mainland Chinese graduate students, the largest English-as-a-second-language (ESL) graduate geographic group, representing 19.6% of the total international graduate enrolment, which in turn represented 20% of the graduate population at the institution. Among the 251 students, the majority (54.6%) were pursuing studies at the doctoral level.

Academic writing in English at advanced levels is a challenge for most native English speakers. However, it becomes particularly difficult for ESL graduate students who come from non-Anglicized linguistic and cultural backgrounds, in particular, Chinese graduate students (Michailidis, 1996; Zhu, 1994). Survey research shows that Asians in North American universities experience more difficulty in writing than other student groups (e.g., Europeans; Casanave & Hubbard, 1992; Crowe & Peterson, 1995). In one survey, writing was perceived by almost all the ESL graduate participants (mostly Asians) to be their greatest difficulty (Burke & Wyatt-Smith, 1996). One reason for such difficulty is the vast difference between their native languages and the target language, English (Kaplan, 1966; Silva, 1992, 1993), between the English they previously learned, emphasizing structural knowledge, and the English required for academic writing (Hu, 1993; White, 1998), and between their native cultures and the target culture (Ballard & Clanchy, 1991; Bloch & Chi, 1995; Cadman, 1997; Fox, 1994; Huxur, Mansfield,

Nnazor, Schuetze, & Segawa, 1996). Furthermore, while a university student is "inducted" into a particular discipline through lectures, discussions, readings, and laboratory work, it is through written assignments that the success of his/her academic performance is most commonly judged (Leki & Carson, 1994; Norton & Starfield, 1997). In fact, these academic and cultural challenges were so stressful that they contributed to the suicide of at least three Chinese graduate students in 1997, two at the University of British Columbia, and one at Harvard University.

As the number of international graduate students has risen rapidly and their academic problems have become more pronounced, researchers have noticed the need to study advanced levels of disciplinary literacy, particularly in graduate schools (Huxur et al., 1996; Prior, 1991; Swales, 1990). The most noteworthy was perhaps Swales, who studied academic writing of graduate students in sciences and engineering. However, his research and that of his colleagues (Swales & Feak, 1994) tend to emphasize discourse analysis of the written product rather than analysis of the writing process. As de Beaugrande (1984) advises us, a text as the outcome of procedural operations cannot be adequately described or explained in isolation from the procedures which humans use to produce and receive it. Thus, a study of the writing processes of ESL graduate students in sciences and engineering should enable us to learn more about the writers, how they proceed in writing, what challenges they encounter, and how they overcome or fail to overcome the challenges. In addition, my previous experience in China teaching English reading and writing to science and engineering graduate students, from February 1983 to July 1985, stimulated in me a deep interest in, and curiosity about, how Chinese graduate students in sciences and engineering attempt to write English academic assignments in Canada. Finally, as a doctoral student of TESL (teaching English as a second language) with a special interest in grammar and writing, I had been troubled by the ubiquitous language errors I noticed in the emails posted daily on the email list of Chinese Students and Scholars (CSS), the lifeline for the Chinese community consisting mostly of graduate students like myself at UBC. I was interested to find out how students writing such English were dealing with writing in academic programs. As Merriam and Associates (2002) point out, a research study begins with our being curious about something related to our work, our family, our community, or ourselves.

Outline of the Study

From 1997 to 2000, I conducted a qualitative doctoral dissertation study of the academic writing processes and challenges of 15 Chinese graduate students in sciences and engineering at UBC (Hu, 2000). Data collection for the study started in January 1997, when I began inquiring into ESL support facilities at UBC, and ended, for the most part, with the last interview on April 8, 1998. The initial stage (01/1997-06/1997) aimed at understanding the larger social context and locating a specific academic unit at UBC as the potential research site. The following main stage had two sections. The first section (08/1997-09/1997) focused on two pilot Chinese doctoral students in Wood Science at UBC, in order to pre-test and refine the research questions, methods, and interview guides. Das (2006) used a similar procedure and Janesick (2003) calls such activities "stretching exercises" (p. 58).

The second section (09/1997-04/1998) was devoted to collecting data from 13 other Chinese graduate student participants. A follow-up of the study (02/1998-03/1998) was designed to obtain another perspective on Chinese graduate students' academic writing from seven faculty and staff members by means of interviews. Though the data collection was completed for the most part in a limited time, the study did not cease as I wrote up the dissertation. I continued observing ESL support facilities at UBC, checking with participants regarding my questions about and interpretations of the data, and refining my coding system for analysis (Glesne & Peshkin, 1992). In fact, the completion of my dissertation did not mean the end of my research. As Wolcott observes, "perhaps qualitative studies do not have endings, only questions" (cited in Creswell, 1998, p. 20).

Outline of the Article

As the study evolved, I encountered many surprises. Some were exciting; others were anything but. However, all demonstrated what I discovered to be the emerging nature of qualitative research. In this article, I reveal the emerging nature by presenting how and why I repeatedly revised the research questions, modified the locations, re-selected the participants, adjusted the data collection methods, and amended the coding system for data analysis. The changes made during the process constitute what is also known as aspects of an evolving design (Creswell, 1998; Das, 2006). Immediately following the research questions, I provide a rationale for adopting a qualitative multi-case study approach. Finally, I reflect on the study process and offer suggestions for qualitative study designs.

Research Questions

The Problem

Despite the vital importance of disciplinary writing (i.e., writing for disciplinary courses) for academic success for university students in North America, research on such writing by ESL graduate students had been only a fairly recent phenomenon (Casanave, 1995; Connor & Kramer, 1995; Fox, 1994; Leki, 1995; Prior, 1991, 1995; Riazi, 1995; Silva, 1992). However, most of these studies chose to focus on ESL writing in humanities and social sciences (HSS), which was claimed to be highly complex and culturally challenging (Cadman, 1997; Casanave & Hubbard, 1992). Less research had studied how ESL graduate students in sciences and engineering undertake writing in their disciplines, which was theorized as having unique processes and challenges (Braine, 1989, 1995; Casanave & Hubbard). To contribute to this body of knowledge, I explored in my dissertation research how some Mainland Chinese graduate students in sciences and engineering at UBC completed their disciplinary writing assignments. In particular, I explored how these students approached their written course assignments and research proposals, how they composed the texts, and how they felt about the writing experience.

