DOCTOR OF EDUCATION

International doctoral students
struggling, coping, and learning in a United Kingdom university

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Award date:
2019

Awarding institution:
Queen's University Belfast

[Link to publication](#)

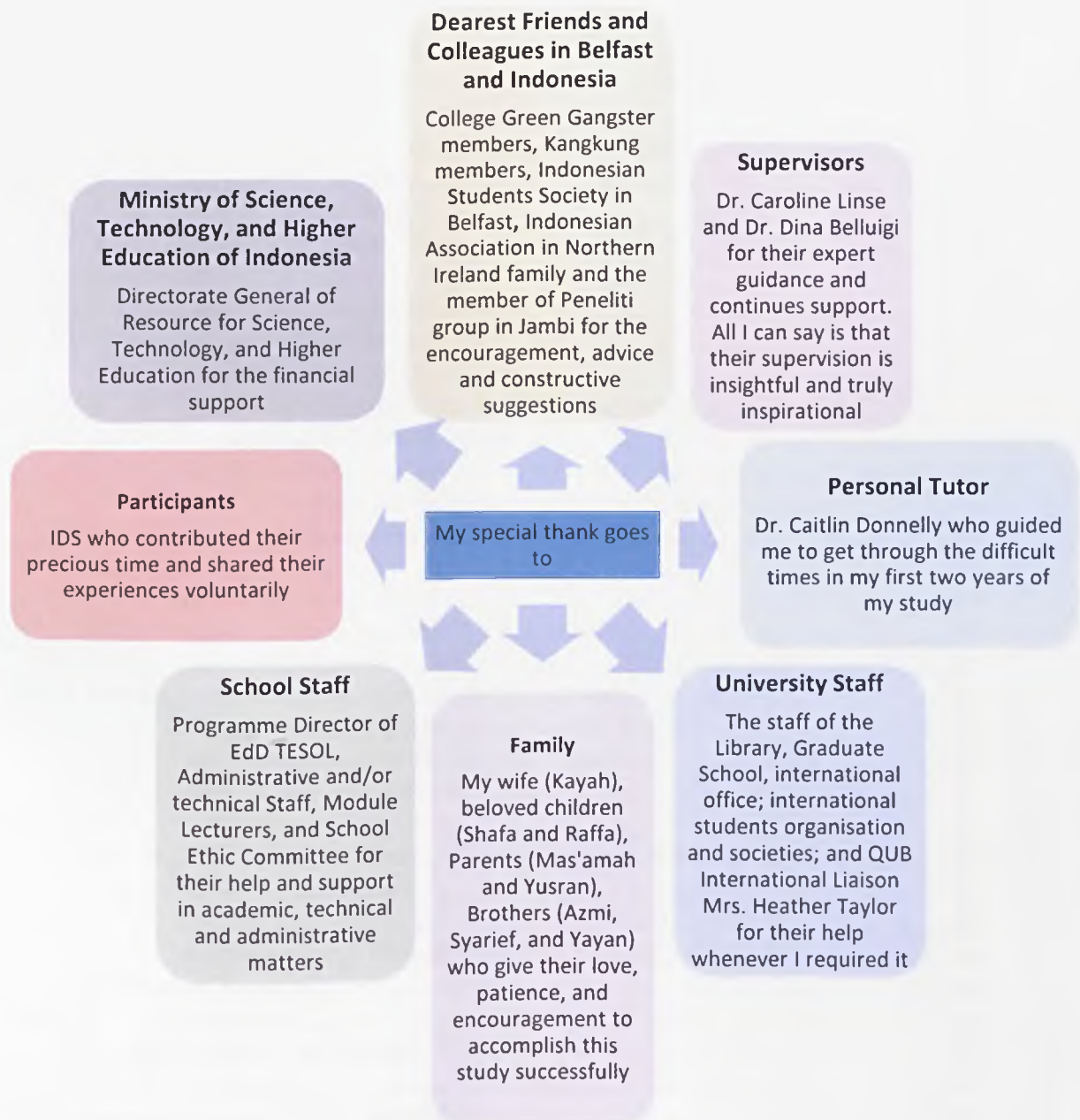# International Doctoral Students: Struggling, Coping, and Learning in a United Kingdom University

By

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A thesis submitted as part of the requirements for the

Degree of Doctor of Education (TESOL)

School of Social Sciences, Education, and Social Work

Queens University Belfast

November 2019

Abstract

The purpose of this study is to conduct an empirical study of international doctoral students (IDS) experiences studying in a United Kingdom (UK) university with three related significant discussions; (1) IDS' struggles, (2) IDS' support networks, and (3) IDS' strategies to address the struggles. To gain in-depth discussions, a qualitative method with a case study approach was employed. A total number of 16 IDS participated in this study. Their learning and living experiences were elicited with the use of sociogram and semi-structured interviews. Sociogram is an innovative technique of data collection through charting. This served as a prompt to gain robust information in the process of interviews and allowed the participants to visualise the networks of influences in their doctoral study. Semi-structured interview was designed to capture in-depth exploration on participants' experiences in their doctoral journey. Additional data was gained by analysing the document of IDS acknowledgment page from the same university to strengthen the data from sociogram and interviews. Drawing from thematic analysis and qualitative content analysis, the results of the study indicate that the participants experienced the struggles in the area of language, academic expectation, health, and contextual factors. To address these struggles, the participants employed some strategies that seem effective for them, including benefiting provided support from university, taking advantage of technological resources, asking for help, and self-management. The results of the study also conclude that familial, institutional staff members, and peer are pivotal support sources for the participants in their doctoral journey. All in all, the implications of the findings are discussed, which might be a unique contribution not only to higher educational institution, but also to prospective IDS who are planning to study at UK and/or overseas institutions.

Acknowledgments*

Dearest Friends and Colleagues in Belfast and Indonesia

College Green Gangster members, Kangkung members, Indonesian Students Society in Belfast, Indonesian Association in Northern Ireland family and the member of Peneliti group in Jambi for the encouragement, advice and constructive suggestions

Supervisors

Dr. Caroline Linse and Dr. Dina Belluigi for their expert guidance and continues support. All I can say is that their supervision is insightful and truly inspirational

Ministry of Science, Technology, and Higher Education of Indonesia

Directorate General of Resource for Science, Technology, and Higher Education for the financial support

Participants

IDS who contributed their precious time and shared their experiences voluntarily

My special thank goes to

Personal Tutor

Dr. Caitlin Donnelly who guided me to get through the difficult times in my first two years of my study

School Staff

Programme Director of EdD TESOL, Administrative and/or technical Staff, Module Lecturers, and School Ethic Committee for their help and support in academic, technical and administrative matters

Family

My wife (Kayah), beloved children (Shafa and Raffa), Parents (Mas'amah and Yusran), Brothers (Azmi, Syarief, and Yayan) who give their love, patience, and encouragement to accomplish this study successfully

University Staff

The staff of the Library, Graduate School, international office; international students organisation and societies; and QUB International Liaison Mrs. Heather Taylor for their help whenever I required it

*Since the study employed sociogram as one of data generation techniques, I present my acknowledgment in the form of sociogram.

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List of Abbreviations

cf	:	confer
e.g	:	example gratia
i.e	:	in example
IDS	:	International doctoral students
IDSTA	:	International doctoral students' thesis acknowledgment
ISO	:	International student office
OECD	:	Organization for economic co-operation and development
PhD	:	Doctor of Philosophy
UK	:	United Kingdom
U.S	:	United State

Chapter 1. Introducing this Study

This study explores the experiences of international doctoral students (IDS) studying in a United Kingdom (UK) university. This chapter serves as an introduction to contextualise the study, with the inclusion of pertinent background information, and to outline the research strategy of this particular study and the ways in which I have structured my presentation across the various chapters. This opening chapter is structured in four main sections. The first section discusses the general study context under the heading Setting the Scene (1.1). It provides a brief summary of the conceptualisation of international students and the internationalisation of higher education in the UK. This section is necessary as it does very depend on the geographical context of the study. The study rationale (1.2) includes an outline of the current landscape and the reasons that led me to pursue this study. In the next sections, I outline the purpose of the study, in addition to the proposed research questions and the importance of addressing the study (1.3). In the last section of the chapter, I present an overview of the organisation of the thesis (1.4).

1.1   Setting the Scene

This section provides a discussion on two subsections interrelated in the context of the study. The first discusses the conceptualisation of the term "international student", followed by a section which provides a succinct review of internationalisation of higher education in the UK.

1.1.1   International Students

The term "international student" is generally used to categorise students who have travelled for educational purposes to another country in which they are not resident. This general descriptor, in principle, is in line with the majority of scholars' definitions. Richters and Teichler (2006), for instance, define international students as those "having crossed a national border in order to study or to undertake other study-related activities for at least a certain unit of a study program or a certain period of time in the country they have moved to" (p. 83). Their definition highlights that all students who have crossed the border of their own country are called international students, regardless of what educational level and/or programme they study. Following a different concept, Andrade (2006) emphasises more particular

characteristics in defining international students, stating that they are "individuals enrolled in institutions of higher education who are on temporary student visas and are non-native English speakers" (p. 134). Writing from the perspective of an English native citizen, he makes two specific points in his definition of international students. Firstly, they are limited to those studying at the tertiary level of education. Secondly, he identifies international students as non-native English speakers. The distinctive characteristics in his definition seem reasonable, as he carried out a study of international university students in the context of English-speaking universities. Despite the underlying concept differences, these interpretations share the same bottom line: the definition is determined on the basis of nationality and physical mobility.

Killick, on the other hand, argues that the principle of physical mobility in identifying international students may not be relevant for some recent cases, as a plethora of so-called "transnational education" models has grown. Students may receive awards or degrees from overseas universities, but never physically go, live and study there. Some students enrol on distance learning programmes and have online classes throughout their study period, while others may register and study at foreign university branches in their home countries. In these cases, physical mobility is no longer considered a determinant factor in defining international students. The obvious difference between international and local students in this context is their legal status, and possibly different tuition fees (2018).

Although there is not any absolute definition of international students, for the purpose of this study, individuals who are termed as international students are those who are physically mobilised to study or undertake other study-related activities outside of their home countries. Since the study is conducted in one UK university, the term international student refers to any student who meets international students' requirements when applied to the university, such as passing a language proficiency test. In addition, the student is a tier 4 visa holder student and/or not a UK/Irish citizen or permanent resident.

1.1.2   Internationalisation of Higher Education in the UK

The internationalisation of higher education has been an important trend in this globalised era. Some scholars see the trend as interrelated with the research, political and economic sectors. Wit (2002), for instance, argues that

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internationalisation of higher education is greatly influenced by academic, economic, socio-cultural and political rationales. In a similar vein, Altbach (1991) believes that internationalisation becomes a major tendency in research and the sciences, and affects both economic and political changes. Moreover, Bartell (2003) asserts that the growth of internationalisation of higher education is in response to social, political, economic and technological environments and challenges around the globe. Therefore, research into the experience of international students, including IDS and international education, is relevant to higher education.

One impact of the trend of internationalisation in education is the increase in international student mobility. Russell, Rosenthal, and Thomson (2010) report that more and more students choose to study at an overseas institution. In line with this assertion, current data from the Organization for Economic Co-operation and Development (OECD, 2018) shows the number of international students in tertiary education reaching five million by 2016. This number is over 11% higher than in 2012 (OECD, 2014). Furthermore, Boehm, Davis, Meares, and Pearce (2002) predicted an increase in the number of overseas students to over seven million by 2025. Figure 1 shows the past decades' trend of international students from both OECD and Non-OECD countries. It indicates growing international student mobility worldwide as a whole.
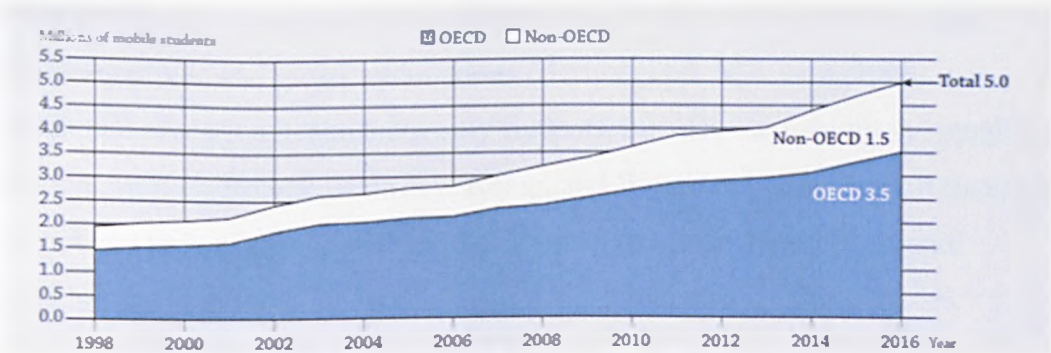
Figure 1.Growth in international or foreign enrolment in tertiary education worldwide (OECD, 2018, p.224)

In the OECD area, three English speaking countries, the United States (US), the UK and Australia, have become popular destinations for international tertiary students. Of the 3.5 million international students studying in the OECD countries, as shown in Figure 1, nearly a million students enrol in in programmes in the US, followed by the UK and Australia, with more than 400,000 and 300,000 respectively (OECD, 2018). The popularity of these countries makes sense, since the language of instruction in most programmes – English – is considered as the current lingua franca

in academia. The OECD (2018) reports language of instruction as one of the strong determinant factors in international students' choice of destination for study, in addition to perception of the quality of the programmes, immigration policy and fees (OECD, 2018).

With the increase in international student mobility flow, the economy of host institutions and countries, and the quality of education, are the other impacts in the development of international education. In terms of the economic sector, Davey (2005) states that international students bring a financial contribution to both the higher education institutions and to the national economy of a host country. The economic contribution comes mainly from higher tuition fees for international students (García & De Laurdes Villarreal, 2014; Hegarty, 2014), which are more than double the fees charged to domestic students (Burns, 2013; Sanchez-Serra and Marconi, 2018). Universities UK International (UUKI, 2018) estimated that the contribution to the UK economy by international students or non-UK students and their visitors was nearly £26 billion in 2016, generated on and off campus. It is obvious that the more international students come to study in a country, the greater the financial contribution obtained by both the institution and the host country. Concerning the increase in quality of education, the internationalisation of higher education provides a positive impact for international students. It offers more chances for students to enhance their quality of education to be able to compete in highly competitive and globalised markets (Bernunger & Mattsson, 2008). International education benefits not only students, but also the institution's quality of education. Mellors-Bourne, Humfrey, Kemp, and Woodfield (2013) report that more countries and their higher education institutions have made great efforts and approaches in response to the trend of international education. This includes partnership and collaboration in teaching and research, increased mobility for international students and staff, and constructing and implementing internationalised curricula. Such efforts and approaches improve the quality of education in the institution itself.

