

Enculturating NNES Engineering Students in Taiwan: A Comparative Case Study

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Abstract. This study aims to investigate how two NNES (non-native English speaking) Taiwanese engineering graduate students became enculturated through various disciplinary practices of their disciplines. In particular, it focused on the learning challenges they had encountered during their overall process of disciplinary enculturation through the lens of legitimate peripheral participation. This study was conducted for the fall semester over the academic year of 2017 and 2018 at two universities in Taiwan. Multiple sources of data such as transcripts of student interviews, writing samples, and lab observations were collected and analysed. The findings indicated that the overall English proficiency of these students played a crucial role in their overall process of disciplinary enculturation. In addition, both students longed for more guidance from their disciplinary mentors/instructors regarding how to present their research and write for journal papers more effectively in English. Moreover, participants encountered varying degrees of writing challenges in writing for scholarly publications. The findings supported previous studies that NNES students often struggled most with various linguistic challenges relevant to their English language proficiency and they needed more guidance from advisors to facilitate their acquisition of genres in their target discipline.

Keywords: disciplinary enculturation; learning challenge; engineering students; comparative case study; legitimate peripheral participation.

1. Introduction

It is often challenging for students all around the world to do their graduate study and to specialize in their field of expertise, let alone for non-native English-speaking (NNES) students to get the hang of presenting conference papers and navigating themselves through writing and submitting their journal articles to the gate-keepers of journal editors to become legitimate members of their target disciplinary communities (e.g., Canasave, 2008 ; Canasave & Li, 2008 ; Cho, 2004, 2009, 2013; Duff & Anderson, 2015; Fazel, 2013).

Indeed, the process of disciplinary enculturation (i.e., acquiring the appropriate disciplinary-specific ways of doing and behaving in one's disciplinary communities) is usually a very complex, ever-changing, and multi-layered task because it is usually highly relevant to the overall linguistic, rhetoric, and sociolinguistic aspects of a particular discipline. Therefore, for graduate students who desire to become competent and legitimate members in their target disciplinary community, it is of paramount importance for them to not only develop their expertise in a particular discipline but also demonstrate their eagerness and ability to the members in general and experts in particular of their disciplinary community.

While most of the previous studies have yielded numerous beneficial results, most of them only investigated the disciplinary enculturating processes of students in North America universities (e.g., Berkenkotter & Huckin, 1995; Canasave, 2002, 2008; Cho, 2004, 2009, 2013; Duffs & Anderson, 2015; Fazel, 2013; Prior, 1998). In particular, few previous studies focused on the possible learning challenges of students who have been mainly educated in non-Anglophone contexts all the way up to their terminal degrees in Taiwan. Hence, there seems to exist a gap in the previous literature concerning the disciplinary enculturation process of NNES graduate students in Taiwan.

In light of these problems, this study purported to bridge these gaps by investigating the disciplinary enculturation process of two Taiwanese NNES engineering doctoral students in Taiwan through various disciplinary practices of their discipline. In particular, this study focused on the primary learning challenges they had encountered during their overall process of disciplinary enculturation. Hence, the three overarching research questions were summarized as follows:

1. What kinds of learning challenges had these Taiwanese engineering doctoral students perceived during their process of disciplinary enculturation?
2. What role did English play in their disciplinary enculturation process?
3. What kinds of assistance would they need during their process of disciplinary enculturation?

2. Legitimate Peripheral Participation

Lave and Wenger (Lave & Wenger, 1991)'s *legitimate peripheral participation* refers to how newcomers gradually increase their participation and master the skills they need under the guidance of more experienced members such as their instructors and advisors in their discourse community. That is, it is only when those newcomers begin to develop more competence through the guidance and the interactions with old-timers (i.e., more experienced and seasoned members in their target discourse community) that they gradually increase their competence and their involvement as more full-fledged members in their target discourse community.

This framework is particularly suitable to this study because disciplinary enculturating experiences of NNES doctoral students are very similar to this

apprenticeship model proposed by Lave and Wenger (1991) in two ways. First, these NNES doctoral engineering students in Taiwan need to learn the required competence in their field of expertise through the guidance of their instructors and advisors before they could become full-fledged members in their target discourse community. Second, they also need to participate in a variety of disciplinary practices valued by their target discourse community to lessen their status as novice and to become full-fledged members in their academe. For instance, they need to learn how to write for scholarly papers in English and to make them published by indexed journals, and their process of learning will be greatly facilitated by the assistance and guidance of their advisors. In sum, it is through this kind of learning and apprenticeship that these students gradually learn the knowledge of their disciplinary community and become legitimate members in their target disciplinary community.