Research Questions

Strauss and Corbin (1990) and Pandit (1996) suggest using literature on the general problem area to derive initial questions to get research started. The literature that seemed most relevant for my initial research proposal to study Chinese doctoral students of forestry science in disciplinary writing included studies such as Casanave (1995), Leki (1995), and Riazi (1995), who drew participants from humanities and social sciences, and Norton Peirce (1993) and Norton (2000), who explored identities of adult immigrants in Canada. Partly inspired by these studies, in my dissertation research proposal and the two pilot cases (Ming & Ting, see Table 1) that I studied in August-September 1997, I proposed the following questions:

1. How do the Chinese doctoral students represent or interpret their disciplinary course writing tasks?

Sub-questions: (a) What are the instructors' goals and rationales for the writing assignments? (b) How do the students perceive the tasks? (c) Do the students negotiate the tasks with their instructors? If so, how?

2. How do the Chinese students undertake the writing?

Sub-questions: (a) What resources do they utilize? (b) What strategies do they adopt? (c) How do their prior linguistic, academic, and cultural experiences influence their writing, including the process and product? (d) What problems and needs do they find in their writing attempts?

3. How do the students react to faculty response?

Sub-questions: (a) How do the faculty respond to the students' writing? (b) How do the students react to the responses?

4. How do the students perceive their cultural and social identity change when writing the assignments?

Sub-questions: (a) What are the changes they perceive in their identity, both cultural (e.g., Chinese vs. Western) and social (e.g., teacher, researcher, ESL student)? (b) How do they feel about the changes?

After the pilot study of two cases, I found that the participants did not have much to offer regarding issues such as instructors' rationale for assignments, faculty response, and identity change. Many faculty members gave no or little feedback on the students' assignments. Some even did not bother to return students' papers. Unlike the students of humanities and social sciences in Casanave (1995), Leki (1995), and Riazi (1995), my student participants in this study did not find socialization to be very meaningful to them, for they tended to socialize with Mandarin-speaking Chinese student peers rather than Canadians or peers from other countries. In this sense, it might not be a highly significant phenomenon for me to investigate.

So, while still maintaining my interest in exploring students' response to faculty feedback, I removed the question as a major research question, and instead went to the faculty with questions such as why some of them did not provide feedback (see below). Thus, it is also true that while the research questions I had asked guided my data collection and analysis, the former did not control the latter. In "inquiry-guided"

(Mishler, 1990) research, "research questions and answers evolve[d] in a mutually informative, dialectical manner" (Ramanathan & Atkinson, 1999, p. 53). As Strauss and Corbin (1990) remind us, the initial questions may change after the first interviews or observations. Creswell (1998) also indicates that our questions are modified during the process of research to reflect our increased understanding of the problem, and that an evolving design is a fundamental characteristic of the qualitative approach. In fact, questions in qualitative studies are "under constant revision and are continually taking new shapes" (Janesick, 2003, p. 54). Hence, I shifted my research focus from faculty-student interaction, or socialization, to writing process, and narrowed down the writing to course assignments and research proposals, which represented typical short-term formal student disciplinary writing and were manageable in my research time frame. In other words, the study started with a purpose to verify the questions and findings reported in earlier studies, mainly in humanities and social sciences. However, as some of the questions did not fit my science setting very well, the study turned to become primarily exploratory.

The revised purpose of the study was now to explore how Chinese graduate students completed the written assignments required by their academic programs, in particular, course assignments and research proposals. This question broke down as follows:

1. What kind of written course assignments and research proposals must the Chinese students complete? What are the faculty expectations and feedback?
2. How do the Chinese students try to complete the written assignments?
3. What challenges do the Chinese students encounter?

Qualitative Multi-Case Study

The study took a qualitative approach to research, aiming to uncover an emic (i.e., research participants') perspective and interpretation of the participants' experiences in natural settings. When addressing narrative inquiry, Larson (1997) observes that

narrative researchers assume that people who live these lives can help us to understand these growing concerns [problems in schools]. When we understand circumstances, events, or conflicts from other people's perspectives, we can identify and implement better strategies for addressing these problems. (p. 455)

This observation can also apply to my study. Furthermore, Flowerdew (1999) asserts that "qualitative research methodology is particularly suited to studying culture-specific phenomena, which, of course, are best investigated by people from the cultures being studied" (p. 260). Based on research such as Bogdan and Biklen (1992), Creswell (1998, 2007), Denzin and Lincoln (1994), Eisner (1991), Flowerdew, Janesick (2003), Larson (1997), Marshall and Rossman (1999), Merriam (1988), and Norton Peirce (1995), I summarize the characteristics of qualitative research as follows: (a) an interpretive, naturalistic approach to the subject matter; (b) a primary concern with

process; (c) an interest in exploring participants' meaning and understanding of their own experiences and structures of the world; (d) the researcher as the primary instrument for data collection and analysis; (e) an evolving design; (f) an involvement in fieldwork by the researcher actively visiting participants and the situation to observe/record behavior in its natural setting; (g) studied use and collection of a variety of empirical materials; (h) a description of the process, meaning, and understanding in a narrative, expressive, and persuasive style; and (i) an inductive approach to build abstractions, hypotheses, or theories. These characteristics directed my study and reveal themselves in the rest of the article.

In conjunction with a qualitative approach, the study adopted a multiple case study design. Johnson (1992) notes that the questions that motivate case studies often arise out of knowledge gaps or discontent with currently accepted explanations for phenomena. In my study, the motivation stemmed from a combination of these two factors. The knowledge gap was the shortage of research on the academic writing experiences of Chinese graduate students in sciences and engineering by researchers who shared the native language and cultural backgrounds of these students. Also, I was not content with the view of socialization embodied in the "novice-expert" and "discourse community" metaphors (Swales, 1990). This view regards the ESL graduate student as the novice and the professor as the expert. The novice learns knowledge, values, and beliefs of the discourse community from the expert in a one-way model of enculturation (see Casanave, 1995) and then becomes a member of the community sharing the same knowledge, values, and beliefs as other community members. This view pays little attention to the conflicts, tension, and differences either between the ESL student and the context (Atkinson, 1997; Cadman, 1997; Fox, 1994; Myers, 1998; Pennycook, 1996a, 1996b; Silva, 1992) or within the student him/herself on ideological, cultural, and linguistic grounds (Cadman; Canagarajah, 1993; Shen, 1988; Thesen, 1997). My own observations of many ESL graduate students and readings (e.g., Atkinson, 1998; Casanave; Ramanathan & Atkinson, 1999; Thesen) suggested that the view does not conform to reality.

Additionally, Merriam (1988) states that a qualitative case study can provide investigators with an in-depth understanding of a problematic situation, and its meaning for those involved. The problematic situation for my study was the juxtaposition of Chinese graduate students experiencing great challenges in academic writing and the lack or inadequacy of language support from both faculty and the institution as a whole. Merriam asserts that the case study approach is often the best methodology for addressing problems in which understanding is expected to lead to improved practice. Yin (1994), on the other hand, states that case studies are the preferred strategy when the investigator has little control over events, and when the focus is on a contemporary phenomenon whose variables are impossible to separate from their context. As I aimed to explore issues involved in the academic writing processes of individual Chinese graduate students in natural settings with the ultimate goal to improve the education of Chinese graduate students in academic writing, a qualitative case study was an appropriate design. In fact, Zamel (1983) claims in her classic study of advanced ESL students that case study is "the most effective way to examine the writing process" (p. 169).