Although international students' mobility to the UK can be tracked back to the medieval period (Mellors-Bourne, et al., 2013), the positive recent trend of international education began when the British Council marketed higher education and offered different scholarships to support targeted or selected overseas students (Chien, 2015). Since then, the population of international students has continued to

rise to the present time – see Figure 2 which indicates the steady increase in the number of international/non-UK domiciled students in the last decade (UUKI, 2018).
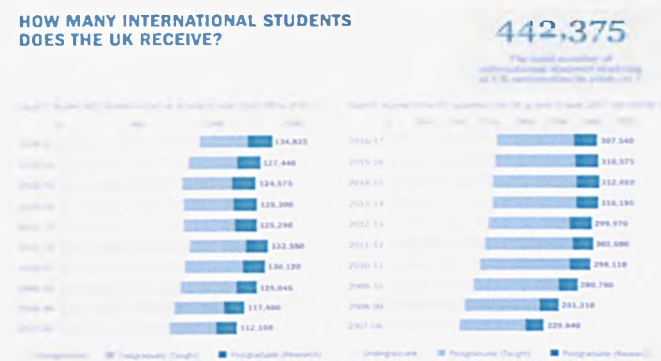
Figure 2 Number of international students in the UK 2007/08 to 2016/17 (UUKI, 2018, p.6)

The figures above indicate the proportions of international student type and study level. The number of non-EU students is far greater than EU students in every academic year. The highest population of international students is from Asia: more than 50% of international students are from Asian countries, including China, Hong Kong, Malaysia, and India (UUKI, 2018). In terms of study level, more international students enrolled in undergraduate programmes, compared to other levels, such as masters and doctoral programmes. The aforementioned discussion on international students and the internationalisation of higher education is relevant to this study, as it provides general information in the context of the study.

1.2 Rationale of the Study

This section addresses reasons to conduct the study into specifically IDS experiences. There are at least two main motives behind my particular interest in investigating IDS at a UK university. These include my personal experience and scarcity of prior studies on the issue.

The initial impulse to conduct this study was from my own lived experience as an Indonesian academic studying as an IDS at a UK higher education institution. During my study period since 2015, my experience as an international student has been bitter-sweet. In my first two months of studying abroad, despite being an academic, I found that I struggled academically and socially. I faced many challenges ranging from language to social-life issues. Yet, in spite of these difficulties, I learned more about myself, made friends from across the world, both inside and outside the university, become more aware of and familiar with other cultures, and found out how to manage the challenges I encountered to succeed

academically. From these elements came an interest and motivation in asking and exploring other IDS' experiences, and how they negotiated the challenges they faced.

Another reason that led me to this study is the scarcity of prior study and/or literature on comprehensive discussion of international students, including IDS, as I discuss in more detail in the second chapter. Therein I outline how scholarship on international students' experiences has gained a lot of interest in the last decade (see 2.2, 2.3). The growing number of such studies about international students seems to be indicative of the growth of internationalisation of education and perhaps the importance of international students themselves in the process of internationalisation. The importance of examining the experience of studying abroad was highlighted early on by Yokota (1997), who argued for the need to understand how international students obtain knowledge from programmes, what they obtain, and the changes in their personal development. In my review of the documented literature on international students' experiences, I note that much literature seems to focus on exploring the general viewpoints, such as challenges, coping strategies, and adjustment processes, with less attention on support networks perceived by international students in their study life. The scarcity of literature on international students' support networks encouraged me to include this aspect in this present study. Therefore, my motivation for this study was to contribute a more in-depth exploration of IDS experiences involving the struggles they frequently faced, the strategies they use to cope with their struggles, and the support networks they perceive as enabling them to pursue their studies as international students in a UK institution.

In addition to the issue of limited resources on international students' support networks, other further rationales of this study are the scarcity of doctoral level focus and on the UK context, identified from the countless studies on international student experiences. In terms of focus on doctoral students, some studies on international students include doctoral students' experiences, but only a few focus solely on doctoral students. Regarding the setting of the study, much literature documents the experiences of international students in US and Australian higher education, but, to date, little literature investigates the related issues in the UK context (Abrar, 2019; Abrar & Mukminin, 2016; Elliot, Baumfield & Reid, 2016; Ghadamosi, 2018; Wright & Schartner, 2013; Ye & Edwards, 2015). Among the studies, Elliot et al. (2016) and Ye and Edwards (2015) discuss exclusively the experiences of IDS.

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However, Elliot et al., (2016) focus their study solely on the acculturation issues, without discussion of coping strategies, or of the social support network; while Ye and Edwards (2015) studied a particular ethnic group of students. That is why I felt motivated to systematically investigate the issue in-depth, embracing discussion of IDS challenges, coping strategies and social support networks, from a heterogeneous ethnic group, in an effort to address the gaps in the study.

1.3 Purposes of the Study, Research Questions and Significance of the Study

1.3.1 Purposes of the Study

This study generally attempts to explore IDS experiences by generating and analysing the qualitative data provided by a small group of IDS studying in a UK university. To probe with the area of inquiry, this study explores the struggles faced by IDS in their UK study journey, including academic and non-academic difficulties, and challenges which they identify as important, in order to identify the strategies and support networks they have adopted and have found valuable in managing those struggles.

1.3.2 Research Questions

Three interrelated research questions were formulated to frame the study. They are relevant to the purposes of the study, and to the contribution to knowledge I seek to offer. The research questions are:

1. What struggles do international doctoral students face in their study journey?
2. Which support networks do international doctoral students perceive in their study journey?
3. How do international doctoral students use the perceived network to address the struggles in their study journey?

1.3.3 Significance of the Study

At least three groups and/or stakeholders will benefit significantly from the results of this study. First, it is beneficial for both prospective and current IDS. Prospective IDS who have access to this work will understand the struggles experienced by other IDS who have studied in the UK. From this work, they can prepare themselves for potential problems and find ways to survive the process of

studying and living abroad. For current IDS, especially for the participants, this study can be a medium for them to tell the world what they have experienced, so their voices can be heard. For other current IDS, the findings of this study – although they cannot be generalised – can represent their voices, so that the university staff and society might for the first time understand the depths of experience IDS undergo while studying and living with them.

Second, this study is significant for institutions in the UK and the rest of the world. As the study provides information on problems affecting IDS, the institutions can provide a facilitative pedagogical environment in which such students can grow and realise their potential. This eventually will help universities' image and reputation worldwide as international students are their actual living representatives.

Third, this study attempts to address gaps in previous related literature on IDS experiences by conducting a more comprehensive discussion, covering aspects of challenges, coping strategies, and social support networks. Additionally, this can benefit future related studies because the findings here may help further researchers to develop a framework of understanding that articulates the experiences of IDS.

1.4   Organisation of the Thesis

This thesis is structured into six chapters. Chapter one provides a brief introduction to the whole study. I began the chapter by outlining the working definition of international students utilised within the text (1.1.1) and its relation to the internationalisation of higher education generally, and in the UK specifically (1.1.2). I then briefly sketched the study rationale, study purposes, research questions, and significance of the study, all of which will be discussed in more detail within the chapters, as outlined below.

Chapter two presents the conceptual umbrella of the present study, which is then related to a review of existing literature in the field. The principal issues covered in this chapter are: (i) theories of self-efficacy and social networks, and their relation to the scholarship of international and/or doctoral students; (ii) a review of IDS struggles with scholarship; (iii) a review of IDS managing struggles; and (iv) a review of support network sources available to IDS.

Chapter three addresses the research methodology for this current study. It begins with a restatement of the research questions and the objectives of the study. Then, justification of the method and approach of the study is highlighted. The next

section of the chapter presents detailed explanations of the research methods, research setting, recruitment and sampling procedures, data collection, data analysis, ethical considerations and trustworthiness.

Chapter four reports on the findings that emerged from my analysis of data generated through the methods of participant sociogram construction and semi-structured interviews, in addition to document analysis of acknowledgements pages of IDS students' dissertations published at the same institution. This chapter is structured in three sections on the basis of the research questions (1.3.2, 3.1).

Chapter five discusses the results of the study and correlates them with related theories and previous studies under the heading Research Discussion. In line with chapter four, this chapter is presented in three sections.

In closing, chapter six presents four interrelated sections. The first summarises the study findings. The second outlines the strengths and limitations of the study. The third details the implications of this study, and the last makes recommendations for further research.

Chapter 2. Review of the Related Literature

This chapter encompasses the salient aspects of interest to this study in several interdependent sections. The discussion begins with a conceptual umbrella, reviewing the general theories relevant to the study. This section is necessary, as it shapes the nature of the study. Following this theory review is a literature review of three aspects of the study, covering IDS struggles, coping strategies, and support networks sources. Reviewing these aspects could provide relevant and current guidance to me as the researcher in answering the research questions.

2.1 Conceptual Umbrella of the Study

This section discusses self-efficacy and social networks theories as the research umbrella. These theories suit the scope of the study as they represent individual and social aspects of individuals. Within this section is a subsection on the concept of self-efficacy, followed by a subsection which links this theory to the scope of the study, which is the context of IDS. The two following subsections review social networks theory and its role for international students. The last subsection discusses the interconnection of the concepts of self-efficacy and support networks in the context of IDS.

2.1.1 The Concept of Self-Efficacy Theory

The concept of self-efficacy theory was introduced by Bandura in 1977. In later years (1986, 1997), he situated self-efficacy within social cognitive theory (Pajares, 1997), in which he details *human agency* and *self-reflection*. Human agency refers to an individual's capacity to take control of thoughts and direct actions (Bandura, 1986, 1997), which is largely affected by behavioural, interpersonal, and environmental factors. Self-reflection, considered as a human capability, is a form of self-referential thinking that an individual employs to evaluate, modify and change his/her own thoughts and behaviour (Bandura, 1986, 1997). These self-referential aspects include the construction of self-efficacy theory.

According to Bandura (1986, 1997), self-efficacy is belief in and judgment of one's capabilities to organise and execute courses of action required to produce given performance attainments – so self-efficacy refers to what individuals believe

and can do, regardless of what skills they possess. In other words, individuals who feel and believe that they can be successful are more likely to be so. This is because individuals set the goals, try hard to achieve them, and develop coping strategies to manage stress and pressure (Bandura, 1986; Poyrazli, Arbona, Nora, McPherson & Pisecco, 2002). Self-efficacy plays a significant role in individuals' success because it affects their behaviour (Bandura, 1977; Pajares & Kranzler, 1995). With self-efficacy, individuals make choices, decide the strategies to achieve the goals, and exhibit perseverance and elasticity. This suggests that the stronger individuals' notion of efficacy, the greater their effort, perseverance and elasticity (Bandura, 1986). Apart from affecting behaviour, self-efficacy influences the way individuals think and feel (Bandura, 1977). Individuals with high self-efficacy will view challenges as opportunities, not as dangers to avoid. On the other hand, individuals with low self-efficacy tend to think that tasks seem harder than they actually are, and this thought leads them to feelings of failure and depression. However, self-efficacy is not an entirely innate characteristic that individuals possess from birth; it can develop as they experience the world, and from judgement about their abilities (cf. Maddux, 2002).

Bandura (1993) states that self-efficacy functions through four major processes. First, through the cognitive process – the thinking process involving the acquisition, organisation and use of information. The effect of self-efficacy on cognition can be seen from how individuals value goals. The stronger the perceived self-efficacy, the higher the goals people set for themselves, and the firmer their commitment to them (Bandura, 1993). Second, self-efficacy plays an important role in the motivational process. It is reflected in individuals' intensity and persistence of effort. According to Bandura (1993), self-efficacy operates in three different forms of cognitive motivators: causal attribution, outcome expectancies, and cognised goals. It manifests in causal attribution when individuals attribute failure to insufficient effort, not to low ability; the reflection of self-efficacy in outcome expectancies is when individuals act on their beliefs about what they can do, as well as on their beliefs about the likely outcome of performance; and the role of self-efficacy in cognised goals can be seen from how individuals determine the goals they set for themselves, how much effort they expend, how long they persevere in the face of difficulties, and in their resilience to failure. Third, self-efficacy affects the affective process, regulating emotional states and the elicitation of emotional reactions. Individuals

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with strong self-efficacy are likely to be able to manage and control threats and pressures with both perceived coping self-efficacy and thought control efficacy (Bandura, 1993). The last major role for self-efficacy is in selection processing – individuals' choices of activities and environment. Individuals with strong personal efficacy undertake challenging activities and select situations they judge themselves to be capable of handling (Bandura, 1993). Figure 3 demonstrates the processes through which self-efficacy functions.

Self-efficacy

- cognitive process
- motivational process
- affective process
- selection process
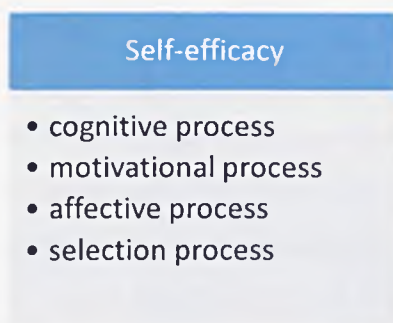
Figure 3. The processes where self-efficacy exerts its influence

It is important to note that self-efficacy is a required quality for everyone's success, including educational success among IDS and others. The interconnection between self-efficacy and IDS will be explained in the next sections.