3. Key Issues in Disciplinary Enculturation

3.1 The importance of English competence

Previous studies have revealed that English might be one of the most factors in determining the ultimate outcome of the disciplinary enculturating process of NNES graduate students (e.g., Belcher, 2007; Casanave, 2002; Cho, 2004, 2009, 2013; Fazel, 2013; Leki, 2007). For instance, some scholars investigated how NNES graduate students in a TESOL program struggled to develop the necessary voices and identities in their “writing games” (Casanave, 2002) while some scholars concerned more about how problematic language issues and insufficient cultural understandings might be detrimental not only to the overall composing processes of NNES graduate students but also whether they could receive desirable assistance from their advisors to become legitimate members in their target disciplinary community (e.g., Belcher, 1994; Dong, 1998; Duff & Anderson, 2015; Paltridge & Starfield, 2007).

3.2 Writing challenges

According to Prior (1998), textual productions often play a primary role in the disciplinary enculturating experiences of graduate students. Hence, the ability to make significant contributions to the target academic communities through textual productions was indeed one of the crucial factors in determining the legitimacy of participants in a discipline-specific community. However, it seemed impossible for every NNES graduate student to fully master all the essential genres such as research articles, grant proposals, theses and/or dissertation proposals critical to their full participation in their target disciplinary community.

In light of the aforementioned issues, some scholars have investigated a wide array of problems of NNES writers in their writing for scholarly publications (e.g., Cho, 2004, 2009, 2013; Duffs & Anderson, 2015; Flowerdew, 1999a, 1999b, 2000, 2001; Li, 2006; Gosden, 1992). In particular, Fazel (2013) classified the problems NNES had encountered when they learned the disciplinary-specific ways of writing for publications as follows: 1) at the sentence level, 2) at the discourse level, and 3) at the rhetorical level. For instance, Flowerdew (1999b)

found that writing qualitative research was more difficult than writing quantitative research for NNES students Hong Kong. In addition, Cho (2009) found that linguistic features (e.g., grammar and vocabulary) might be more difficult than meta-linguistic features (e.g., organization and paragraph development) for NNES learners in Korea. Moreover, Gosden (1992) found that discourse level issues (e.g., incoherent topic progression and ideas) are the major problems for NNES learners in Japan. In a similar vein, other scholars have examined the problems concerning the feelings of those NNES writers being disadvantaged by their NNES status in their process of writing for scholarly publication (e.g., Flowerdew, 1999b, 2000; Cho, 2009, 2013). For instance, Flowerdew (2000) discovered that a NNES Hong Kong scholar returning from the U.S. suffered from spending considerably much more time editing his papers than his NES counterparts and could barely publish his article by trimming more than ten pages of his draft.

4. Methodology

4.1 Research Design

To further understand the learning challenges and the overall disciplinary enculturation processes of these participants, this study adopted a comparative case study design (Creswell, 2012). Comparative case study was chosen as the primary approach to the study because it allowed for more detailed, in-depth personal descriptions of the overall disciplinary enculturating context of these participants. In addition, it enabled readers to compare and contrast the learning challenges and disciplinary enculturating processes of the participants in this study (e.g., Leki, 2007).

4.2 Site and Participants

Research Site. This study has been undertaken at two universities (i.e., University A and University B) in Taiwan. University A was a research-oriented university which prided itself on its academic prestige and excellent quality of scientific research. In contrast, University B was a teaching-oriented public technology university which prided itself more on the development and application of the cutting-edge technology and the practical on-the-job training of its students.

Focal Participants. The focal participants were two doctoral science-majored students enrolled in the engineering departments at two universities in Taiwan (see Table 1). They were recruited through email invitation (see Appendix A) to their departments by snowball sampling method (Patton, 1990).

Table 1: Focal Participants

Participants	Jenny	Mark
Gender	Female	Male
Name of their University	University A	University B
Type of their University	Research-oriented	Teaching-oriented
Program	Engineering	Engineering
Years in the Program	2	3
Age	26	31
English Language Proficiency	TOEIC 625	TOEIC 375

Jenny. Jenny was a sophomore doctoral engineering student in University A (i.e., a research-oriented public university). She was in her mid-twenties and she received her master's degree from an engineering department in a similar research-oriented university (i.e., University C). In addition, her English language proficiency was approximately TOEIC 625 points.