Furthermore, Stake (1994) distinguishes between an intrinsic case study, performed because of intrinsic interest in the case, and an instrumental case study, in

which a case is examined to provide insight into an issue or refine a theory, while the case itself is of secondary interest. As an extension of the latter, researchers may conduct a collective case study by examining a number of cases jointly, in order to inquire into the phenomenon or population. Yin (1994) calls this a multiple case study (see also Creswell, 1998). Multiple cases may uncover multiple realities (Kuzel, 1992) and therefore, better illuminate the questions, leading to better understanding, perhaps better theorizing, about a still larger collection of cases (Stake). My study sought insights into the academic writing processes of Chinese graduate students in sciences and engineering. As each case might be different, examining multiple cases was expected to generate richer insights into, and better understanding of, the issues involved in the writing processes without losing the necessary depth. On the other hand, new factors often emerge during a study, demanding more or different cases to be included (Silverman, 2005). This happened several times in my study (see the following section for details). In conclusion, the qualitative multi-case study approach provided me with both the depth and breadth necessary to address the research questions.

Location and Research Participants

Qualitative research requires theoretical sampling, that is, selecting samples or cases which are relevant to research questions and which have the potential to provide rich information for the questions, and in particular, for the explanation or theory we seek to develop regarding the questions (e.g., Kuzel, 1992; Mason, 1996; Silverman, 2005). In order to find relevant and interested student participants to address my research questions, I had to adjust the location and re-select the participants several times. Initially, I intended to collect data from six first-year doctoral students in one department, following work by Casanave (1995), Leki (1995), and Riazi (1995). I chose Wood Science because with 12 Chinese doctoral students in summer 1997, who were supposed to write considerably in the program, Wood Science appeared to be an ideal location. Therefore, I conducted a pilot study and interviewed two first-year doctoral students (Ming and Ting) of Wood Science during August to September 1997, which I called Section 1 of the main stage of my study.

In September 1997, I started to recruit participants for Section 2 of the main stage of my study. In case some participants should quit the study, I planned to recruit six to ten new first-year doctoral students who had come directly from Mainland China. In order to maximize the possibility of recruiting such a number, I expanded the scope of my participant source to the whole Faculty of Forestry, which included Forestry Science and Forestry Management as well as Wood Science.

I decided to study doctoral students rather than master's students because the great majority of Chinese students in the Faculty of Forestry were doctoral students, providing me more chances to find desired participants. I decided to focus on first-year doctoral students because international ESL students typically face more problems at the early stages of their study in a foreign country (Huxur et al., 1996; Perrucci & Hu, 1995). During this period they experience culture, environment, and language shocks most strongly, so they need understanding most, and for that reason, offer the best opportunity for research (Stake, 1994) or theoretical sampling (e.g., Silverman, 2005; Strauss & Corbin, 1990).

However, the Faculty of Forestry did not enroll a single graduate student from Mainland China in fall of 1997. This surprise was due partly to the increase of international graduate student tuition and partly to the lack of spaces for new international graduate students, as I learned later from the head of the Department of Wood Science. The zero enrolment forced me to change decisions regarding participant recruitment and to search beyond the Faculty of Forestry.

After contacting several new Chinese doctoral students in sciences and engineering who were introduced to me by the Chinese Students' and Scholars' Association, or who came to the Spoken English Tutorial Program for which I was a tutor, I found that most of the new doctoral students either had little required writing to do or were too busy to commit themselves to my study. I ended up with only one doctoral student from Botany. However, some new master's students whom I met at the Spoken English Tutorial expressed interest in being interviewed. As I already felt that new students might not have much academic writing experience to share, I decided to recruit six additional "old" students who: (a) had come from Mainland China (directly or indirectly), (b) had been studying in either a PhD or master's program at UBC for at least six months, and (c) had done or were doing considerable writing for their course work. By "considerable writing," I meant at least two term papers, or one term paper plus some other minor assignments such as lab reports, during one semester. These participants were from several science and engineering departments such as Electrical Engineering (EE), Botany, and Metals and Materials. I included 12 participants, in the event that some might drop out of the study. However, after the first round of interviews, I had to abandon the new students because unlike the participants in Casanave (1995) or Leki (1995), they typically had very little writing to do for the courses they were taking during their first term at UBC. One participant told me her advisor deliberately allowed her to postpone her written assignment for her directed study because she was having language difficulty. Since these new students had just started their studies in Canada, they had had very little writing experience to talk about. It was clear that they would not be able to supply much of the information I needed for my study within the time I planned for my project. So in order to collect rich data for my study, while retaining the six old students: Ling, Feng, Ning, Ping, Qing, and Xing (see Table 1), I recruited six more of the "old" category: Hang, Ding, Wang, Kang, Bing, and Ying (see Table 1). As Strauss and Corbin (1990) observe, "The specific sampling decisions evolve during the research process itself" (p. 192).

Zong came to my study through special circumstances. Unlike any of the 14 student participants I had interviewed, Zong was highly recommended to me for his exceptional academic success by a faculty member in Wood Science who I interviewed during the study follow-up (see below). Zong was now a shining young scientist at a research institute on UBC campus. Deeply intrigued by his success in graduate studies, I decided to include him in my study even though he was no longer a student. Thus, my study evolved even further, unexpectedly. Just as Janesick (2003) observes, "One interview may lead the researcher to find out that another individual may become part of the study for one reason or another" (p. 50). As it turned out later, Zong was a special case of success. He entered the graduate program barely meeting the TOEFL (Test of English as a Foreign Language) requirement, but finished it with an offer of a faculty

position at a Canadian university, and then another offer as a research scientist. His case represented an ideal theoretical sample.