2.1.2 *Self-efficacy for International Doctoral Students*

It is indeed important for IDS to possess self-efficacy, and undeniable that the doctoral experience can be viewed as a multi-faceted and emotional journey towards becoming a scholar. Challenges – expected and unexpected – may frequently occur during the doctoral experience, as the level of study requires more independent management, albeit supervised (Park, 2007; UK Quality Code for Higher Education, 2015). An absence or low level of self-efficacy in research can interfere with students' research training and willingness to conduct research (Love, Bahner, Jones, & Nilson, 2007), potentially hindering doctoral students from graduation. Attrition from doctoral programmes has reportedly averaged between 30% and 70% for decades (Bowen & Rudenstine, 1992; Gardner & Gopaul, 2012; Lovitts, 2001; Spaulding & Rockinson-Szapkiw, 2012). Much literature has highlighted factors which cause doctoral students' attrition, and one of them is navigating the complex dissertation stage (Baker, Pifer & Flemion, 2013; Golde & Dore, 2001; Lovitts, 2001).

IDS need to possess academic self-efficacy, research self-efficacy, and intercultural social self-efficacy. Academic self-efficacy refers to students' beliefs and judgements in their competence to control their learning and academic activities (Bandura, 1993; Midgley et al., 2000; Zimmerman, 1995). This contributes to the prediction of students' quality learning and achievement outcomes (Phan & Ngu, 2014; Pajares, 1996), including for doctoral students. The doctoral students who have strong sense of academic self-efficacy are more devoted, persistent, and emotionally adaptive to finishing their academic tasks.

Research self-efficacy primarily relates to students' beliefs in conducting research, and is required if a doctoral student is to progress well in his or her research. Several empirical studies have found that this self-efficacy is linked to an individual's research interest, involvement and progress, and higher research productivity (Bard, Bieschke, Herbert & Eberz, 2000; Faghihi, Rakow & Ethington, 1999; Hollingsworth & Fassinger, 2002; Tiyuri, et al., 2018). Faghihi et al. (1999), for instance, examined factors related to doctoral candidates' dissertation progress. Their study concluded that research self-efficacy is the most important factor influencing that progress. In another study, Tiyuri, et al. explored research self-efficacy and its relationship with postgraduate students' academic performance. The results indicated a significant direct relationship between student grade point average and research self-efficacy.

Intercultural social self-efficacy is defined as people's beliefs in their ability to carry out intercultural social interaction (Fan & Mak, 1998). This type of self-efficacy is required for IDS, as they mostly travel to culturally different places to pursue their degrees. Since self-efficacy has been found to positively contribute to international students' social adjustment, psychological health and life satisfaction (Gong & Fan, 2006; Li & Gasser, 2005; Yusoff, 2012), intercultural self-efficacy is possibly one of the most important coping resources in cross-cultural, social, and psychological adjustment. Neil and Mark (2007), who investigated intercultural social factors among Asian international students, found that intercultural social self-efficacy was inversely related to depressive symptoms. In a different study, Mak, Bodycott and Ramburuth (2015) examined the relationships between international students' internal and external coping resources, and their satisfaction with personal and university life. Their findings indicated that intercultural social self-efficacy

contributes to international students' life satisfaction in an English-speaking environment.

From the review of self-efficacy theory, it can be concluded that self-efficacy is individuals' belief in their competence in managing and controlling actions within a given social context. Arguably, a sense of self-efficacy is needed by IDS to adjust better to their host country, and to cope better with study and daily life issues.

2.1.3 The Concept of Social Networks

Scholars mention three key concepts that steer organisation of research on network effects: centrality, cohesion, and structural equivalence (Freeman, 1979; Burt, 1987). Network centrality measures the centrality reflected among a group of nodes; network cohesion measures the degree of interconnection among a group within the nodes; and structural equivalence indicates two or more network positions that share a similar pattern of connections with the rest of the network. These concepts were included in three lines of research that contributed to the early development of social network framework theory: the anthropology study, which explores the structure of community relations; the sociometric analysis study, which relies on graph theory methods; and an interpersonal relations study that focuses on the formation of cliques among a group of individuals (Scott, 1991). From the history of social networks theory, it can be concluded that the general concept of social network theory relates to the structure of social ties.

The conception of social networks is offered in many different ways. Ye (2006) ascertained that a social network, in social network theory, involves actors such as family and/or organisation and the relations that connect them. Ye also outlined how actors exchange resources, which could be in the form of data, financial support, emotional support, and information. In a similar vein, Liccardi, et al. (2007) argued that "Social networks are a social structure of nodes that represent individuals (or organizations) and the relationships between them within a certain domain" (p. 225). Moreover, Butts (2008) asserted that a social network is a social pattern which consists of distinct sets of actors who communicate with one another, sharing resources and information in the process. With a simpler definition, Nedeva (2000) outlined that "social network" refers to a structure on the basis of social relationship. Building on these notions, in a later section of this chapter, I present particular sources of social networks for international students (2.4).

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Although these definitions seem different, they exhibit similarities: (i) all definitions indicate that a social network is a social structure that involves individuals and/or organisations; (ii) all suggest that the basis of a social network is a social relationship. Linking all definitions, it could be argued that a social network is a social and interpersonal connection among individuals and/or organisations that link and facilitate them in exchanging resources.

2.1.4 The Role of Social Networks for International Students

Previous studies on social networks indicated that a social network is generally associated with many aspects of life, such as physical and mental health (Barger, 2013; Cohen, 2004; Small, Taft & Brown, 2011), an individual's likelihood of getting a job (Granovetter, 2003), and education (Desforges & Abouchaar, 2003; Hommes et al., 2012). This shows that a social network is a necessary and significant factor in individuals achieving a better life.

Subsequently, a social network plays a pivotal role for international students, including IDS, because it is a source of support and/or social support in adjusting and adapting to a new environment (Coleman, 1988; Kim, 2001; Ye, 2006). House (1981) associated that support with networking, which serves as a 'protective' factor against people's vulnerability to the effects of stress on health. Furthermore, Gottlieb (2000) defines social support as a "process of interaction in relationship which improves coping, belonging, esteem and competence through actual or perceived exchanges of physical and psychosocial resources" (p.28). It is clear that support is an interpersonal communication and assistance process which aims to improve individuals' sense of belonging, esteem, competence, and coping through networking.

A number of studies explored social networks of international students and found them to be crucial for their education and social life (Beech, 2015; Gomez, Urzua & Glass, 2014; Gomes, Berry, Alzougool & Chang, 2014; McFaul, 2016; Montgomery & McDowell, 2009; Sawir, Marginson, Deumert, Nyland & Ramia, 2008). A qualitative study by Beech (2015), for example, explored the role of social network for international student mobility and discovered that a social network has many particular roles, including as a source of advice and encouragement, a place for sharing experiences and a pillar to establish cultures of mobility. Montgomery and McDowell (2009) focused their study on exploring the role of social networks in the

academic and personal experience of international students. Their results indicated that a social network is an integral part of participants' learning experience, as it is a source of help, support and motivation for international students to succeed academically, socially, and, to a certain extent, emotionally. Moreover, the necessity of networks was also highlighted by Sawir (2008), who interviewed 200 international students. Two-thirds of the interviewees reported problems with loneliness and/or isolation. In his study, Sawir identified three categories of loneliness: (i) personal loneliness as a result of the loss of contact with families, (ii) social loneliness as an impact of the loss of networks, and (iii) cultural loneliness, initiated by the absence of a preferred cultural/linguistic environment. Based on his findings, Sawir emphasised the need for same-culture networks for international students.

The review suggests that the main role of social networks for international students is as a source of support. This support is not limited to morale or encouragement only, but it is also in the form of information – financial, spiritual and instrumental. The existence of support networks for international students can help them to succeed academically, socially, and psychologically. On the other hand, its absence will lead international students to face hurdles in their learning experiences. While this analysis relates to the *role* of social networks for international students, in section 2.4 of this chapter, I present an analysis of literature that considers the specific sources of social networks.

2.1.5 *Interconnection of Self-efficacy and Social Networks*

Principally, self-efficacy and social networks are two different and independent concepts. This is why I present them distinctly in the above sections. To reiterate the underpinning differences, self-efficacy focuses on the psychological construction of individuals and their agency, while social networks focuses on individuals' social interrelations with others. However, when it comes to the actual inter-cultural context of IDS, the focus requires that the two distinct concepts are brought into relation, as is outlined in this section.

The previous reviews of both concepts indicated that high self-efficacy (2.1.1, 2.1.2) and social networks (2.1.3, 2.1.4) are required components for IDS to succeed academically, socially and psychologically in their study journey. The reviews indicate that both conceptual components play a role for the students and the absence of either component may put hurdles in their way. For instance, without higher levels

of self-efficacy, students may have low interest in study; on the other hand, without engaging with enough social networks, the students may not have enough of the support they require. The interplay of self-efficacy and social networks is illustrated in figure 4:
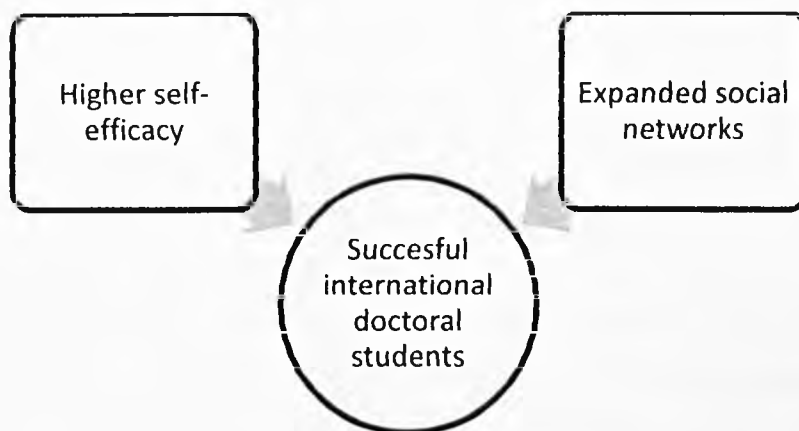
Figure 4. A visualisation of the interconnection of self-efficacy and social networks

The above figure highlights that self-efficacy and social network are necessary factors for IDS to succeed in their study. However, this is not to say that successful IDS do not experience struggles throughout their study life. In the three sections below (2.2 - 2.4), I review related previous studies which represent some of the central concerns of struggles of international and/or doctoral students, including communication, academic expectation, health, and contextual factors (2.2). Additionally, taking the lens of self-efficacy theory, I analyse the review of the ways in which students manage these struggles independently (2.3), following which I offer a social network analysis of the sources which enable them to manage the struggles (2.4).

2.2   International Doctoral Students: A Review of Struggles

This section provides an overview about the struggles of IDS studying in foreign universities. The term struggle is used in this thesis because it includes a strong emotional aspect which is more appropriate to the context of the study. Owing to inadequate and/or limited resources exclusively focusing on IDS, I initially reviewed the literature from two different angles – doctoral student experiences and international student experiences. This was to get a comprehensive review on the related topic. I searched the literature from several reference platforms and databases by typing related keywords, including *international student experiences*, *doctoral student experiences*, *postgraduate student experiences*, and *studying abroad*

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experiences. A large volume of related empirical research articles published within the last 20 years in peer-reviewed journals was selected and reviewed to discover common patterns of struggle experienced by doctoral and international students. The review results were employed as a basis for analysing the data. They indicated that the students experienced both expected and unexpected struggles in their study journey. Due to the complexity of literature review results, I synthesised and identified them into four major types of struggle, each consisting of sub-themes. The struggles include language (comprehension, and reading, writing, and speaking effectively), academic expectation (research process, supervision, and academic cultural differences), health (financial, physical, and emotional), and contextual factors (society, family, and living-related conditions). The following table provides the summary of review results.

Table 1 The Categories Literature Review of IDS Struggles

No		Key Points	Articles
1	Language	Comprehension	Abrar (2019); Abrar & Mukminin (2016); Cao, Zhu & Meng (2018); Gebhard (2012); Khawaja & Stallman (2011); Lee (2009); Li & Zizzi (2018); Lin & Scherz (2014); Malau-Aduli (2011); Park, Lee, Choi & Zepernick (2017); Rabia & Hazza (2017); Wearring, Le, Wilson & Arambewela (2015); Wright & Schartner (2013); Wu, Garza & Guzman (2015);
		Reading, writing, and speaking effectively	Abrar (2019); Abrar & Mukminin (2016); Alsahafi & Shin (2017); Cao et al. (2018); Gebhard (2012); Heng (2019); Khawaja & Stallman (2011); Lin & Scherz (2014); Park et al. (2017); Rabia & Hazza (2017); Sandekian, Weddington, Birnbaum & Keen (2015); Son & Park (2014); Wearring et al. (2015); Wright & Schartner (2013); Wu et al. (2015)
2	Academic expectation	Research process	Abrar & Mukminin (2016); Bamgboje-Ayodele, Almond & Sakulwichitsintu (2016); Cao et al. (2018); Click (2018); Elliot et al. (2016); Ezebilo (2012); Gebhard (2012); Kusek (2015); Sato (2016); Son & Park (2014); Vekkaila, Pyhältö & Lonka (2013); Wang & Li (2011); Yan & Pei (2018); Zhang & Brunton (2007)
		Supervision	Bamgboje-Ayodele et al. (2016); Bireda (2015); Carter, Blumenstein & Cook, (2013); Cornér, Löfström & Pyhältö (2017); Hunter & Devine (2016); Kim (2007); Maher, Wofford, Roksa & Feldon (2017); Pyhältö, Toom, Stubb & Lonka (2012); Sato (2016); Vekkaila, et al. (2013)

		Academic cultural differences	Abrar & Mukminin (2016); Elliot et al. (2016); Ezebilo (2012); Heng (2019); Lee (2009); Son & Park (2014); Tsevi (2018); Wang, Leen & Hannes (2018); Wearring et al. (2015); Wu et al., (2015)
3	Financial, emotional, and physical health	Financial	Acker & Haque (2015); Bamgboje-Ayodele et al. (2016); Bireda (2015); González (2006); Malau-Aduli (2011); Pyhältö et al. (2012)
		Emotional	Abrar & Mukminin (2016); Alsahafi & Shin (2017); Bamgboje-Ayodele et al. (2016); Bireda (2015); Carter et al. (2013); Elliot et al. (2016); Ezebilo (2012); Hansen, Shneyderman, McNamara & Grace (2018); Heng (2019); Lee (2009); Lin & Scherz (2014); Maher et al. (2017); Pyhältö et al. (2012); Sato (2016); Sawir et al. (2008); Vekkaila, et al. (2013); Wang & Li (2011); Wearring et al. (2015); Zhang & Brunton (2007)
		Physical	Brown & Watson (2010)
4	Contextual factors	Society	Acker & Haque (2015); Brown & Watson (2010); Ezebilo (2012); Gbadamosi (2018); González (2006); Green & Kim (2005); Hanassab, (2006); Hwang et al. (2015); Lin & Scherz (2014); Malau-Aduli (2011); Park et al. (2017); Rabia & Hazza (2017); Robati & Tonkaboni (2017); Wu et al. (2015); Yan & Pei (2018); Zhang (2016)
		Family	Bamgboje-Ayodele et al. (2016); Bireda (2015); Carter et al. (2013); Dickerson et al. (2014); Park et al. (2017); Pyhältö et al. (2012); Tsevi (2018); Vekkaila et al. (2013); Wright & Schartner (2013)
		Living-related conditions	Khawaja & Stallman (2011); Kusek (2015); Li & Zizzi (2018); Rabia & Hazza (2017); Son & Park (2014); Wang et al. (2018)

2.2.1 Language

The first pattern of IDS struggles from the review of the literature is the language challenge. This theme can also refer to culture differences because language and culture are intertwined. The language issue is a classical issue for international students, most of whom, including doctoral students, may experience language problems, especially when they travel to study in a new country.