Mark. Mark was a junior doctoral engineering student in University B (i.e., a teaching-oriented public technology university). He was in his early thirties and he also received his master's degree from University B. He worked in a technology company for three years prior to his enrollment in his doctoral program, and his English language proficiency was approximately TOEIC 375 points.

4.3 Data Collection

Sources of Data. Various sources of data were collected to gain an in-depth understanding of the case (e.g., Creswell, 2013; Yin, 2003) over the fall semester in 2017-18 such as lab observations, interviews, and examination of texts (e.g., students' drafts of conference papers, term papers, or journal papers). In addition, other sources of data such as course syllabi and program descriptions were collected to further inform and facilitate the data analysis process and the write-up of this study (see Table 2).

Table 2: Sources of Data

Methods	Time to Collect Data	Data
Observations	1 st Observation: Beginning of the semester 2 nd Observation: End of the semester	Observation notes Research logs Analytic memos
Student Interviews	1 st Interview: Beginning of the semester 2 nd Interview: Middle of the semester 3 rd Interview: End of the semester	6 interview transcripts Observation notes Research logs Analytic memos
Writing Samples	Ongoing until the end of the semester	Term papers Conference papers Journal papers
Other Sources of Data	Ongoing until the end of the semester	Course syllabi Descriptions of the program Excerpts of scientific textbooks Class readings and handouts

Lab Observations. Each participant was observed for two school days (i.e., one day at the beginning of the semester and the other day in the end of the semester) in their disciplinary settings (i.e., engineering labs) during the data collection period to provide some first-hand insights into their possible learning challenges and overall process of disciplinary enculturation. Observation notes were taken during each lab observation while analytic memos were written after each lab observation.

Interviews. In-depth qualitative interviews were conducted to delve into the possible learning challenges and disciplinary enculturating experiences of those students based on their personal recounts. Each focal participant was interviewed three times during the data collection period primarily based on the proposed sample interview questions (see Appendix B) and each interview lasted about 30 minutes. Those interviews were all audio-taped and transcribed for further analysis. Field notes were taken mostly during each interview while analytic memos were written after each interview.

Writing samples. Three kinds of written documents were collected from each focal student (i.e., term papers, journal papers, and conference papers) to enlighten the primary researcher on the possible learning challenges of each participant during their process of disciplinary enculturation.

Other sources of data. In addition to the aforementioned data sources, other sources of data (e.g., course syllabi, descriptions of program requirements, and class readings and handouts) were gathered to further unravel the possible learning challenges of focal participants within their institutional, social, and academic contexts.

4.4 Data Analysis

Various sources of data such as interview transcripts, observation notes, analytic memos, students' written samples such as their conference papers and journal papers, and other sources of data such as course syllabi and program descriptions were the primary sources of data analysis.

To look for threads and salient themes among the massive data collected in this study, Saldana's (2009) *first cycle and second cycle coding methods* were employed. In the first coding cycle, I first coded the data sentence by sentence, sometimes word by word, in a process referred by Saldana (2009) as *initial coding*, and I strived to identify and formulate any and all ideas, themes, or issues the data suggested. In the second coding cycle, I used *focused coding* to investigate the most frequent or crucial initial codes to identify the most salient categories in my data corpus and to see if they would be able to formulate some major categories or themes in my data.

In sum, the analytic procedures of this study was recursive and dynamic. Through data triangulation and constant examination of data and reflection, some salient themes ultimately emerged to further construct or reconstruct the findings.

4.5 Trustworthiness

A variety of strategies were employed to enhance the trustworthiness of this study (e.g., Creswell, 2013; Ely et al, 1991). First, a thick description (Geertz, 1973) of the participants and their process of disciplinary enculturation made it possible for readers' personal interpretations. Second, multiple data sources such as interviews, lab observations, and written samples were collected and analysed to facilitate the overall triangulation process. Finally, over the course of this study, I strived to be as objective as possible to better analyse their process of disciplinary enculturation. By employing all of these strategies, I hoped that the trustworthiness of this study could be well achieved.