Table 1

Student Participants

NAME	PROGRAM	MAJOR	ENTRY TIME	GENDER
Ming	PhD	Wood Sci	05/96	M
Ting	PhD	Wood Sci	09/96	M
Ling	PhD	Wood Sci	09/96	F
Feng	PhD	Wood Sci	01/97	M
Hang	MS	Forest Sci	01/96	M
Ning	PhD	Food Sci	09/96	M
Ding	PhD	Animal Sci	09/96	M
Ping	MAS	EE	01/97	M
Qing	MAS	EE	09/96	F
Xing	PhD	EE	01/97	M
Wang	MAS	EE	09/96	M
Kang	MAS	EE	09/96	M
Bing	MS	Resource Eng	09/96	F
Ying	MS	Audiology	09/96	F
Zong	PhD	Wood Sci	09/89	M

Data Collection Methods

Interviewing the Student Participants

I intended to have three interviews with each of the student participants in Section 2, as I had done in Section 1 with the two pilot cases; one on their background, another on their writing experiences, and a third on their writing sample. However, due to the varied availability of their time and writing samples, I had as few as one and as many as five interviews with the participants (see Table 2 below). Although the methods I used for data collection in the second section were largely the same as those adopted in the first section, I had refined the interview guides (see Appendices A and B) to better address the revised research questions. I added another list of questions (see Appendix C) in case I needed them for the final "free talk" I planned to better understand the students and address further questions that occurred to me during my transcription. I had learned from my instructional experience that due to their education in China, most Mainland Chinese students in sciences and engineering would not talk on occasions, such as my interview, unless they were asked questions. Even when questions were posed, they would usually stick to the questions and seldom go beyond to other topics. "Free talk" in

the sense of "talking about anything you like" would not work with most of these students, so I carefully prepared questions in advance of each interview.

From September 1997 to April 1998 I conducted: (a) five individual interviews with five participants each (Hang, Ning, Ping, Qing, & Bing); one based on Appendix A, two on Appendix B, one on Appendix C, and another on the participants' sample writings; (b) four interviews with three participants each (Feng, Xing, & Wang); one based on Appendix A, two on Appendix B, and one on Appendix C; (c) three interviews with two participants each (Ding & Ling); one based on Appendix A and two on Appendix B; (d) three interviews with one participant (Kang); one based on Appendix A, one on part of Appendix B, and one on a combination of the remainder of Appendix B and Appendix C; (e) two interviews with one participant (Ying): respectively based on Appendices A and B; and (f) one interview with one participant (Zong); based on a condensed combination of Appendices A-C (see Table 2).

All the interviews were conducted in the seminar rooms in the Education Building at UBC except in the case of Feng, Ying, and Zong, who preferred to meet me in their offices. Though the participants were given a choice of speaking Mandarin or English, they all chose the latter, with only occasional resort to the former because they wanted to seize the opportunity to practice speaking English. Normally, the interviews each lasted an hour to an hour and a half, but the interview with Zong and the second interview with Ying each lasted two hours. Instead of an interview, Ying had time only to respond to Appendix C by e-mail. The great variety in the number of interviews and use of my interview guides was due to the varied times each participant had available for interviews and their varied degrees of interest and ability to talk. While they all showed interest in participating in my study, some were obviously more passionate and enthusiastic than others. The case of Zong was special: I only intended one interview with him as he was extremely busy. Thus, as researcher, I felt I should respect the needs and interests of the participants within reasonable limits.

Table 2

Interviews with the Student Participants

NAME	NO. OF INTERVIEWS	SUBJECT MATTER	TIME
Ming	1	Appendix A*	1-1.5 hours each
	1	Appendix B*	
	1	Sample writing	
Ting	1	Appendix A	1-1.5 hours each
	1	Appendix B	
	1	Sample writing	
Ling	1	Appendix A	1-1.5 hours each
	2	Appendix B	
Feng	1	Appendix A	1-1.5 hours each
	2	Appendix B	
	1	Appendix C*	
Hang	1	Appendix A	1-1.5 hours each
	2	Appendix B	
	1	Appendix C	

	1	Sample writing	
Ning	1 2 1 1	Appendix A Appendix B Appendix C Sample writing	1-1.5 hours each
Ding	1 2	Appendix A Appendix B	1-1.5 hours each
Ping	1 2 1 1	Appendix A Appendix B Appendix C Sample writing	1-1.5 hours each
Qing	1 2 1 1	Appendix A Appendix B Appendix C Sample writing	1-1.5 hours each
Xing	1 2 1	Appendix A Appendix B Appendix C	1-1.5 hours each
Wang	1 2 1	Appendix A Appendix B Appendix C	1-1.5 hours each
Kang	1 1 1	Appendix A Appendix B Appendix C	1-1.5 hours each
Bing	1 2 1 1	Appendix A Appendix B Appendix C Sample writing	1-1.5 hours each
Ying	1 1	Appendix A Appendix B	1-1.5 hours 2 hours
Zong	1	Appendices A-C	2 hours

* Appendix A refers to a comprehensive background questionnaire.

*Appendix B refers to an interview guide on the participants' academic writing experiences.

*Appendix C refers to a guide for free informal conversation.

In fact, in qualitative research it is not unusual to adjust interview times and methods as required by the circumstances. As Janesick (2003) reminds us, "Because working in the field is unpredictable a good deal of the time, the qualitative researcher must be ready to readjust schedules and interview times, add or subtract observations or interviews... and even rearrange terms of the original agreement"(p. 59). Janesick considers readjustments the "elasticity of qualitative design" (p. 53). Another example besides my study to illustrate the elasticity is Das (2006), in which her interview questions for the teachers evolved from semi-structured to open-ended, so that she could gather richer information about the teachers' views on the school ethos without a pre-determined structure. On the other hand, her approach to observing the school classrooms changed from open-ended for School Case 1, to semi-structured for School Case 2, to structured for Cases 3 and 4, in order for her to manage collating and analyzing the descriptive observation data as an outsider. Even critical self-reflection may lead to

changes in research design and methods used (see Ortlipp, 2008). As is evident, the changes or readjustments typically cannot be planned prior to the study, but emerge as the study unfolds.

Playing Multiple Roles as Researcher

As researcher, I was first and foremost an interviewer, as interviewing was the primary method of data collection. Being a graduate student from Mainland China with Mandarin as my first language (L1), having experienced a culture very similar to that of the student participants, and being in the same age group of 25-40, put me on a relatively equal footing with the student participants. That is one major reason why these participants felt comfortable throughout the interviews and could express themselves mostly in English, their second language (L2). The relatively equal footing, and resulting comfort, afforded me an advantage to develop the rapport and trust necessary for case study and process-oriented research (Stake, 1994). Furthermore, I was a tutor for most of them in the UBC Spoken English Tutoring Program: Also, I assured them that the data collected from the interviews would be kept strictly confidential. For all these reasons, the student participants were very open and frank with their experiences, difficulties, and perceptions, at least as it seemed to me. The tape-recorder did not seem to distract them at all. On the other hand, because I had taught English to other Chinese graduate students of science and engineering in China, and had been in constant contact with the Chinese student community at UBC, orally and by email, I was often able to detect what the students were trying to express when they had difficulty doing so, as shown in this illustration.