Language is considered as an integral element in socialisation for individuals, as it is a medium for people to exchange ideas, share what they feel, and address their critiques or advice to the others. The appropriate use of language may bring some advantages, including having closeness with other people that individuals come

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in contact with. However, low language proficiency could cause a lack of understanding (Montgomery, 2010). Simply put, language proficiency is deemed important to maintain the smoothness of learning and interaction, as it concerns an individual's ability to use the language understandably and appropriately. As Canale and Swain (1980) outline, language proficiency refers to an individual's communicative competence in the target language environment. In a similar vein, Clark (1972) argues that language proficiency is the ability of learners to communicate using the language for real-life purposes, without concentrating on how the ability was acquired. When an individual is proficient enough in a language, he or she may not find it arduous to actively get involved in an interaction and/or to carry out an activity using the language. Therefore, it is obvious that adequate language proficiency plays a pivotal role in successful learning and communication, both in spoken and written forms. On the other hand, inadequate language proficiency triggers several issues, including difficulty in comprehending conversation and problems with effective reading, writing, and speaking.

2.2.1.1   Comprehension

Much literature, based on the review of previous studies, highlighted that comprehension was one of the major aspects of individuals' inadequacy in language proficiency. A qualitative study by Lin and Scherz (2014) identified the cultural and linguistic experiences of five non-native speakers, Asian international graduate students, at a US university. Their findings indicated that the participants acknowledged various challenges they encountered in their study life, including linguistic issues. Some suffered from difficulties in understanding lecturers in the classroom, and some had listening and speaking issues. Likewise, Lee (2009) conducted a study of Korean international students' oral participation in US seminars. The results indicated that one of the major obstacles to participation is the lack of language proficiency. Some participants specifically stated that they struggled to adjust to fast-paced and interactive classroom learning and discussion. They needed more time to understand the discussion and to think of what to say. In a different study, Wearring et al. (2015) found that the language proficiency issue, notably in English, is the concern of all participants. They struggled with understanding the language and took extra time to get used to the speed of conversation and local accents. Moreover, Li and Zizzy (2018), who focused their

research on international students' multicultural friendship development, revealed that understanding local friends' speech was one of the main challenges for the participants in their interaction.

The aforementioned studies show that individuals' lack of proficiency in a language could be a source of comprehension issues in the process of learning and communication. A number of other empirical studies have consistently reported that international students find it challenging to understand speech, due to proficiency issues (Abrar 2019; Cao et al. 2018; Park et al. 2017; Rabia & Hazza, 2017; Sandekian et al. 2015).

2.2.1.2   Reading, Writing, and Speaking Effectively

Another impact of inadequate language proficiency is the difficulty in reading, writing, and speaking efficiency. A qualitative study by Son and Park (2014), which specifically focused on examining the academic experiences of international PhD students in Australian higher education, reported that one of the concerns for IDS is the language-related issue. The participants, to be more specific, mentioned that they struggled to express their ideas in verbal communication with their lecturer and/or peers due to their lack of language proficiency. Moreover, some participants conceded that their proficiency level greatly affected the progress of other language skills, such as reading and writing. In a similar vein, Wright and Schartner (2013), who explored the social interaction and adaptation of international students in the UK, reported that some students frequently struggled in their interaction. They found it hard to express their ideas to lecturers and local friends/people fluently and appropriately, and therefore chose to keep silent.

In a more recent study project, my colleague Mukminin and I (2016) investigated Indonesian international student experiences in engaging in classroom discussion at one UK university. Our findings indicated that the participants, in this case international graduate students, could not actively participate in the discussion. Most of them admitted that lack of language proficiency, including a limited range of vocabulary and grammar, plus pronunciation and accent issues, was the main reason for their communication struggles. The students struggled to express their thoughts and ideas during the class and even felt reluctant to ask questions of the lecturers and their peers. Furthermore, a study from Park et al. (2017) which examined the adjustment challenges for international graduate students at US universities indicated

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that some participants suffered from study issues, including difficulty in expressing ideas in conversation and reading textbooks, due to language proficiency problems. Moreover, similar results were reported by Alsahafi and Shin (2017), whose mixed-method research explored factors affecting Saudi students' educational experiences in Australian universities, and their adjustments. The results showed that language proficiency is the main barrier to Saudi students' academic and social adjustment. The interview data indicated that language proficiency issues often affect students' spoken communication, such as speaking in front of other people and being active in class discussion.

The review of literature on language challenges suggests that the struggle mainly arises from the students' lack of language proficiency in foreign languages. This inadequate proficiency may affect the ways they address their thoughts and/or perceive and comprehend information. This is not to say that international students' language skills are poor, but differences between their native language and the targeted language they learn and speak may be the reason for international students' challenges in language (Sato & Hodge, 2009).

2.2.2 Academic Expectation

This theme includes all challenges associated with issues in research and study. For international and/or doctoral students, these issues can be very problematic and nerve-racking. Much literature on the related topics indicates that students struggle with these issues. Synthesising from the selected previous studies, three main challenges relating to research and study expectation are identified: the research process, supervision, and academic cultural differences.

2.2.2.1 Research Process

The literature review indicates that the research process is one of the common challenges for international and/or doctoral students. What it is meant by the research process is a set of steps that helps researchers to carry out their study. Generally, there are several stages in research, including topic selection, reviewing the literature, developing a theoretical and conceptual framework, clarification of research questions or hypotheses, research design, data collection, data analysis, writing a report, and drawing a conclusion (Creswell, 2014; Drew, Hardman & Hart, 1996; McMillan, 2012). These steps may vary slightly, depending on the nature of

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the research. The complexity of the research process often becomes a struggle for researchers, including doctoral students and/or international students.

Pyhältö et al. (2012) examined the problems of doctoral candidates during their study. They revealed that the research process represents one of the major struggles faced by the participants. Some students confessed that they found it troublesome to define research questions, while others found research methodology quite challenging. Likewise, a qualitative study by Bamgboje-Ayodele et al. (2016), which elicited the experiences of four final-year PhD candidates, found that the candidates were struggled somewhat during the research process. Some of difficulties were in choosing the research topic, conflicts in data collection, and difficulty in contacting respondents. Click (2018), in a different study, reported that international students experienced difficulties in their research ranging from the broader scale of research, i.e. coming up with an idea, to specific research skills, such as data analysis. Sato (2016) indicated that participants struggled with their research, with one participant mentioning that limited English proficiency put him in a challenging situation, especially when he had to write his research proposal. These reviews suggest that the research process is challenging for both international and doctoral students. The difficulty for international students is even doubled, as the process requires a good level of language proficiency, as indicated in the previous section (2.2.1).

2.2.2.2 Supervision

Supervision is another concern for the international/doctoral students. Supervisors in the academic world are often considered as experts in research who perform a variety of tasks, such as providing supervision, monitoring and improving students' performance, and giving advice and feedback on students' work (Petre, 2010; Russell, 1996). The study indicated that effective supervision is critical to doctoral students' satisfaction and successful careers. Zhao, Golde and McCormick (2007) specifically asserted that good supervision and a satisfactory relationship between student and supervisor are significant components of successful doctoral research. Moreover, Armstrong (2004) outlines that

> relationships with supervisors are also known to be related to the satisfaction
> and productivity that students find in their supervision, are known to be critical
> for successful completion, and are regarded by most graduate students as the

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single most important aspect of the quality of their research experience. (p. 600)

This indicates that the key to successful supervision is the quality of relationship between the students and supervisor, and problems between them may affect the students' completion.

Some of the literature reported that supervision is quite problematic for international/doctoral students. For example, Hunter and Devine (2016) found that doctoral students experienced negative supervisor interactions. The negative supervisory experiences include terrible relationships with supervisors, too critical and demanding supervisors, irresponsible and unreliable supervisors, and mistreatment/abuse by supervisors. Vekkaila et al. (2013) concluded that tension in supervisory relationship was one of the disengagement forms for doctoral students. Destructive feedback, a lack of support, power games, and bullying were part of the tension in the students' supervisory process. Furthermore, Sato (2016) noted that social and hierarchical relationships with supervisors were concerns for Asian doctoral students. In a more recent study, Maher et al. (2017) implied that having a good relationship with a supervisor is the key element for doctoral students. More than half of the study sample reported that problematic relationships with supervisors drove attrition decisions. A plethora of other related literature also highlighted supervision as a serious challenge for international/doctoral students in completing their study (Bireda, 2015; Corner et al., 2017; Hwang et al., 2015; Kim, 2007; Pyhältö et al., 2012; Ye & Edwards, 2015)

2.2.2.3 Academic Cultural Differences

Academic cultural difference is a unique issue to sojourners, especially international/doctoral students. It mainly relates to differences in academic circumstances, such as classroom interaction patterns, learning processes, types of supervision, and/or the education system. Since international students come from countries socially and culturally different from the destination country, it is not surprising that differences in academic environment may exist in their study journey.

A qualitative study by Wang et al. (2018), for instance, elicited the experiences of South American international students in a non-Anglophone context. The findings indicated that the participants struggled to adjust to academic culture differences from their home country, mainly around systems of education and assessment. In a

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different study, Wearring et al. (2015) concluded that type of assessment and western teaching and learning styles are two major challenges that Vietnamese international students have to adjust to during their study life in an Australian university. Moreover, Kim (2007) conducted a study to explore the difficulties international doctoral students experienced, and identified academic cultural differences in supervision as one of the challenges for the students. The participants admitted that they struggled to adjust to the supervision/advising style, because it was different from what they had experienced at university in their home country, and it was outside of their expectations. Some other concerns regarding academic cultural differences that international students need to deal with are instructional delivery, teaching media, classroom environment, and activities (Abrar & Mukminin, 2016; Elliot et al., 2016; Lee, 2009; Lin & Scherz, 2014; Son & Park, 2014).

2.2.3 Financial, Emotional and Physical Health

In the selected literature, health was identified as one of the concerns of doctoral and/or international students in their study journey. Synthesising from the previous studies, the category of health was divided into three main categories, financial, emotional, and physical.

2.2.3.1 Financial Health

Many researchers reported that finance is a serious concern for international and/or doctoral students, in particular self-funded students. Research by Acker and Haque (2015) showed that lack of funding is disastrous. Their respondents acknowledged that they made numerous efforts to secure funding for their study. A similar point was made by Bireda (2015) in his qualitative study. He explored the challenges facing female doctoral students from Ethiopia, and found that they suffered financially, and this affected the quality of their research work, and their social and personal lives. Furthermore, Pyhältö et al. (2012) and Kusek (2015) separately indicated finance as one of the problems faced by doctoral and international students.

2.2.3.2 Emotional Health

Emotional health is another concern for international/doctoral students. According to Pekrun and Stephens (2010) and Zeidner (2014), emotion is central in

learning as it directly links to achievement activities and outcomes. Previous qualitative and quantitative studies reported that international and/or doctoral students experienced emotional and mental strains during their study, suffering depression, anxiety, loneliness, and burnout (Alsahafi & Shin, 2017; Bamgboje-Ayodele et al., 2016; Carter et al., 2013; Corner et al., 2017; Elliot et al., 2016; Gebhard, 2012; Hansen et al., 2018; Hwang et al., 2015; Sato, 2016; Sawir et al., 2008).

A qualitative study by Sawir et al. (2008), for instance, focused on international students' loneliness. They interviewed 200 international students and found two-thirds experienced feelings of loneliness. This feeling was triggered by many factors, including personal, social, and cultural. Similarly, Elliot et al. (2016), who studied the experiences of IDS in the UK, reported loneliness as one of the challenges that the participants had to deal with in their studies. Moreover, Maher et al. (2017) discussed doctoral students' attrition in US universities, and found that some participants experienced stress and anxiety. They further acknowledged that these emotional states contributed to their intention to withdraw from programmes.

Some quantitative studies on international and/or doctoral students also reported that students struggled emotionally. For instance, a survey by Corner et al. (2017) which specifically investigated doctoral students' perception of different aspects of supervision and their relation to burnout, reported that students experienced high levels of burnout. Furthermore, the study highlighted how experiences of burnout were connected to students' attrition intentions. In a newer study, Hansen et al. (2018) assessed acculturative stress of international students at a US community college. They revealed that international students experienced high levels of acculturative stress, and this is likely to have had an impact on their health and learning success.

2.2.3.3   Physical Health

The review of the literature also indicated that physical health could affect the international/doctoral students' progress in their studies. This was highlighted by Brown and Watson (2010), who explored the experiences of female doctoral students. Their results indicated that being sick is one of the constraints from the students' balancing their study and home life. This suggests that being physically healthy is indeed necessary for students to be successful in their study journey.

2.2.4 Contextual Factors

The last category of IDS struggles identified from previous studies is *contextual factors*. This pattern is primarily associated with issues of social, family and living-related conditions.