5. Results and Discussion

The results of the study could be categorized into three main themes: 1) Both participants concurred on the importance of their English proficiency in their overall disciplinary enculturation process 2) Both participants longed for more guidance from their advisors regarding how to present their research and write for journal papers more effectively in English and 3) Participants encountered varying degrees of writing challenges in writing for scholarly publications.

5.1 The importance of English proficiency in disciplinary enculturation process

Both Jenny and Mark agreed that English played an important role in their overall disciplinary enculturation process. Moreover, they also expressed their frustrations and anxiety of using English to present their conference papers or to write journal articles in English:

“...Yes, I would say that English is ...of course... the only and the biggest challenge I have to deal with throughout my graduate study. You know, I am not especially good at English, so it took me some time to write abstracts and papers in English... How could I graduate earlier without getting my papers accepted by English SCI journals? And it literally freaks me out to present my conference paper in Europe. Terrible! I could not utter any word in English at the beginning of my presentation because I was too nervous and I was so worried about my bad English speaking at that time. What a nightmare!” (Jenny, 1st Interview)

“... Well, I guess English is why I could not do very well in my graduate study. Although I also found the content of my field of expertise (engineering) to be extremely challenging for me to master and to make some breakthroughs, I certainly thought that I would learn my disciplinary content much faster and better if my English was so much better...No, I did not go to any international conferences because of my bad English... I could not even write my abstract in English...How could I dare to present my paper in English? Perhaps that will be why it might take me forever to graduate from this program...” (Mark, 1st Interview)

In the two excerpts above, Jenny and Mark both voiced their fear of English and the perceived importance of English in their overall process of disciplinary enculturation. Additionally, they confided in their fear of presenting papers at international conferences. For instance, they mentioned that English was probably one of the most decisive factors in determining whether they could get their graduate degrees. In particular, Jenny explained that the ability to graduate earlier from her program would be predominantly contingent upon whether her articles could be accepted by major SCI journals in English. In the similar vein, Mark indicated his lack of English proficiency would be detrimental to his rate of reading, comprehending the disciplinary content, and making possible research breakthroughs in his field of expertise. Moreover, his low proficiency in English seemed to prevent him from writing journal abstracts in English. Therefore, he was worried that he might not be able to successfully graduate from his program concerning that the graduating criteria of his department relied on publishing SCI papers in his field of expertise.

5.2 More guidance from their disciplinary mentors/instructors

In order to facilitate their process of disciplinary enculturation, both Jenny and Mark indicated that they might need more assistance from their disciplinary

mentors/instructors, especially how to present and write journal articles in English under the guidance of their mentors/instructors:

“...I need more help from my advisor... He was very busy and he seldom showed up in our lab, but it would be great if he could share some of his previous experiences of preparing for his presentations at international conferences so that we could model him and prepare for our own presentations in the future... And I think that I might need him to analyse several influential research papers and explain to me how to write an excellent research paper in our discipline...step by step...give me good topics...not just ask me to learn how to write articles by reading previous journal articles... not just correct grammar mistakes in my paper or ask me to find on-line editing agencies to help me correct these mistakes...” (Jenny, 2nd Interview).

“...My adviser was busy and it was hard for me to make appointments with him. However, it might be helpful if he could take us with him to present at international conferences...I would like to see how he presents papers in English and perhaps learn from him on the spot... And since my English is really bad, I think that I need him to sit me down and analyse the basic structure of journal articles in our field...And then I might be able to write my draft in Chinese... and then ask others to help me translate it into English...” (Mark, 2nd Interview).

In the two excerpts above, both Jenny and Mark agreed that they might need more guidance and assistance from their advisers to cope with the linguistic challenges they had encountered. More specifically, they both longed for their help in demonstrating or scaffolding the presentations their advisers had done at international conferences and research papers in English. However, their differing levels of English proficiency affected how much and what kinds of help they needed most from their advisers. For instance, since Jenny was relatively more proficient in English, she would prefer his adviser did not spend too much time correcting her grammar mistakes. Instead, she actually hoped that he could analyse significant research papers for her and perhaps showed her some possible topics for her future research in person. On the other hand, Mark would prefer his adviser to show him the basic structure of journal articles in his field. While he agreed with Jenny that advisers did not need to spend time revising their articles, he seemed to be extremely doubtful of his ability to write excellent journal articles in English and would prefer to just learn the basics of journal articles by playing it safe and asking others to help him translate his Chinese articles into English.