X: But maybe at the beginning of the term, the teacher didn't give all these things. Maybe the students are not fully -

J: - aware?

X: aware of the burden, the load.

(Interview with Xing)

As researcher, I was more than an interviewer. In my informed consent form, I promised the potential student participants that in return for their participation, I would act as a resource person to help them with their cultural and academic adjustments. Therefore, I carried over my capacity as spoken English tutor by offering advice to overcome their difficulties. I also offered to proofread papers, which they were writing or revising during my study. I read each paper carefully and made suggestions to correct grammatical, rhetorical, and editorial errors or to improve the structures and expressions. Then, I would meet with each participant and explain how and why I made those suggestions. The participants were very appreciative of my feedback, since they did not often receive much feedback from their faculty. For illustration, I reproduce Ning's salient metaphor.

Sometimes you need feedback. That's very important. Feedback not means you really point out that point. But feedback is in one sense to me

encourage. It's source of energy. No matter whether this is something right or wrong, give me energy, OK? (Ning)

Thus, as "academic consultant" and tutor, I directly participated in the construction of the student participants' academic experiences, albeit to a very limited extent. Furthermore, the interviews served as venues for exploring the participants' academic experiences, in order to reach a better understanding for them and me. In the case of Ning, the interviews provided a foundation for knowledge construction, as illustrated in the following:

N: No, when I talk to you, most like I talk too much. Sometime when I talk, it also organize my thought. Also clear my experience.

J: Clarify your thoughts, reorganize your thoughts.

N: Reorganize my thoughts, yes. Sometimes when something happened, I didn't pay attention to. When I talk to you, it's all things came together.

J: You become more conscious as you reflect on them.

N: Became conscious, became theory, become refined. Become refined experience or refined knowledge or something like that.

(Interview with Ning)

Therefore, as researcher, I sometimes worked with the students as they sought to articulate their ideas.

Interviewing Faculty and Staff

In order to obtain another perspective on Chinese graduate students' academic writing experiences, in February-May 1998 I conducted one-hour follow-up interviews with six faculty members, who were co/supervisors and/or course instructors of the student participants (see Table 3 below). I also interviewed the graduate secretary of Electrical Engineering, who was recommended by a faculty participant for her knowledge about Chinese graduate students (see Janesick, 2003). I transcribed each interview as soon as possible.

Table 3

Faculty and Staff Participants

NAME	DEPT	POSITION	CHINESE GRADS SUPERVISED THEN+BEFORE
Ellis	Wood Sci	Prof	3+3
Irvin	Wood Sci	Prof	3+12
Oates	Food Sci	Assoc. Prof	5+6
Ray	EE	Assoc. Prof	2+6
Smith	EE	Prof	3+11
Adams	EE	Prof	4+14

Vivian	EE	Secretary	NA
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Apart from the interviews, I visited the home pages of all the related programs and faculty participants. These home pages provided me with an understanding of the program requirements and academic contexts for my student participants and points of reference for my interviews with the faculty. In the end, partly because I was under a time restriction and partly because the huge amount of data collected from the students forced me to focus on the student participants, I was unable to include the faculty and staff interview data as a major component of my dissertation. Nevertheless, the data helped me better understand the context of my study and faculty expectations for the students' writing. They also provided me direct faculty perceptions on Chinese students' writing difficulties and even suggestions on what the students should do to deal with the difficulties, and what the university should do to help ESL graduate students with their English in general and writing skill in particular. I incorporated some of the perceptions and suggestions in my discussion of the study findings and implications for policy and practice.

In retrospect, while it is prudent to recruit extra participants in case some might withdraw, it is not always necessary. In my case, additional student participants such as Hang, Wang, and Kang undoubtedly contributed to the abundance of student data, which resulted in the exclusion of most of the faculty and staff interview data in my dissertation. It is true that every case is different, but at some point we need to discontinue expanding sampling for a specific multi-case study unless the case (e.g., Zong) is extremely compelling, relevant, or informative for the research questions.

Adopting Research Logs

As qualitative research is often complicated and needs to collect and deal with rich data, researchers have suggested or used various strategies to keep track of the research process, data collection, researcher's thoughts on the study design, researcher's reflections after interviews and on the research process, and so on. Some of the strategies include reflective journals (Janesick, 2003; Ortlipp, 2008), researcher's log (Das, 2006), and research diaries (Silverman, 2005). As suggested by one of my co-supervisors, I started adopting research logs during Section 2 of the main stage of the study to record in a Word file: (a) my thoughts of the moment, (b) striking interview quotes, (c) useful references and quotes from literature readings, and (d) ideas for organizing the dissertation. I found the research logs to be of great value in helping me manage the important information needed for such an extensive research project and capturing the surprises as they emerged in my sight and/or mind. The following is an illustration of a thought of the moment that I later included in my study findings.

April 23, 1998

Chinese student conferencing after written feedback, [namely] interactive feedback-based conferencing, is much more effective than feedback alone, which is better than no feedback, which in turn is better than not returning students' assignments.

I wrote 18 pages of single-spaced logs altogether. Had I written more, I would have placed them in the respective categories (a-d), as mentioned above to achieve better organization and easier access. In the meantime, I kept a paper log to record the interviewee's name and the time, location, and serial number of each interview I conducted.

Data Analysis

In congruence with the tenets of qualitative research (e.g., Denzin & Lincoln, 1994; Lincoln & Guba, 1985; Meloy, 1994; Merriam, 1988; Norton Peirce, 1995; Strauss & Corbin, 1990), I adopted an interpretive, inductive approach in my treatment of the transcribed data. Thus, I read and reread the transcripts of the interviews and other collected documents to search for recurrent themes. Specifically, for the main stage Section 1, I coded the transcripts on paper, searched for interrelationships between the codes, and then for themes and subthemes.

The analysis of the data in the interview transcripts for the main stage Section 2 was much more elaborate than that for the main stage Section 1. While reading and rereading the transcripts, I coded in pencil meaningful segments on paper (see Crabtree & Miller, 1992) and in the meantime, wrote the codes in pencil on a large flow chart sheet, which allowed me to see all the codes on one surface like an open map (see Appendix D for a final coding system). Having all the codes on one map enabled me to compare the codes and categorize them as I added more or moved them around as necessary. Often I had to rename or modify the codes to stay closer to the meaning conveyed, to merge themes, or avoid confusion with other codes. For example, I changed "suggestions for my study [SGS]" to "participant suggestions for my study [PS]." I dropped "language preparation in China [LPC]" and "teaching methods in China [TMC]" to merge them with "English education in China [EEC]," as the students were unable to offer many comments on these topics. I had to change "[MI]" initially standing for "motivation/investment," to "[M]" to make room for "[MI]," which I thought would better stand for "methods for interview." Modification of the coding system continued throughout the process of analysis (see Crabtree & Miller; Glesne & Peshkin, 1992; Merriam & Associates, 2002), whenever a new theme emerged or a new understanding of a theme necessitated re-categorization.