2.2.4.1 Society

The results of the literature review indicated that discrimination or social isolation seem to be apparent society-related issues for international/doctoral students. Discrimination refers to "negative or destructive behaviors that can result in denying some groups' life and opportunities" (Hanassab, 2006: p. 158). Some studies highlighted how international students experienced a wide range of discrimination and/or social isolation behaviours in both academic and non-academic environments (Acker & Haque, 2015; Bonazzo & Wong, 2007; Green & Kim, 2005; Hanassab, 2006; Malau-Aduli, 2011; Park et al., 2017; Robati & Tonkaboni, 2017; Wu et al., 2015; Ye & Edwards, 2015). Bonazzo and Wong (2007), for instance, conducted a study to explore Japanese international female college students' experience of discrimination, prejudice, and stereotyping in a predominately white university. They found that the students experienced a wide range of discrimination, ranging from harassment to negative stereotypes about their culture and ethnic groups. Another study by Hanassab (2006), which examined perceived discrimination against international students entering university in the US, found that many students experienced discrimination. Moreover, Wu et al. (2015) explored international students' challenges and adjustments to college, and found that social isolation experienced both inside and outside classrooms. One participant in their study acknowledged that the most obvious isolation occurred in classroom discussion.

2.2.4.2 Family

Regarding family issues, role conflict and time management seem to be major constraints for married doctoral students. To illustrate, Carter et al. (2013), who investigated gender-specific differences in the challenges facing doctoral students, asserted that family and time commitments were the struggles for female participants. Similarly, Vekkeaila et al. (2013) found that some respondents acknowledged that balancing doctoral studies with family and work is their

disengagement trigger. To be more specific, the results indicated that heavy workload and the demands of full-time work or family responsibilities reduced students' time allocation for study. Brown and Watson (2010) found similar results in their research project. They noted that tensions between home and academic life – e.g. switching roles between doctoral student, wife and mother – is the major struggle for participants in their study.

Another prevalent concern is missing the family, or homesickness. This has been reported in most previous studies on international students. Park et al. (2017) reported that one of the early challenges that international students had to cope with while living far away from their family is the feeling of homesickness. A similar point was made by Tsevy (2018). She explored the experiences and strategies of international undergraduate students trying to persist in and survive their educational transition to achieve academic excellence. The students experienced some serious challenges, including feelings of missing family. Other studies highlighted similar findings (Alsahafi & Shin, 2017; Rabia & Hazza, 2017; Wearring et al., 2015; Wright & Schartner, 2013).

2.2.4.3 Living-related Conditions

Living conditions is another issue in this category. The term refers to cultural-related daily life aspects, such as weather, food, and lifestyle. A number of studies indicated that international students found it difficult to adjust to those aspects. Wang et al. (2018) reported that international students experienced socio-cultural challenges, including making friends with local people, food, and bad weather, including unexpected patterns of rain. A qualitative study by Kusek (2015) pointed out that international students found it uncomfortable to get involved with society and/or the local community due to many factors, such as the differences in lifestyle, and drinking and eating habits. Furthermore, differences in religious practice were identified as one of the struggles for international students living in a different country (Son & Park, 2014).

The review of previous studies on international/doctoral students above clearly indicates that communication challenges, academic expectation, health and contextual factors are the salient struggles of international/doctoral students in their study life. Based on the results of the literature review, specific thematic categories emerge in relation to IDS struggles, as illustrated in Figure 5. Hence, the categories

were used as guidance in searching for themes to answer the first research question in the process of analysing the data.
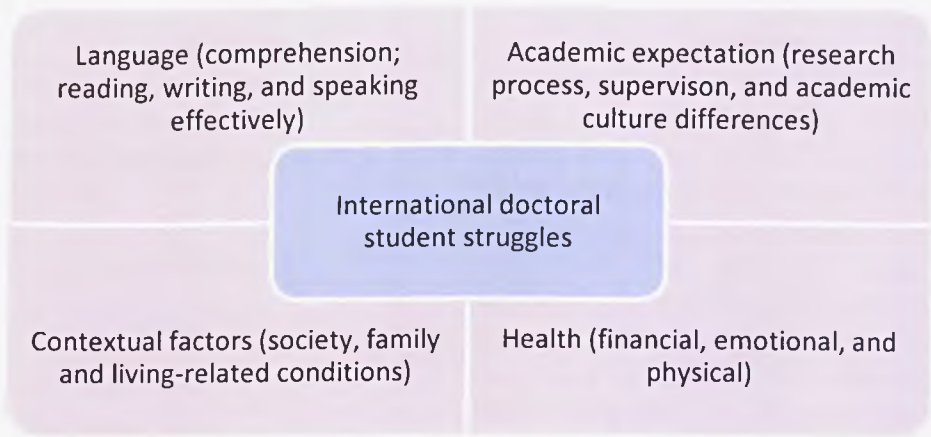
Figure 5. A visualisation of the thematic categories for analysis of international doctoral student struggles

2.3 International Doctoral Students: A Review of Managing Struggles

The section on a review of studies related to managing struggles provides meaningful information of how the IDS cope with challenges during their study journey. In accordance with the review of IDS struggles, the review of managing struggles had the same method, due to limited sources on the topic. I collected a large amount of related empirical study on doctoral students' and international students' experiences, and synthesised the results of the review. Owing to the complexity of the review results, I synthesised them into four main categories of coping strategy: (1) taking advantage of support provided; (2) taking advantage of technology resources; (3) seeking help from others; and (4) self-managed. Table 2 below summarises the review.

Table 2. Managing IDS Struggles Literature Review

No	Key Points	Articles
1	Taking advantage of university support provided	Park et al. (2017); Ezebilo (2012); Gbadamosi (2018); Gebhard (2012); Wu et al. (2015)
2	Taking advantage of technology resources	Abrar & Mukminin (2016); Gbadamosi (2018); Gebhard (2012); Khawaja & Stallman (2011); Saravanan, Mohamad & Alias (2019)
3	Seeking help from others	Abrar (2019); Cao et al. (2018); Dickerson et al. (2014); Ezebilo (2012); Gebhard (2012); Heng (2019); Janta, Lugosi & Brown (2014); Khawaja & Stallman (2011); Malau-Aduli (2011); Park et al. (2017); Saravanan et al. (2019); Wette & Furneaux (2018)
4	Self-managed	Abrar & Mukminin (2016); Acker & Haque (2015); Cao et al. (2018); Ezebilo (2012); Gebhard (2012); Heng (2019); Khawaja & Stallman (2011); Park et al. (2017); Saravanan et al. (2019); Wette & Furneaux (2018); Ye & Edwards (2015)

2.3.1 *Taking Advantage of University Support Provided*

The results of the literature review indicated that one of the ways used by IDS to overcome and/or alleviate the struggles during their study journey is by benefiting from university support. In other words, students utilised the available and accessible university support, such as seminars, workshops, the health centre, and other facilities. Park et al. (2017) for instance, who investigated the challenges and coping strategies of international graduate students from East Asia, reported that one method used by the students to face their challenges was accessing on-site campus facilities. More specifically, some participants revealed that they used their rights to access the university gym, art centre, and health centre.

In a different study, Wu et al. (2015) explored international students' adjustments and found that they experienced multi-layered challenges, ranging from academic to cultural barriers. In facing the challenges, it was reported that the participants used university support, such as going to the university counselling service, participating in university activities, and joining a students' club at the student union. Moreover, Ezebilo (2012) conducted a study on doctoral students in a Swedish university, and found that one of the ways the students coped with problems encountered was to take part in student union activities. Attendance and participation

in campus activities organised by the student union has helped them to manage their struggles, because they can make new friends and meet other international students.

2.3.2 Taking Advantage of Technology Resources

Nowadays, technology has become integrated into every aspect of life. It is largely used for many different activities and purposes, such as for entertainment media, learning resources, and coping strategies (Armstrong et al., 2005; Coffey, 2012; Liu, 2010; Wang, Woo, Quek, Yang & Lium, 2012). A review of studies that explored international and/or doctoral students' experiences indicated that technology seems to be a useful medium to enable the students to cope with both personal and study issues (Abrar & Mukminin, 2016; Gebhard, 2012; Khawaja & Stallman, 2011; Saravanan et al., 2019). Khawaja and Stallman (2011) examined the challenges and coping strategies of international students using a qualitative study. They found that technology provided a method for international students to alleviate their homesickness, and helped them familiarise themselves with the city and campuses. They installed and used technological applications such as Facebook, Skype, YouTube and Google Maps to help them.

In a more recent study, Abrar and Mukminin (2016) reported that technology was used by participants as a medium for learning to manage their worries about classroom discussion engagement. To be more specific, participants frequently used an electronic dictionary installed in their mobile phones to help them overcome problems with vocabulary during discussion. Moreover, Saravanan et al. (2019) focused their study on exploring coping strategies for depression and homesickness used by international students. The findings of their study indicated that the participants took advantage of technological resources, i.e. watching television and listening to music, to manage and alleviate feelings of depression and missing family.

2.3.3 Seeking Help from Others

Drawing from the results of the related literature review, seeking help from others has been found to be a prevalent strategy used by international/doctoral students to manage their struggles during their study journey. This is reasonable because human beings are social creatures in nature, and could not live without any interactions from others (Baker, 2015). The results of the review also suggest that the

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strategy of seeking help from others can be manifested in many different ways, including asking for help, questions, repetitions, sharing and discussions (Abrar, 2019; Cao et al., 2018; Dickerson et al., 2014; Ezebilo, 2012; Gebhard, 2012; Janta et al., 2014; Khawaja & Stallman, 2011; Malau-Aduli, 2011; Park et al., 2017; Saravanan et al., 2019; Wette & Furneaux, 2018).

Cao et al. (2018) conducted a qualitative study which explored Chinese international students' coping strategies and social support resources in dealing with academic stressors. Their study suggested that the strategy of seeking help from others could help the participants to manage their struggles. Some participants reported that talking to friends, negotiating with their teachers, collaborating with friends, and asking for guidance from teachers were helpful ways to cope with communication barriers and heavy workload. Malau-Aduli (2011), in a different study, focused on exploring the experiences and coping strategies of international medical students. The findings of this study showed that seeking help from others worked effectively to alleviate participants' challenges. Several participants in the study acknowledged that sharing their problems with family, peers and professors was one way to deal with the challenges. My recent study (Abrar, 2019), on international graduate students' speaking experiences in a UK university, showed that participants encountered language and communication difficulties in interacting with people both in the classroom and in the university surroundings. To cope with the issue, the participants asked questions, and requested repetitions and clarifications whenever they had communication issues.

2.3.4   Self-managed

A plethora of literature in the reviews indicated that self-management is another prevalent strategy used by international/doctoral students to overcome the struggles in their study journey. What it is meant by self-managed strategy is one initiated and used by the individuals themselves. This strategy is closely related to self-efficacy, in which the individuals have belief in their own capabilities to develop coping strategies to manage stress and pressure. The self-managed strategy includes praying, keeping up with practising the language, reading and writing more, going on vacation, positive motivation, working part-time, and avoidance (Abrar & Mukminin, 2016; Acker & Haque, 2015; Cao et al., 2018; Ezebilo, 2012; Gebhard,

2012; Khawaja & Stallman, 2011; Park et al., 2017; Saravanan et al., 2019; Wette & Furneaux, 2018; Ye & Edwards, 2015).

A qualitative study by Gebhard (2012), for instance, which investigated international students' adjustment problems and working behaviours, indicated that a self-managed strategy was successful in coping with problems. The participants in the study reported some activities they carried out to deal with the struggles were praying, taking trips/holidays, and imitating. Another qualitative study, by Park et al. (2017), indicated that self-management was one of the participants' chosen strategies in dealing with both their personal and study issues. The participants mentioned that carrying out religious and spiritual activities helped them to face the stressors as international students. Moreover, one participant reported that avoidance/ignorance was a strategy she used in order to deal with discrimination she was facing. A more recent study on international students (Saravanan et al., 2019) suggested that self-management was a prevalent strategy for students. The authors reported that the participants had various ways to tackle their crisis events, including maintaining positive motivation, religious activities, physical exercise, shopping and other activities which kept them busy.

The review of previous studies on doctoral and/or international students clearly indicates that taking advantage of university-provided support, taking advantage of technology resources, seeking help from others, and self-management are the salient strategies of doctoral and/or international students to cope with all encountered issues. Based on the results of review, specific thematic categories emerged in relation to IDS strategies to manage struggle is illustrated in Figure 6. Hence, the categories were used as guidance in searching for themes to answer the second research question during data analysis.

Figure 6. A visualisation of the thematic categories for analysis of international doctoral students' strategies for managing struggles

2.4 International Doctoral Students: A Review of Social Network Sources

In 2.1.3 and 2.1.4 I outlined the concept of social networks and the role that they play for IDS. Because of the importance of social networks, which emerged in my analysis of the literature, this section is dedicated to exploring in depth what those studies indicated about the specific support sources. Later I draw on these sources, which are social structures, to analyse data collected in my study (see 3.5 for the methods which relate; and 4.2 of the analysis chapter).

In one of the influential early studies of international social support, a model of international students' friendship patterns is presented (Bochner, McLeod & Lin 1977). The model predicts that students will belong to three distinct social networks with particular cultural characteristics:

1. A primary, monocultural network consisting of co-national friends. The main function of this network is to express the culture or ethnic origin.

2. A second, bicultural network, consisting of bonds with host nationals, for example professors, students, and advisors. The main function of this network is to instrumentally facilitate the international students with academic and professional goals.

3. A third network, called multicultural, consisting of relationships with friends and acquaintances. The main function of this network is to provide companionship for recreational activities.

A later analytical device is the concept of social connections – weak and strong ties – utilised in a number of recent international student networks studies (Bilecen, 2014; McFaul, 2016; Taha & Cox, 2016) and has informed my own analysis. According to Granovetter (1983), a strong tie is viewed as a relationship which involves frequent interaction, emotional intensity and intimacy, and is homophilous in nature. When read in relation to the above network definitions, it is presumed that this has implications for the heterogeneity of multi- and inter-culturalism. Family, co-nationals and close friends belong to the category of a strong tie network. On the other hand, relationships which feature less frequent interaction, lower levels of intensity and intimacy, and are less homophilous, are in a weak tie network. This includes acquaintances, other friends and host nationals.

Summarising from reviews on international student networks, it can be said that there are three main support sources for IDS, including familial, friends, and

institutional staff member support. The discussion of each source of support is presented in the following subsections.