5.3 Different writing challenges in writing for scholarly publications

While Jenny and Mark both had encountered some writing challenges in writing for scholarly publications in English-medium journals, it seemed that they had varying degrees of writing challenges and needed different assistance for solving these problems:

"... I might have mentioned it before... My writing challenges for writing journal papers were more relevant to the idea generation of possible good topics in my field rather than committing grammar and word choice mistakes... Well, I am not very good at English... I make grammar and word choices mistakes from time to time...and I had difficulties in writing a proper English abstract...but my English isn't so bad... I am fine...And I know where to seek help for language mistakes such as the paid editing service provided by the language center in our campus... I just do not know how to choose the appropriate topic in my field that will be approved by my adviser and the journal reviewers...Just give me a direction and I could try to make this topic work by myself." (Jenny, 3rd Interview)

"... Honestly, I am completely lost when it comes to English and English writing. I know that English writing ability is very important in determining how fast I could graduate... But, my English has been hopeless since I was in junior high school...So, it is very hard for me to read English journal articles by myself even when I have translated every vocabulary and phrase in these articles...let alone writing... No wonder that journal reviewers often commented on my language problems and asked me to seek more professional assistance from the editing agencies they recommended." (Mark, 3rd Interview)

In the two excerpts above, both Jenny and Mark indicated that they had encountered some language problems such as grammar and word choice in English and English writing for scholarly publications. However, once again, their differing levels of English proficiency affected how much and what kinds of assistance they needed to help them better solve their problems at hand. For instance, while Jenny was not extremely proficient in English considering that she scored only 625 points in her previous TOEIC exam and she made grammar and word choice mistakes "from time to time", compared to Mark, Jenny was much more confident in her English ability and her ability to find proper assistance from the editing service on her campus (i.e., the school language center). Furthermore, Jenny was not so much anxious about her English writing ability as to find the perfect topic that her adviser and/or the gatekeepers of journals might be very interested. In contrast, Mark was once again very frustrated with his low proficiency in English (i.e., TOEIC 375 points), especially his inability to fully comprehend the content of research articles even under the assistance of translating every English vocabulary and phrase into Chinese. Mark also implied that he failed to find the proper language assistance prior to his submission of journal articles so that journal reviewers asked him to edit his article again by seeking the help from their recommended editing agencies.

6. Implications

The results of the study indicated that English had played a significant role in the overall disciplinary enculturating process of the participants, which confirmed the results of previous studies that NNES graduate students often suffered from their low proficiency in English and the process of disciplinary enculturation was especially excruciating for NNES graduate students who

often lack the relevant cultural and linguistic capital to successfully publish their research (e.g., Canasave, 2002, 2008; Casanave & Flowerdew, 2000; Li, 2006; Cho, 2009, 2013; Fazel, 2013). As a result, NNES graduate students in Taiwan might need abundant guidance from their advisors and effective editing assistance from language professionals to solve their linguistic problems at hand.

The findings of the study also confirmed the findings of previous studies which have demonstrated senior members (e.g., advisors) did play a crucial role in apprenticing NNES graduate students into their target disciplinary communities by enhancing their disciplinary knowledge of genres, conventions, and purpose of academic writing in their target disciplinary communities (e.g., Angelova & Riazantseva, 1999; Cho, 2004, 2009, 2013; Kuwahara, 2008).

Moreover, the findings of the study proved the legitimacy of Lave and Wenger's (1991) theory of *legitimate peripheral participation*, which sheds light on how these NNES doctoral engineering students in Taiwan would need to rely heavily on the assistance and guidance of their doctoral advisors to develop their disciplinary-specific knowledge and competence so that they could gradually move from novices to full-fledged members with increasing movements in their target discourse community. For instance, Jenny and Mark both longed for the guidance from their advisors to help them scaffold the structures of writing acceptable journal papers and to provide them a proper model to present their conference papers, which echoed what Prior (1998) termed as the *zone of situated relationship* that allowed both participants to be guided by old-timers in their disciplinary communities to engage in meaningful disciplinary-specific activities such as preparing for conference presentations and comprehending the necessary genres (e.g., the structures of disciplinary-specific journal papers and dissertation chapters) in their disciplines.