After I coded all the transcripts on paper, I coded them again in my computer files, while continuing to refine the coding system. Once the computer files were coded, it was easy to assemble transcript segments with the same code for analysis and interpretation. It is worth noting that each modification of the codes or the system signified a deeper understanding on my part of the data, the themes, and/or the relationships between the themes (see Crabtree & Miller, 1992).

Reflections

In this article I have discussed the emerging nature of qualitative research as evidenced in my study of the academic writing of Chinese graduate students at UBC. The study developed in an emerging, and often unpredictable, manner in such aspects as

research questions, research locations, participant sampling, data collection methods, and data analysis.

Unlike the humanities and social science (HSS) graduate students examined in other studies (Casanave, 1995; Leki, 1995; Riazi, 1995), my student participants in science and engineering (S&E) at UBC did not find socialization or interaction with faculty and non-Mandarin speaking peers to be very meaningful, since the interaction was limited. Most Chinese graduate students in S&E tended to socialize among themselves. On the other hand, to my surprise, few faculty members offered substantial feedback on the students' writing. Therefore, I had to shift my focus from faculty-student interaction, or socialization, to the writing processes of course assignments and thesis proposals. It would have been worthwhile to study the students' thesis or dissertation writing, had I had more time to follow through such processes.

The study found that not only did the S&E departments differ from HSS counterparts (see also Braine, 1989, 1995; Casanave & Hubbard, 1992), but that the situation of the same location could vary from time to time. For example, none of the UBC Faculty of Forestry departments enrolled any graduate student from Mainland China in the fall semester of 1997, which surprised me. Thus, while the findings of earlier studies might provide guidance regarding site location and participant selection, they should not be overgeneralized; instead, we need to keep an open mind and accommodate the local conditions and case-specific features. That means that we should be prepared to adjust our research design and sometimes even to dramatically change our research plan, as dictated by the local circumstances. The uniqueness and unpredictability of specific cases suggest extreme difficulty of replication in qualitative case studies.

To collect reliable data, it is important to establish rapport with the participants by assuming an equal footing and making the interviews appear casual and the interviewees feel comfortable. Furthermore, a flexible semi-structured interview guide allows freedom to explore unexpected interesting questions or topics that often lead to insightful data and surprises. As well, we need to respect the needs and interests of the participants. For instance, I had planned to conduct three interviews with each of the student participants except Zong. However, due to their varied availability and enthusiasm, I ended up having as few as two and as many as five interviews, with each member of the group except Zong.

To analyze the data, I adopted a coding system which evolved throughout the analysis. I often had to modify or restructure the codes when I discovered new themes or new relationships between the themes.

Qualitative research is a dynamic process and my study emerged not only on an objective level, namely, that of the researched, but also on a subjective level in that I, as researcher, found my own understanding of the subject matter and the research process developed in the meantime, contributing to the evolving research process. My experience echoes Watt's (2007) observation that "each time I return to the original [journal] entries and my reflections on them, something new emerges. As I discover more about theory, the topic of study, the research process, and myself, my perspective shifts" (p. 98). Indeed, what is fascinating about qualitative research is the discovery of new facts, new meanings, and new relationships that keep emerging.

Lastly, my study has a lesson for graduate students and new researchers who are about to start qualitative research. While we need to be familiar with the literature in the

field and have a research proposal before data collection, it may not be very productive to spend too much time trying to construct a watertight proposal that we hope to follow strictly (see Strauss & Corbin, 1990) or in a neat and linear order (see Ortlipp, 2008). Instead, the proposal should allow for flexibility or elasticity in time, research questions, data collection, and other research design concerns as the study unfolds. It is also advisable to conduct a pilot study or “stretching exercises” (Janesick, 2003, p. 58) to pre-test research questions and data collection methods.

Obviously, there is no end to qualitative research. Somewhere we need to bring a study to closure, especially in case of graduate theses with time constraints, and suggest topics or directions for future research.

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Appendix A

Background Questionnaire

1. Personal Background

1.1 Name _____

1.2 First language (please check in appropriate bracket)

Chinese (including its dialects) Other language (specify) _____

1.3 Year of birth _____

1.4 Sex: male female

1.5 Time of arrival in Canada: _____ Time to start studies at UBC: _____

2. Educational Background

2.1 How many years did you attend the following schools?

Junior high _____

Senior high _____

2.2 a) When did you study for your *undergraduate* degree?

19 _____ to 19 _____

b) Where did you study for your *undergraduate* degree?

Name of college/institute/university _____

c) What was your *undergraduate* degree major/specialization?

Degree (e.g., B.S.) _____

Major _____

2.3 a) When did you study for your *graduate* degree?

19____ to 19 ____

b) Where did you study for your *graduate* degree?

Name of college/institute/university _____

c) What was your *graduate* degree major/specialization?

Degree (e.g., M.S.) _____

Major _____

2.4 Did you write a thesis for your last degree? [] Yes [] No
If yes, what was the title? (You can write in Chinese.)

2.5 a) Do you have any *domestic* publications (i.e., published in China) (including journal articles, books, and book chapters, etc)?

[] Yes [] No

If yes, please describe each publication briefly by specifying title, author or co-author, year, publication type (such as journal, book, or book chapter), language, approximate number of pages, and other related information (such as journal name in case of journal article, and winning such-and-such a prize). You may write in either English or Chinese.

b) Do you have any *international* publications (including journal articles, books, and book chapters, etc)?

[] Yes [] No

If yes, please describe each publication briefly by specifying title, author or co-author, year, publication type (such as journal, book, or book chapter), language, and other relevant information (such as journal name in case of journal article, and winning such-and-such a prize). You may write in either English or Chinese.

3. Working Experience

- 3.1 What work positions did you have before you came to Canada? Please list all occupations since completion of undergraduate study.

e.g., Lecturer of Forestry, 1995 to 1997, Jilin University

- 3.2 Had you been out of China before coming to UBC?

Yes No

If yes, please describe briefly.

4. Current Program

- 4.1 What is your current program?

Program of study (e.g., PhD in Forestry) _____

Dept. _____

- 4.2 What credit courses are you taking this term?