2.4.1 Familial Support

Family is assumed to be one of the major support sources that individuals may obtain in their lives (Lyons, Perrotta & Hancher-Kvam, 1988). Family is the social unit where people live and grow up. Family relations can generally be defined by blood and/or adoption (parents, children, siblings), marriage (husband, wife, in-laws), and living together (spouse). The support from family members is greatly significant for individuals, with much literature indicating this is the case for many international students. To date, there has been much literature on the role of family support for international/doctoral students' success and learning experiences (Dickerson et al., 2014; Hercog & Van de Laar, 2017; Le, LaCost & Wismer, 2016; Pimpa, 2002; Stevenson & Bland, 2017). All of these texts highlight the significant role of familial support networks for students, especially for financial and psychological problems.

A study by Le, et al. (2016), who explored the experiences of international female graduate students, reported that familial support is a helpful network for them. One participant in particular told how support from family, in this case a host family, was instrumental in alleviating homesickness and loneliness. Moreover, Stevenson and Bland (2017) stated that family contributed to international students' learning experiences. The findings also suggested that family provides various kind of support for students, such as emotional, financial, moral, spiritual, psychological and practical. Pimpa (2012) noted that support from family was provided even before enrolment. Family played an influential role in students' choices to study abroad and became a source of financial support during their study abroad.

2.4.2 Peer Support

Another central support network for IDS is peer support. The term peer support is interpreted in many ways. According to Boud, Cohen and Sampson (2001), peer support is the provision of help from one person to another who has the same status and shared experience. Similarly, Toda (2005) defined peer support as "social support by individuals who are similar in age/or social condition to the

person" (p. 5). A more general concept was offered by Topping (1996), and by Cowie, Naylor, Talamelii and Smith (2002). They noted that peer support is normally found in friendship groups. These suggest that peer support is a type of social support on the basis of friendship, and the relationship is one of equality in terms of age, status, social condition, and experience. There are various types of peer support, such as peer learning, peer mentoring, peer group discussion, and online peer support. In the case of international students, peer supporters can be home friends, working colleagues, host friends, and other international students.

A plethora of study indicated that peer support is a worthwhile network for international and/or doctoral students because the support can help them to adjust better with a new environment and to cope with their personal or academic issues (Devenish, et al., 2009; Lee, 2017; Evans, 2015; Menzies & Baron, 2014; Thomson & Esses, 2016; Quintrell & Westwood, 1994; William & Johnson, 2011; Zaccagnini & Verenikina, 2013). Lee (2017), for instance, explored the role of peer support in managing supervision issues among international students. The study highlighted that a peer support network is an important resource for international students. It helps them to understand the nature of the supervision process in the host country. In their study, Thomson and Esses (2016) examined the effectiveness of a peer-mentorship programme for international students. They recruited international students and paired each with a mentor for at least one semester in their quasi-experimental method. The results of the study indicated that programme participants experienced better changes in sociocultural and psychological adaptation. The study also confirmed that programme participants had a lower level of acculturative stress than control participants. Menzies and Baron (2014) investigated the experiences of international postgraduate student transition at a university and found that the role of the student community and friends is pivotal in this transition stage. Moreover, Evans (2015) conducted an action research study to investigate the effectiveness of peer learning for international postgraduate students. The study concluded that peer learning is a useful way to enhance the learning experience and enrich the educational journey of international postgraduate students.

2.4.3 Institutional Staff Member Support

The last crucial support network for international students is the institutional support network. Although the notion of institutional support is sometimes limited to

financial or expanse support (Calder et al., 2016), this study offers a more general and holistic concept of the institutional support network. Institutional support refers to any support offered and given by a university to its students, including academic support, practical support, and/or social/personal support. Academic support from the university can be in the form of supervision, academic tutorial and mentoring, library services, and training or workshops on study skills development and language competence. Practical support may include financial advice/help, childcare, and careers services. Examples of social personal support from the university are counselling, health advice, sports and clubs, and the Students' Union. This concept corresponds with the categories of Bartram (2008) about the necessary support for international students at the institutional level.

The importance and effectiveness of institutional staff member support for international and/or doctoral students is mentioned in much literature (Ali, Zhou, Hussain, Nair & Ragavan, 2016; Arambewela, Hall & Zuhair, 2006; Bégin & Géarard, 2013; Gopee & Deane, 2013; Hughes, 2016; Lértora, Sullivan & Croffie, 2017; Zhou & Okahana, 2019). Hughes (2016) employed a qualitative study to explore the library-related experiences and perceptions of international students. The participants of the study viewed the university library and librarians positively. The study concluded that the library plays an important part in supporting international students' transition to a host university. In the mixed-method study of international students' satisfaction factors, Arambewela et al. (2006) found that institutional supports, such as the quality of education and student facilities, were among factors that made students satisfied in their learning experiences. Lértora et al. (2017) reviewed qualitative studies pertaining to Chinese international students' transition, concluding that university counsellors can support and assist international students in maintaining their physical and mental well-being through proactive outreach initiatives. Furthermore, Bégin and Géarard (2013) conducted a survey study about supervision among 533 doctoral students in French universities. The study suggested that the role of supervisor should be playing effectively and the supervisor should adopt a coaching role in the supervision process.

This review of studies about support networks for international students indicates that that there are three main sources of social networks, including those that relate to familial, peer, and institutional staff member relations. Moreover, the studies indicate that these three network sources play an important role in

international students' success in academic, social, and psychological aspects of their study journey. The illustration of these can be seen in Figure 7 below.

Figure 7. A visualisation of the thematic categories for analysis of international doctoral student support networks

2.5   Concluding Remarks

This chapter contained a review of literature related to the focus of the study. The first section of the study provided meaningful information of the present study research umbrella, and focused on discussion of self-efficacy and social networks theories, and their connection with the context of IDS. The final discussion research umbrella section offers a connection between self-efficacy and social networks in an educational context. In addition to the review of related theory, this chapter has also provided a comprehensive review on the focus of the study, including IDS struggles, managing strategies, and support networks. In the next chapter, the research methodology employed in the current research study will be outlined.

Chapter 3. Methodology

The previous chapter reviewed and considered relevant theoretical and conceptual lenses and their relation to published studies to outline the ways in which the field of enquiry has been explored. This chapter shifts in focus to the particularity of the methodological strategy, and the process of the present study. To begin with, research purposes and questions will be restated in this chapter (3.1). This is needed as a reminder for the researcher and readers about the focus of the study. After that, a more detailed explanation and justification of research design, participants' recruitment, methods of data collection, data analysis, and ethical issues and trustworthiness are presented (3.2-3.6). These sections give a clear picture of how the research was planned and conducted. The last section of this chapter (3.7) provides a summary of the methodology chapter.

3.1 Research Purposes and Research Questions

The purpose of this research is threefold. The first purpose involved the intent to develop an understanding of IDS' academic and personal struggles while studying in a UK university. The second purpose reflected a desire to explore the support network that they received while studying. This includes discussion on who supports them, and what type of support they felt they received. The third purpose concerned the goal of acquiring meaningful information on coping strategies that they applied to alleviate and/or solve the encountered struggles. In order to systematically approach this research, I present the following research questions:

1. What struggles do international doctoral students face in their study journey?
2. Which support networks do international doctoral students perceive in their study journey?
3. How do international doctoral students use the perceived network to address the struggles in their study journey?

3.2 Research Design

According to Yin (2018), research design is an essential part of research as it is a plan to guide the researcher in the process of collecting, analysing, and interpreting data. Furthermore, Huff (2008) outlined how research design or methodology are the

underlying principles behind the set of methods used to bring researchers to what they are trying to understand. These assertions underline the importance of appropriate justification of selected research design at the beginning of the study. Without a proper methodological grounding, the study may become meaningless. As previously indicated, the intention set out in this study is to provide an explanatory insight into IDS experiences in one university in the UK, and qualitative design with a case study approach is adopted as the method of inquiry in this current study.

Qualitative research is considered a good fit for the study since it is about how people make sense of things and interpret the existing phenomenon. According to Denzin and Lincoln (2005), "qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomenon in terms of the meanings people bring to them" (p. 3). Furthermore, Strauss and Corbin (1998) asserted that a qualitative approach allows the researcher to explore and interpret phenomena through feelings, thoughts and perceptions that are difficult to extract from conventional research methods. As researcher of this study, I will try to interpret and make sense of IDS' articulated perceptions, utterances, and feelings regarding their lived experiences during their doctoral study period. In addition, the use of qualitative research is believed to facilitate the gathering of rich, in-depth, and robust descriptive data (Creswell, 2014; Flick, 2014; Gray, 2013; Huff, 2008; McMillan & Schumacher, 2010; Punch, 2009).

Qualitative research, in terms of practice, is not solely a research design, but comprises a wide variety of approaches, including phenomenology, qualitative case study, ethnography, autobiography, discourse studies, and grounded theory (Clisett, 2008; Creswell, 2014; Denzin & Lincoln, 2005). These qualitative approaches are similar but also distinct in many different aspects, such as their discipline background, the range of sample size and how the data are collected and analysed. Despite the differences, all approaches have a common ground – providing rich and in-depth discussion of the phenomenon. In this current qualitative study, I will employ a qualitative case study approach in an attempt to unearth fruitful findings on the issues of IDS, motivated by a desire to identify their struggles, their managing strategies, and the social support networks they have found helpful.

As previously indicated, a case study approach is used in this inquiry; this approach is neither a purely qualitative nor quantitative research method. In a nutshell, a case study approach is not limited to a particular research method, but is

applicable to both qualitative and quantitative methods. However, as Gall, Gall and Borg (2007) note, case study has often been described as "a basic form of qualitative research" (p.447). They further argue that almost all topics in qualitative inquiry can be explained and explored using a case study approach.

The general idea of a case study approach is a detailed and in-depth study of one or several case(s) as an attempt to develop understanding of the case(s) in a natural setting and to recognise the importance of context and complexity within the case(s) (Punch, 2009). This idea is in line with some definitions of the term given by scholars. According to Stake (1995, 2005), case study is an approach of inquiry in which the researchers collect detailed and in-depth information about a programme, event, activity or process by using a variety of data on procedures over a sustained period of time. In a similar vein, Creswell and Maietta (2002), note: "Case study is an exploration of a 'bounded system' or a case (or multiple case), over time, through detail, in-depth data collection involving multiple sources of information and rich in context" (p. 162). Furthermore, Yin (2018) describes case study as a comprehensive research strategy with all an-encompassing method, including the rationale of the design, data collection techniques, and particular approaches to data analysis. These suggest that case study is a research approach and means of empirical inquiry which concentrates on an up-close, in-depth, and holistic exploration and analysis of a case or multiple cases from a particular programme, event, process or setting. As this study sought to explore the experiences about a particular group of students in a particular academic life (doctoral study), case study seems the most appropriate qualitative approach to be used for this study.

In general, case study has many classifications. Yin (2012), for instance, classified the approach into three main categories, including descriptive, exploratory and explanatory. According to Yin (2012), these three types of case study are different in their focus. Descriptive case study focuses on a complete description of a phenomenon within its context. Exploratory case study focuses on defining hypotheses or questions of a subsequent study, and an explanatory case study focuses on the cause and effect of the phenomenon. Gall et al. (2007) also classified three categories of case study: descriptive, explanation, and evaluation. Descriptive refers to a type of case study which portrays the phenomenon with thick description. Explanation case study occurs when the researcher elucidates the phenomenon of interest in an attempt to find the patterns within a case or across cases. Evaluative

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case study, on the other hand, is used to make a judgment about the phenomenon. Another classification of case study was made by Stake (1995). He categorised case study into instrumental, intrinsic and collective. Intrinsic case study is a study of a particular case (e.g. to explore the experiences of a particular EFL teacher). Instrumental case study is a type of inquiry in which the case is not the primary focus of the research, but functions as an instrument to get general understanding of the phenomenon of interest (e.g. a study aims to investigate the effectiveness of peer-mentoring through the context of a programme in a particular institution). Collective case study refers to an instrumental case which is studied as multiple and parallel. In other words, it focuses on one issue, but the researchers use several or multiple cases (Stake, 1995). In this current study, I adopt intrinsic case study, as this study focuses on one phenomenon, and the case for this study is limited to only one particular group (IDS at one UK university). Further, this research adopts explanation case study using the Gall et al. (2007) and Yin (2012) classification, because this study explores the perceptions and experiences of the participants within the context, and looks for patterns across the responses to the interview questions.

3.3   Research Setting and Recruitment

Due to the ethical requirements, the actual identity of the institution has not been included in this study, but in this section I give a sense of its general characteristics.

Participants were recruited from one of universities in the UK. This university is a public research university and has been included in the Russell Group of UK research-intensive universities since 2006. It is located in an urban context which does not seem strongly multicultural. However, the university does have some diversity, as it offers a wide variety of undergraduate and graduate programmes. Of the approximately 23,000 students who attend at the university, nearly 2,000 are international students from nearly 100 countries world-wide. These international students study in many different programmes, both as undergraduates and postgraduates.

Since the core purpose of this research is to explore IDS experiences, the research participants of this study are IDS themselves. In the process of recruiting potential participants, I as the researcher employed a purposive sampling procedure. This is considered appropriate, as it is a qualitative tradition, and allows the

researcher to select the participants who are most suited to the purpose of the research (Berg, 2009; Bernard & Ryan, 2010; Creswell, 2013; McMillan & Schumacher, 2010).

To purposely select the participants, the criteria of inclusion were specified. Firstly, participants are registered as full-time doctoral students (Doctor of Philosophy and/or professional doctoral programme) at the university. The reason for including full-time doctoral programme students as the main criterion of this study is on the basis of their intensity in engaging in academic activities, such as training, supervisory, and tutoring. In other words, full-time doctoral students engage more in academic activities and regularly attend the university. Secondly, participants are from culturally diverse countries, and their home language is not English. This implies that all IDS whom their home language is not English are eligible to participate in this research, including European Union (EU) students. This criterion is established as one of the focuses of this study in order to explore how language and cultures contribute to IDS experiences. Lastly, the participants are in at least their second year of doctoral study. This criterion is included because the students have undergone quite a lot of experiences as doctoral students.

In relation to the sample size, I planned to recruit a minimum of 15 and maximum of 25 participants in my study. This was based on the focus of a qualitative study that is exploring the phenomenon of interest in an in-depth and robust way, not generalising the findings. In addition, this sample was in line with the ideal range of sample size for qualitative study recommended by Creswell (2014) and Bertaux (1981). Therefore, having 15-25 research participants is an adequate amount sample to conduct an in-depth exploration in this qualitative study.