Hence, the lens of *legitimate peripheral participation* (Lave & Wenger, 1991) enable us to understand not only how these NNES doctoral engineering students in Taiwan learn their disciplinary-specific ways to become full-fledged and legitimate members in their target academic communities but also how they gradually learn the ways of thinking, doing, and behaving in their academic fields by receiving support from old-timers (e.g., advisors, senior classmates, and journal reviewers) in their target disciplinary communities.

7. Conclusion

This study strived to investigate how two Taiwanese science-majored graduate students became enculturated through various disciplinary practices of their discipline. In particular, it focused on the learning challenges they had encountered during their overall process of disciplinary enculturation. The findings indicated that the overall English proficiency of these students played a crucial role in their process of disciplinary enculturation. In addition, both of the participants longed for more guidance from their disciplinary mentors/instructors regarding how to present their research and write for journal papers more effectively in English. Moreover, the participants

encountered varying degrees of English writing challenges in writing for scholarly publications.

In order to better address the needs of these students, it might be beneficial for these students to take genre-based writing courses offered by their advisers or course instructors. In this way, they could not only learn how to write discipline-specific research articles more effectively in English but also acquire the essential disciplinary knowledge from the disciplinary experts to become more full-fledged and legitimate members in their disciplinary communities.

8. Limitations and Future Research Directions

This study has two limitations. First, this study is not a longitudinal study and the overall duration of investigation only lasted for one semester over the academic year of 2017 and 2018. To better understand the overall disciplinary enculturating process of these participants, a much longer longitudinal study that lasts for one to three years will be able to better trace the overall academic journey and progress of these participants. Second, this study only compared and contrasted the learning challenges of two focal participants in one discipline (i.e., Engineering) during their process of disciplinary enculturation. Future research could further investigate more participants in either one discipline or two to three disciplines to unravel how NNES graduate students in science and non-science disciplines (e.g., English, Journalism, and Philosophy) might encounter similar or different challenges in their process of disciplinary enculturation.

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Appendix A

Email Invitation

Greetings (name),

You're invited to participate in a research project that investigates the disciplinary enculturating process of Non-native English speaking (NNES) doctoral engineering students in Taiwan. More specifically, this study aims to examine what kinds of challenges those students have encountered in school.

BENEFITS: Through your participation in this project, we will gain a better understanding of your experience as a NNES doctoral engineering student in Taiwan. We will gain valuable information to enhance the curricular reform of those students in Taiwan.

RISKS: All materials, interview notes and records will remain confidential to minimize risk. There are no known risks to participating in this study.

PROCEDURES: If you choose to participate in this study, you will be invited to participate in one to three thirty-minute private and confidential interviews with Dr. Cheng. Interviews will be recorded and transcribed for future reference and analysis within the next twelve months.

COSTS & COMPENSATION: There are no associated costs with this study.

CONFIDENTIALITY: The interview recordings and observation notes obtained during this project will be presented with pseudonyms (fake names). Participation will not be shared with individual supervisors. Participants can choose to meet in different settings to protect identity and confidentiality. When the data is presented in class or any other setting, publications, etc., pseudonyms will be used to protect you and your university. Neither your name nor your university's name will be included. If you withdraw from this study, all individually identifiable data provided by you will be destroyed and not used for analysis.

Your participation in this project is completely voluntary, and you are free to withdraw at any time, for any reason. You are also free to decline answering any questions that you do not wish to answer. You will receive a copy of the research report once it is completed.

If you have any questions about this project, please contact me at cxxx@niu.edu.tw or at 0921-xxx-xxx. You may also contact me anonymously if you wish.

Sincerely,
Dr. Chu-Chun Cheng
Assistant Professor
National Ilan University

Appendix B

Sample Interview Questions

1. What lab are you in right now? How many people are there in your lab?
2. Does your lab have weekly meeting? If so, what do your lab members usually do in those weekly meetings?
3. How long have you stayed in this university? Where did you get your bachelor and master degree?
4. How many courses have you taken so far? Have you passed your qualifying exam?
5. Did you have to do a lot of teamwork in your major? Why or why not?
6. Could you tell me what your research interests are? And could you briefly explain those interests to me?
7. Have you thought about giving up on your doctoral study? What made you think so?
8. Have you had any difficulties or challenges in your doctoral study? If so, could you briefly tell me about them?
9. What are some of the main causes of those challenges?
10. Have you tried to find any person or any resources to help you overcome those challenges? If so, could you briefly tell me about them?