Course # (e.g., FRST 555) _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

Course # _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

Course # _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

Course # _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

4.3 What credit courses had you taken at UBC prior to September 1997?

Course # (e.g., FRST 544) _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

Course # _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

Course # _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

Course # _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

Course # _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

Course # _____

Title: _____

Name of instructor:

Writing assignments (please describe briefly):

5. English Language Background

5.1 How many years did you learn English in school before receiving post-secondary education?

5.2 How long did you learn English in classes while in university?

Undergraduate: number of years _____; hours/week _____

Graduate: number of years _____; hours/week _____

5.3 What was the **primary** language of your previous study and research?

Instructors' lectures: (bachelor's) _____ (master's) _____

Discussion with instructors: (bachelor's) _____ (master's) _____

Textbooks: (bachelor's) _____ (master's) _____

Your writings: (bachelor's) _____ (master's) _____

Others (please specify) _____

5.4 What were your (highest) TOEFL scores?

Total _____

Listening comprehension _____

Grammatical structure and written expression _____

Reading comprehension _____

Test of Written English (if taken) _____

Year of the test written:

5.5 What were your (highest) GRE scores if applicable?

Total _____

Verbal _____

Quantitative _____

Analytical _____

Year of the test written:

5.6 What areas of writing in English cause problems for you? You may mark more than one area.

A: General English

- None
- Grammar
- Idioms
- Coherence (consistency of meaning)
- Style (e.g., formal vs. informal; written vs. oral)
- Organization (e.g., how to organize a piece of writing)
- Tenses
- Clear argument
- Sentence structure
- Sentence connection
- Paragraph connection
- Spelling
- Vocabulary
- Specific areas of vocabulary such as _____
- Words with multiple meanings
- Others _____

6. Cultural and Other Perceptions

6.1 Please briefly describe the things that you feel *good* about since your arrival in Canada?

6.2 Please briefly describe the things that you feel *bad* about since your arrival in Canada?

Appendix B

Interview Guide (Students)

Written Academic Requirements

1. Generally, do you have a great deal of written work to do in your current program?
2. Could you please tell me what the written assignments are for each of the courses you are taking this term? How much are they worth for the particular courses? Are you working on any other written work?
3. Could you please tell me what the written assignments were for each of the courses you had taken prior to September 1997? How much were they worth for the particular courses?
4. How flexible are/were the assignments? In other words, are/were they flexible enough so that you could write according to your interests?
5. Did you have any difficulty understanding any of the assignments?
6. What did you write in each of these assignments?

Writing Environment

1. Do you discuss your work with native English speaking students in your course/department? If so, how helpful is it?
2. Do you discuss your work with other Chinese students in your course/department? If so, how do such interactions enhance or hinder your academic thinking and writing?
3. Do/Did you discuss your topic or work with your course instructor? If so, how helpful is/was it?
4. Do/Did you discuss your topic or work with your supervisor if the course is taught by a faculty member other than your supervisor? If so, how helpful is/was it?

Sources

1. What kind of sources (e.g., textbooks) do you use for your topics?
2. What academic journals do you read?

3. Do you have any written sources of information about your topics, which are not in English?
4. Do you use any aids to writing like dictionaries?
5. How do you read articles or books? (e.g., Do you read all the parts in sequence or otherwise?)
6. When you read academic writing (e.g., an article in your field), do you normally think in English or Chinese?
7. Do you sometimes notice useful sentences or words in your reading and write them down? If so, how useful are they?
8. What have been the effects of your readings on your writing?

Composing

1. In what language do you normally think about your writing?
2. Why do you use this language?
3. Do you use any code switching between languages (jumping from one to the other)? If so, in which direction? Under what circumstances do you switch? Do you revert to Chinese for difficult problems/concepts?
4. How do you start writing your papers?
5. Do you write on the computer right away or do you make a hand-written draft first?
6. Do you use editing and revision in your writing? If so, how and at what stages?
7. What aspect of paper-writing is most challenging?
8. In your opinion, how did you learn to write for English papers?
9. How do you perceive memorization as a strategy for writing?

Audience

1. Do you visualize a reader while writing?
2. Do you care about your professor's expectations?
3. How do you try to adapt yourself to those expectations?

4. What difficulties do you experience in doing so?
5. Do you use different strategies/styles for writing assignments for different courses?

Papers and Feedback

1. What feedback did you receive from your professors on your papers?
2. What did you think about the feedback? Helpful, fair, etc.?
3. Did the feedback influence your writing subsequent papers?

Socio-Cultural Differences

1. How are academic requirements in your current program different from your last degree program in China?
2. According to your experience/perceptions (if applicable), what is the role or responsibility of the academic supervisor in your studies (especially in writing) in China vis-à-vis in Canada? How did that influence your writing in China and Canada respectively?
3. According to your experience and perceptions, what is the role or responsibility of the course instructor in your writing in China vis-à-vis in Canada? How did that influence your writing in China and Canada respectively?
4. How are written course assignments in your current program different from those in your previous Chinese university/institute, in terms of instructor expectations, format, organization, and conventions?
5. What did you have to do to become a successful student in China and in Canada respectively, especially in relation to academic writing?
6. According to your observation/experience/readings, how is writing academic papers in English in Canada different from that in Chinese in China, in terms of format, organization, and conventions?
7. What linguistic difficulties and conflicts have you found when writing academic papers?
8. What difficulties and conflicts have you found with cultural identity when writing the assignments? Or: What ideological and logical difficulties and conflicts have you found? What did you do to try to resolve these difficulties and conflicts?
9. Given your previous experience as _____ (e.g., university teacher), how do you feel about being a STUDENT writing papers required by your current program?

Miscellaneous

Why did you choose English, or Mandarin, or both of them, to answer my questions?

Additional Comments/Suggestions

Appendix C

Free Informal Conversation

1. Why did you choose to study in your current program at UBC?
2. What do you wish to get out of your current program experience?
3. How do you evaluate the importance of academic writing for (a) your program, (b) your future career (such as research, business, and publication)?
4. Use of languages
 - A) Use of English in speech: what situations, to what extent
Use of English in writing: what situations, to what extent
 - B) Use of Chinese in speech: what situations, to what extent
Use of Chinese in writing: what situations, to what extent
 - C) Their respective effects on academic writing in English.
5. How do you perceive your academic experience at UBC, positively or negatively?
Supporting examples?
6. Generally, what do you think to be your difficulties/problems with respect to academic writing?
7. What more would you like the instructors and especially your supervisor(s) to do to help you with writing your academic papers?
8. What would you like UBC or your department to do to help you with academic writing and other aspects of academic studies? (Any suggestions on educational practices and policy changes re. academic writing?).
9. What would you like my research project to accomplish?
10. What advice would you like to offer to a NEW Chinese graduate student with reference to academic writing?

11. What would you suggest to China's universities to do in order to better prepare students who will need to do academic writing in North American universities?