In the process of recruiting the participants, I firstly gained the ethical approval from the ethic committees of the university's School of Social Sciences, Education, and Social Work. Then, I began the process by getting in touch with the international student office (ISO) staff to help me circulate a research recruitment email to all full-time registered IDS at the university. The staff kindly gave me a space at the wall of ISO social media to advertise my research project (see Appendix 1). Besides, I contacted some international students' society presidents to circulate the email to a particular group of students (doctoral students). Both the email and research project notice included a link to the initial questionnaire, and to the consent form, which is used for further recruitment once students complete the questionnaire. The initial

questionnaire consisted of biographical information, including name, country of origin, native language, school information and year of study (see Appendix 2). The process of recruiting participants took about a month after sending the recruitment email and/or posting my research project on ISO social media.

Twenty-one international students completed the initial online questionnaire, and wished to do face-to-face interviews. I emailed each to arrange the interview time and date. According to Creswell (2014) and Patton (2002), the researcher should conduct the interview at time that is convenient for the participants. Unexpectedly, only seventeen of twenty-one prospective participants responded to the follow-up email for the interview schedule. After all interviews had been scheduled, one participant cancelled due to unforeseen circumstances. Thus, sixteen participants were eventually interviewed, eight males and eight females. Nine of them were in their second year of doctoral study, and the remaining seven were in their final year of study. To be more specific, two participants are in their fourth year of doctoral degree, three in their third year, and the rest in their second year. In terms of the participants' study major, eleven were from social sciences, and the other six were from natural science, and engaged in a range of studies. Their biographical information, with pseudonyms, is summarised in Table 3.

Table 3. Participants' profiles

No	Name	Gender	School	Year of the Study
1	Arnold	M	Social Science	2nd
2	Harry	M	Natural Science	2nd
3	Nancy	F	Social Science	2nd
4	Kathy	F	Social Science	4th
5	Grace	F	Social Science	4th
6	Angela	F	Social Science	3rd
7	Kitty	F	Natural Science	2nd
8	Bobby	M	Natural Science	3rd
9	Richard	M	Social Science	2nd
10	Yuga	F	Social Science	3rd
11	Renata	F	Social Science	2nd
12	Saad	M	Social Science	2nd
13	Scott	M	Social Science	3rd
14	George	M	Natural Science	3rd
15	Alex	M	Social Science	2nd
16	Lilian	F	Natural Science	3rd

Additionally, the participants came from multiple nationalities: eight from Southeast Asia, two from Western Asia, two from East Asia, one from South Asia, one from North Africa, one from West Africa, one from a transactional country in

Western Asia and Southeast Europe. The detail of participants and their origin countries can be seen in the following figure.
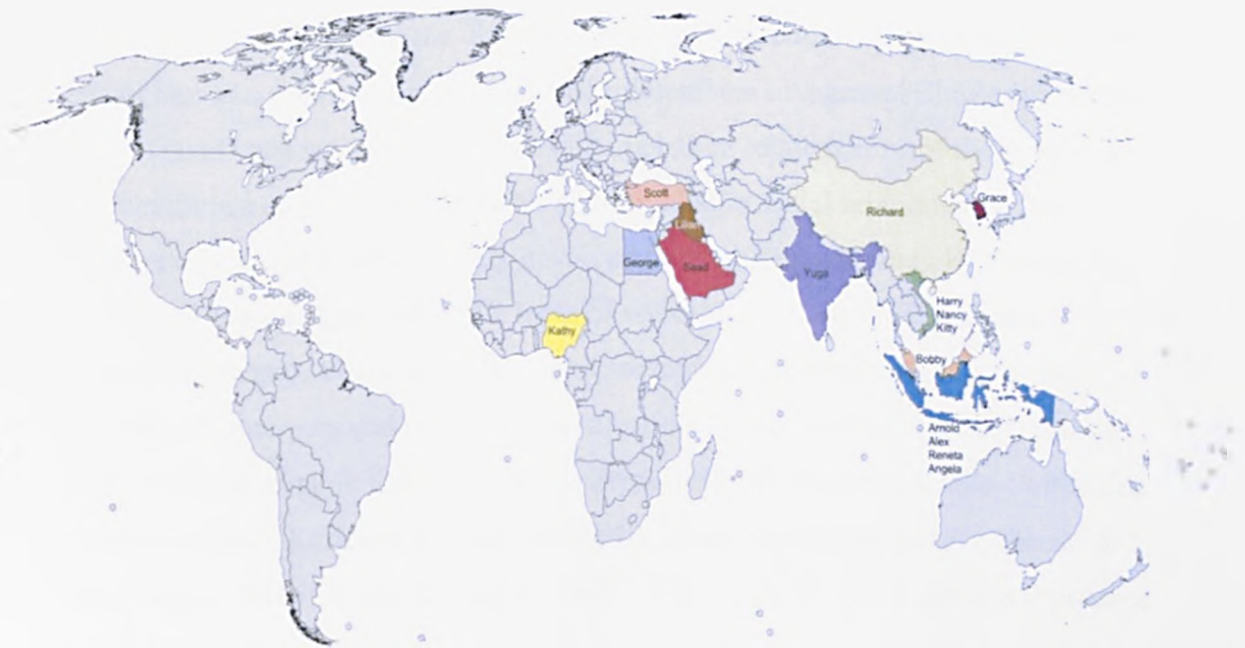
Figure 8. Participants' home origin Information

3.4 Data Collection

On the basis of methodological grounding, the research practices of the study had been carefully planned. The discussion of the research practices relates to the discussion on the data collection process. Simply put, it concerns how the data were generated and/or collected. The data collection process in this study involved three different techniques: a sociogram; in-depth, semi-structured interview; and documents. Although the first two techniques are different by nature, they are considered as unified in the process of collecting data. In practice, these techniques were conducted continuously, and were applied to acquire information from participants about the phenomenon of interest. The last technique was used to gather additional data to support the interview data in answering the last research question. The explanation of each data collection technique is provided in the following sub-sections.

3.4.1 Sociogram

The sociogram is an innovative technique of data collection in this study used to explore the participants' support network and social interaction. The term *sociogram* literally means the diagram of social connection. Forsyth (2006) defines a sociogram as a relationship diagram among members of a group. Similarly, Hucker (2001) posits that a sociogram depicts interpersonal relationships of the people; a sociogram is a chart which illustrates an individual's social relationships. The concept of sociogram was initially developed for sociometric study by Jacob Levi Moreno (1934), a psychiatrist, the basis of which can be briefly described as sociometry theory. Years later, the use of sociogram has been used to examine individuals' interpersonal relationships in various disciplines and research settings (Appleton, Terlektsi & Coombes, 2013; Brickell, 1950; Taimien, Kallio-Soukainen, Nosko-Koivisto, Kaljonen & Helenius, 1998; Merluzzi & Burt, 2013; Sobieski & Dell'Angelo, 2016; Willis & Coakes, 2000). The image of a sociogram is illustrated in the following figure.
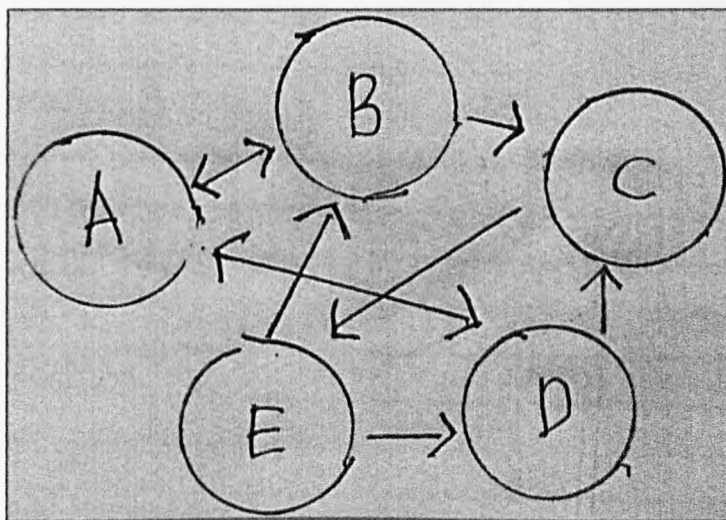
Figure 9. Sample of sociogram image

In terms of research, a sociogram has been used widely as one of the procedures in analysing data. In this sense, a sociogram is used as a part of the data analysis process. For example, Drahota and Dewey (2008) used a sociogram as a tool in interpreting focus group discussion analysis. They specifically used sociogram as a method to uncover a focus group dynamic. In another study, Philip (2010) used social network analysis, a sociogram, as a tool to explore students' interaction

pattern. However, Tubaro, Ryan, and D'angelo (2016) argued that the visual sociogram can also be used as a data generation technique. Therefore, in this present study, by adopting the argument made by Tunaro et al (2016), I used a sociogram as a process in which to generate data, both through the participants' charting of the network of influences on their doctoral study, and subsequent discussion as to which of these contribute to and/or support them in their negotiations of unpleasant experiences. In this way, the sociogram functions as a data generation method, which facilitates reflection and serves as a prompt to boost the dialogue with the study participants in the process of interview. To do this, participants were asked to design a sociogram that represents their social network during their study at doctoral level. In this case, I initiated the participants with a question prompt related to social support ("Who do you communicate with and support your doctoral study?"). After the participants drafted their sociogram, I photographed and used it as guidance for the later discussion in semi-structured interview to deeply explore the participants' experiences and perspectives on social support networks, IDS issues, and overcoming strategies.

3.4.2 Interviews

Interview was used as another way to generate data from the participants. As outlined in much literature, interview is one of the commonly used research instruments in qualitative research (Creswell, 2013; McMillan & Schumacher, 2010; Punch, 2009). In general, there are three forms of interview; structured, semi-structured and unstructured (McMillan & Schumacher, 2010). In this present study, I employed semi-structured interview, as it provides sufficient guidance for the researcher to share within the context of phenomenon, yet at the same time allows sufficient freedom for participants to share their experiences. Additionally, the attraction of conducting semi-structured is that it is quite adaptable in that the interviewer can probe or ask follow-up questions (McCracken, 1988; Gall et al., 2007; Rubin & Rubin, 2005).

Semi-structured interview is indeed the main data collection technique in this study. However, in-depth interview was not commenced before the participants drafted their sociogram, as this was used as one of the prompts/guidelines in the interview. Another guideline was a list of questions called interview protocol (see Appendix 3). It was handed to the participants before the interview, along with the

consent form (see Appendix 4). In the process of interview, the participants were individually interviewed and digitally recorded via a digital voice recorder. The interviews were in English and lasted for approximately 1.5 hour, including sociogram construction. While conducting interviews, I applied a standardised open-ended interviews approach (Gall et al., 2007). This approach allows the researcher to ask probing questions as a means of follow-up, and to change the sequential order depending on the situation. It also facilitates the participants in contributing as much detailed information as they desire. I also approached each interview by first asking grand-tour questions (Spradley, 2016), for example, "Can you tell me about your relationship with your supervisor?" This was followed by mini-tour questions (Spradley, 2016) in the form of descriptive and/or clarification questions, such as "How often do you communicate with your supervisor?" or "Do you find it easy talking to your supervisor?" Other than these, non-verbal communication aspects, such as facial expression, hand gestures, and emotion (Onwuegbuzie, Leech & Collins, 2010) were also observed in order to improve the understanding of the data.

3.4.3 Documents

In addition to the use of sociogram and semi-structured interviews, I used another data collection technique called documents. This is a widely used technique in qualitative research to generate data from both public and personal documents, such as reports, data sets, journals, letters, and even newspapers (Blaxter, Hughes & Tight, 2006; Creswell, 2014; Mason, 2002). According to Blaxter et al., (2006), documents are a useful data collection method in research because data from documents can be interpreted. Besides, this collection method has many advantages, such as enabling the researchers to obtain the language and the words of participants, saving the researchers' time, and in a form accessible at a time convenient to researchers (Creswell, 2014). Moreover, Mason (2002) argued that documents are a flexible method which can be used alongside several other methods of data generation. This indicates that documents are an invaluable part of most schemes of triangulation. In this study, documents were treated as an additional data collection method and the results of the analysis were employed to triangulate the interview data in answering research question two about IDS support networks.

The documents used in this study are the text of acknowledgments pages of IDS' theses. I randomly collected 100 international doctoral students' thesis

acknowledgments (IDSTA) from different schools and majors at the university (see Appendix 5). In getting the required documents, I requested the theses from the library and photographed the needed page(s). Owing to the random selection, the number of collected theses from social science and natural science majors were not equal (see Table 4).

Table 4. The Distribution of International Doctoral Students' Theses

International Doctoral Students' Theses	
Social Science	54
Natural Science	46

3.5 Data Analysis

Data analysis is a fundamental step in a research. It was carried out so that the data would be meaningful in answering the research questions. Due to the varied nature of data types in this study, I used different types of data analysis techniques. For the primary data, taken from the interview, thematic analysis – guided by the themes in Chapter 2 (2.2 – 2.4) – was employed to generate theme(s) and sub-theme(s) from the data. Moreover, qualitative content analysis was utilised in the process of analysing the data from the text (the text of IDSTA). The detail of both analysis techniques is outlined in the following subsection.

3.5.1 Thematic Analysis

After the data were collected from the participants' interviews, I used thematic analysis to identify emerging themes from the data. Thematic analysis is an established data analysis technique in qualitative research (Braun & Clarke, 2006; McMillan & Schumacher, 2010; Ryan & Bernard, 2003). This analysis method is considered a better fit for the primary research purpose of this study: to explore commonalities and differences in experience and perception across the participants in relation to the phenomenon. Moreover, thematic analysis allows for the analysis of a large amount of data from participants to be analysed and synthesised into a meaningful account (Boyatzis, 1998).