Appendix D

Coding System

Themes and Subthemes

1. Course Assignments [AC] and Research Proposals [RP]

Course assignments [AC]

- assignment: writing amount [AA]
- course outline [CO]
- assignment requirements [AR]
- faculty expectations [FE]
- assignment: writing type [AT]
- lab-based report [RL]
- assignment: presentation [AP]
- course assignment: grade [ACG]

Research Proposals [RP]

- research proposal [RP]
- proposal writing [PW]
- proposal defence [PD]
- comprehensive exams [ACE]
- disciplinary difference in assignments [DDA] and program requirements [PR]

Faculty feedback [FF]

- faculty feedback [FF]
- faculty feedback effect [FFE]
- faculty feedback: student perception [FFSP]
- student hopes

Writing views/perceptions [WV]

2. Learning Methods [LM]

Learning methods in Canada [LMCA]

Learning methods in China [LMC]

Learning methods for speaking [LMS]

Reading method [RM]

- reading source [RS]
- reading aids [RA]

- thinking method: language: reading [TMLR]
- reading method for vocabulary [RMV]
- reading method: notation [RMN]
- reading-writing relationships [RWR]
- Writing method [WM]
 - learning method for writing [LMW]
 - language use for writing [LUW]
 - assignment difficulty: strategies to deal with [ADS]
 - taking notes [WMN]
 - planning/preparation [WMP]
 - thinking method: language: writing [TMLW]
 - translation [WMT]
 - dictionary use [WMD]
 - reader awareness [WMRA]
 - revision [WMR]
 - writing sample [WS]
 - language use for speaking [LUS] and presentation method [PM]
 - TA-ing [TA]
 - speaking-writing relations [SWR]
 - thinking method: language: speaking [TMLS]
- Study method: participant suggestions [SMPS]
- Researcher-participant interaction: suggestions to participants [RPIS]
- Student difference/distinction [SD]
- 3. The Academic Context (or context for academic studies) [CAS]
 - Institutional support [IS]
 - university support for ESL [US]
 - student perceptions on university ESL support [SPUS]
 - student participant suggestions for university ESL support [PSUS]
 - financial assistance/support for the students [FA]
 - Student-faculty relations [SFR]
 - faculty support [FS]
 - student-supervisor relations [SS]
 - student-faculty interaction [SFI]
 - socialization: language [SOL]
 - student expectation [SE]
 - student hope [SH]
 - number of students in a course or for a supervisor [NS]
 - faculty influence [FI]
 - faculty influence: effect [FIE]

faculty difference [FD]
 disciplinary difference: student-supervisor relations [DDSS]
 student perception on faculty [SPF]
 faculty attitude to Chinese students [NESA]

Student-student interactions [SSI]
 peer interaction with NES and peer help [PI]
 NES attitude to Chinese students [NESA]
 peer interaction: group meeting [PIGM]
 peer interaction with other Chinese students [PIC]

4. Study Difficulties [STD] and Problems [STP]

Writing difficulty [WD]
 language difficulty [LD]
 style [WDS]
 idiom [LDI]
 thinking difficulty [TD]
 writing difficulty: impact [WDI]
 reason [WDR]

Speaking difficulty (i.e. language difficulty in speaking) [LDS]
 language difficulty in oral (speaking) presentation [LDSP]
 listening (aural) difficulty [AD]
 listening difficulty with faculty accents [ADA]

Study problems [STP]
 writing problem [WP]
 grammar [WPG]
 punctuation [PUN]
 language problem: usage [LPU]
 abbreviation [WPA]
 language program: style [LPS]
 writing problem: format [WPF]
 citation [WPC]
 plagiarism/copying [PL]
 speed [WPS]
 writing views/perceptions [WV]

Speaking problem
 oral presentation [LDSP]
 translation in speaking [TRS]

Student needs [SN]
 student needs in writing [SNW]

5. Socio-Cultural Differences [SCD]

Students' positive experience [PE]

Cultural similarities [CS]

cultural similarities: academic [CSA]

Cultural differences [CDE]

cultural difference: academic [CDEA]

cultural difference: curriculum [CDEC]

teaching methods in China [TMC]

student perceptions on teaching methods in China [SPTMC]

teaching methods in Canada [TMCA]

student perceptions on teaching methods in Canada [SPTMCA]

cultural difference: writing [CDEW]

cultural difference: assessment/evaluation (of students for a course) [CDEE]

cultural difference: faculty [CDEF]

cultural difference: student-supervisor relations [CDESS]

cultural difference: faculty support [CDEFS]

language difference [LDE]

cultural difficulty [CDY]

cultural conflict [CC]

cultural difference: impact [CDEI]

Social difference [SDE]

Chinese students' life [CSL]

social difference: reaction [SDER] and impact [SDEI]

social difficulty [SDY]

6. Identities

Identity: ethnic [IDE]

Identity: cultural [IDC]

Identity: linguistic [IDL]

Identity: social [IDS]

academic ID [FPIDA]

attitude [A]

motivation/investment [MI] - > [M]

future career [FC]

7. Methodology

Methods for interview [MI]

language for interview [LI]

Researcher-participant relations [RPR]

Researcher-participant interaction [RPI]

Participant suggestions for my study [PS]

8. Miscellaneous

Student perceptions on the importance of writing [SPW]

Educational background in China [EBC]

English language education in China [EEC]

English language education in China: suggestions [EECS]

My own experiences and perceptions [JIM]

Test scores [TS]

Writing experience in China [WEC]

Publications and presentations in China [PPC]

Publications and presentations in Canada [PPC]

Working experience [WE]

Study-abroad status [SAS]

Teaching assistant [TA]

Future career [FC]

Theory [TH]

9. Faculty Perceptions [FP]

My study [FPMS]

Program requirements [FPPR]

admission [FPAD]

TOEFL [FPTOEFL]

program requirement [FPPR]

disciplinary difference in program requirement [FPDDPR]

number of Chinese students [FPNCS]

Strengths [FPSTR] and weaknesses of Chinese students

Chinese students [FPCS]

Chinese students' strengths [FPSTR] and

strengths of Chinese students [SCS]

faculty expectation [FPFE]

writing style/format [FPWS]

study difficulty [FPSD]

cultural problem [FPCP]
academic ID [FPIDA]
writing problem [FPWP]
speaking problem [FPSP]

Faculty reaction to Chinese students [FR]
importance of writing [FPW]
faculty support [FPFS]
faculty feedback [FPFF]
disciplinary difference in faculty feedback [FPDDFF]
assessment of students' writing [FPWA]
faculty advice on learning English [FPFALE]
faculty advice on writing [FPFAW]
university support for ESL [FPUS]
university support for ESL: faculty suggestions [FPUSFS]
faculty expectation re academic preparation in China [FPEEC]

Author Note

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