Notwithstanding the considerable advantages of thematic analysis, this analysis technique has been criticised as being too vague in its method (Holloway & Todres, 2003). However, Braun and Clarke (2006) provide six clear and detailed key stages

of thematic analysis in order to overcome criticism. These key stages will carefully be followed within the present study, as outlined in the following figure.

| Familiarising yourself with your data |
| Generating initial codes |
| Searching for themes |
| Reviewing themes |
| Defining and naming themes |
| Producing the report |
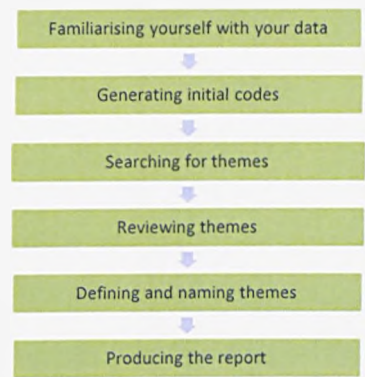
Figure 10. The phases of Braun and Clarke's thematic analysis (2006)

3.5.1.1   Familiarisation with the Data

The first process of the thematic analysis was familiarisation with the data by transcribing the recorded interviews. Bird (2005) asserted that this is a key stage of thematic data analysis. Transcribing the interview was one of the most challenging stages in this analysis. In transcribing the data, I used special software to slow down and adjust the speed of the recording audio. I also sometimes repeated the recording in order not to miss any information from the interviewees. Once I finished the transcription, I read the transcription again to minimise avoidable errors, such as spelling (see Appendix 6 for transcription sample). Then I sent the transcription to the interviewees to be checked. In addition, notes on initial ideas were taken to provide more information for further stages of analysis.

3.5.1.2   Generating Initial Codes

Following the first stage of thematic analysis, I read the transcription carefully and thoroughly several times. During the process, I carried out coding by highlighting lines to identify extracts at the semantic, or explicit, level (Braun & Clarke, 2006) that seemed relevant to answer research questions; I constructed mind maps to help me further familiarise the data. The collected extracts/codes were later linked together into general categories, such as emotional and psychological, research process issues, cultural issues, and so on (see Appendix 7 for initial coding). Some initial codes were merged and/or abandoned due to overlap with others in order to identify the emerging themes. Later, these extracts and emerging themes

would progress from description to interpretation, where broader meanings, interpretations, and implications would be drawn.

3.5.1.3 Searching for Themes

Having completed the initial coding of all the transcriptions, searching for themes was the next stage of analysis. According to Boyatzis (1998), a theme "…is a pattern found in the information that at the minimum describes and organises possible observations or at the maximum interpret aspects of the phenomenon" (p. 67). Braun and Clarke suggest that deciding on themes "…is a question of prevalence, in terms both of space within each data item and of prevalence across the entire data set." (2006, p. 82). This suggests that there should be a number of extracts for a theme across the entire data set. However, prevalence was not used as the determining factor to decide on a theme because themes should capture "…something important in relation to the overall research question" (Braun & Clarke, 2006, p. 82). In this present study, the process of searching for themes was relatively straightforward; I used the information I provided in the literature review section as the framework or category for the themes (2.2, 2.3, 2.4).

3.5.1.4 Reviewing Themes

Following the stage of searching for themes, themes were then reviewed. This stage was to ascertain that the themes correspond meaningfully, and that the data for each theme are adequate, as outlined by Braun and Clarke: "Data within themes should cohere together meaningfully, while there should be clear and identifiable distinctions between themes." (2006, p.91). In the process of reviewing the themes, I carried out a two-level analysis of the codes. The first level was conducted by reading through the codes for each theme and determining if a coherent pattern has developed (Braun & Clarke, 2006). If a coherent pattern was identified, I moved on to the second level of analysis. Conversely, if codes did not fit, I had to determine if the theme itself was the issue, or whether the codes and information for that specific theme were the issue. To complete the second level analysis, I read through the entire data set to ensure the themes fit in relation to the data. This also gave me the opportunity to check if I had missed any additional data that needed to be coded (Braun & Clarke, 2006). The process involved merging or discarding themes when the data was not considered sufficient.

3.5.1.5 Defining and Naming Themes

After completing the stage of reviewing the themes, the final stage before producing the report is defining and naming themes. The main purpose of this stage is to identify the essence of each theme in order to establish what it is about, and to determine aspects of each piece of data captured (Braun & Clarke, 2006). To meet this goal, I focused on defining each theme, identifying the essence of the theme and determining where the theme fits in terms of aspects of the data and research questions (Braun & Clarke, 2006).

3.5.1.6 Producing the Report

This is the final stage of thematic analysis. This stage focused on analysing the data and writing a narrative about the data that "…goes beyond description of the data, and make an argument in relation to your research questions"; while it also "…provides a concise, coherent, logical, nonrepetitive and interesting account of the story the data tell – within and across themes" (Braun & Clarke, 2006, p. 93). In the process of writing the results of thematic analysis, I selected some extracts to be reported, and made sure that all themes and sub-themes made sense in answering research questions.

3.5.2 Qualitative Content Analysis

As previously indicated, content analysis was employed to analyse the additional data of this research. Content analysis is a systematic data analysis technique which involves classification of each document based on its substance meanings. Beck and Manuel (2008), Grbich (2007), Neuendorf (2017) and Krippendorff (2013) separately outlined content analysis as a careful, detailed and systematic way to define, analyse, interpret, and categorise trends and substance meanings within the content of the texts, images, or even videos. Compared to other types of data analysis technique, content analysis has four distinguishing features: (1) it is a relatively unobtrusive technique; (2) It allows participants to process data texts that are meaningful, significant, and informative to others; (3) It facilitates unstructured matter as data; and (4) It is applicable with enormous volumes of data (Krippendorff, 2013). However, this technique also has some limitations and/or

disadvantages: (1) the researcher may ignore the context; and (2) content analysis is not considered as a valid method on its own for complex textual analysis.

In this study, because the results are used for supplementary data to answer research question 2, concerning students' support networks, I used a simple content analysis to analyse the text of IDSTA. In carrying out the analysis, I read the text carefully and repeatedly. Then, I marked the significant words in the texts, such as the individual who gives support to students and the types of support (academic assistance, resources, and moral support). The category of support in this analysis was adapted from the thanking move of Hyland's move structure of dissertation acknowledgment (2004). The results of the analysis were presented in the form of extraction and, where appropriate, in the form of percentages.

3.6 Ethical Consideration and Trustworthiness

Another important tenet that guided the practices of this study was ethical consideration about research protection, including for the participants. Bulmer (1982), Homan (1991), and Lee-Treweek and Linkogle (2000) separately emphasise the need for researchers to protect participants in their research process. In relation to qualitative study, Mason (2002) outlines qualitative research, and raises ethical issues which should be anticipated, so that the researcher can consider how the actions during the research process affect the participants, and can maintain the integrity of the research. Considering the importance of ethics in research, ethical approval from the school was applied for and gained before the recruitment of the participants. Considerations included the principles of anonymity and confidentiality. The principle of anonymity refers to the protection of participants' identity in the research. To apply this principle in this study, as researcher I ensured that I did not reveal any identifiable information about, or names of, participants and/or indirect participants (third party), either in the transcription or in the final report of the study. Therefore, interviewees were given pseudonyms and the identifiers of indirect participants were replaced with the roles they play. With regard to the principle of confidentiality, the data obtained from the participants will be securely protected during and after the study. All materials will be kept and protected by password in my computer during field work study and will be stored in locked filing cabinets for five years after I complete my study before being destroyed.

Aside from ethical consideration, trustworthiness is important in qualitative study (Thomas, 2006). According to Lincoln and Guba (1985), trustworthiness is one way researchers can persuade their readers as well as themselves that their research findings are worthy of attention, and they refer to four criteria: credibility, transferability, dependability, and confirmability. Moreover, Thomas (2006) specifically outlines that various techniques should be applied as an attempt to establish trustworthiness in data analysis procedures in terms of Lincoln and Guba's criteria. I applied several techniques to establish trustworthiness in this current study. Firstly, I used multiple data sources. In this study, I employed more than one data collection method, the use of sociogram, semi-structured interviews and document technique, to get more robust and in-depth data. Additionally, a variety of scholarly articles, books, and documents related to the study was reviewed. Secondly, I employed a member-checking technique. This is pivotal for establishing trustworthiness in a qualitative study (Lincoln & Guba, 1985) to eliminate researcher bias and to ensure the accuracy of researchers' interpretation (Anney, 2014). In practice, I contacted every participant by either email or face-to-face informal meeting to check the accuracy of his/her interview materials once I completed data transcription and thematic analysis. Lastly, I applied peer debriefing. This technique involved working with colleagues outside of this research project who had experience with similar topics and/or methods utilised. I asked three qualitative researchers to check two randomly selected data analyses (transcription, codes, and emerging themes) and to give feedback. Their feedback was very fruitful in establishing the trustworthiness of this study, especially in the process of naming the themes.

3.7   Concluding Remarks

This chapter set out the methodology of the research study. The succinct information on research design and research approach applied were discussed, including the rationale of research design approach choices, how the data were generated and analysed, and how to ensure the quality and reliability of qualitative data. The overview of this research methodology can be seen in the following figure (Figure 10). The next chapter will address the results of the data analysis under the heading *Findings of the Study*.
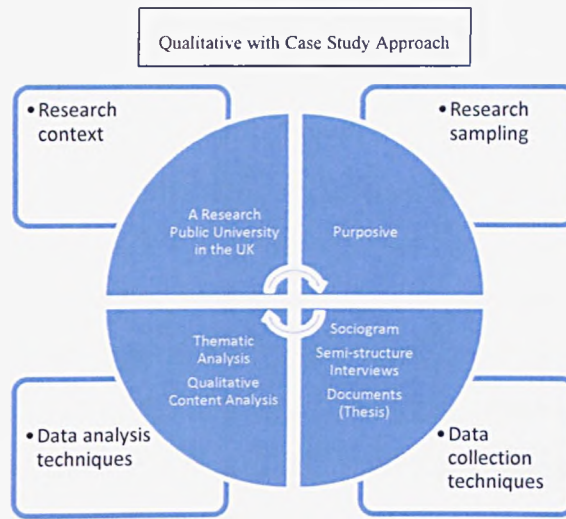
Figure 11. Overview of the research methodology

Chapter 4. Findings of the Study

The purpose of this qualitative study is to investigate the experiences of 16 IDS enrolled in a UK university. The current chapter presents the findings of data analysis and is organised into three main sections on the basis of the research questions. Firstly, in section 4.1, I pinpointed the emerging themes and subthemes from the participants' interviews in relation to the struggles that the IDS face in their life during the study. Then in section 4.2, I presented the results of sociogram, interview, and text analysis of the IDS support network. In the last section (4.3), I highlighted the themes and subthemes of IDS strategies to address the struggles.

4.1   International Doctoral Students' Struggles

According my analysis of the IDS responses in this study, the participants face a number of struggles as doctoral students. Four themes emerged from the interviews, including: (4.1.1) language, (4.1.2) academic expectation, (4.1.3) health, and (4.1.4) contextual factors. Each theme has more than one sub-theme which can be seen in Table 5 below:

Table 5. Themes and sub-themes of international doctoral students' struggles

International doctoral students' struggles	Language	Comprehension
		Reading, writing, and speaking effectively
	Academic expectation	Research process
		Supervision
		Academic cultural differences
	Health	Financial
		Emotional
		Physical
	Contextual factors	Society
		Family
		Living conditions and working environment

4.1.1   Language

The first emerging theme of IDS struggles is language. This, as explained in the literature review (2.2.1), refers to all matters which involve the issues around socialisation, interaction and learning. The results of the interviews indicated that all of the IDS participating in this study experienced language struggles, especially early in their journeys as sojourners. The responses of the participants indicated that there

are two interrelated subthemes: (1) comprehension; (2) reading, writing, and speaking effectively.

4.1.1.1 Comprehension

One prevalent language struggle in the process of learning or communication is comprehension. Seven respondents explicitly reported that this struggle is a consequence of the occurrences of a language barrier, or lack of language proficiency. When someone has an issue with accent during communication, for instance, s/he has a problem in understanding the content and/or flow of the talk. The results of the interviews indicated that participants struggle to comprehend communication both in academic and daily life. One participant, Arnold[1], explained that he felt difficulty in understanding the conversation in his classroom, because his colleagues speak with unfamiliar accents or dialects. He stated:

> *Well, maybe language barrier would be/was my main concern. I was quite surprised because the English with the dialect they use here was totally out of my mind. That's really concerns me because when I join the class, I would like to say that maybe 10 percent of the content I would understand, the rest would be gone somewhere, were going somewhere. That would be my concern.*

In a similar vein, Nancy experienced comprehension struggles in the classroom. She reported: "Sometimes the local students [talked] too fast and I [couldn't] understand and [asked] them to repeat slowly. And the lecturers sometimes [spoke] too fast and the accent [was] not familiar to me. Sometimes, it [was] hard to understand". Another participant, Lilian, shared her experience sitting in a group of locals when attending a workshop. She said: "To be honest, sometimes disconnection occurs if the group are all (local). I once tried to sit with [a group of (local students) and] I miss a lot what they said". Moreover, Kitty told of her confusion during conversation with her friends. She stated: "For daily life situation, I think it's very hard for me to catch up and sometimes if they get fun, they say some slang or several terms that I never get what they say".

Two other respondents also shared in the interviews that the local people sometimes could not understand their utterances because of language issues. Kathy,

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[1] Arnold is pseudonym, not the real participant's name. The same case applies to other participants. The pseudonyms were used to protect the participants' identities.

for instance, told about a comprehension struggle she and her local colleagues experienced in their workplace. She said:

> *Sometimes [local people] they don't understand me clearly because my accent is very different from them. Which I remember in workplace, I talk with local people. They said they couldn't my accent as I didn't understand their accent. They are difficult to understand me as well because my accent is different from theirs. But when they said I speak too fast, I speak word by word so they can get me.*

Another participant, Angela, told of her embarrassing experience with the language when she communicated with a banker. She recalled:

> *I got a really bad experience when I got a problem in terms of my bank account. I went to a customer service in one of very famous banks here, but the customer service did not understand any single word I produced at that time even I explained in a sign language, you know? I felt so embarrassed and so angry at the same time. And at the moment, I thought my pronunciation was really horrible, so I didn't want to talk to anybody. But yes, that's happening to me. I didn't want to talk to anybody because I thought my pronunciation was disaster.*

Besides the issues with language barriers and/or proficiency, data generated during the interviews indicated that another reason for comprehension problems when communicating with locals or other people was the participants' lack of topical knowledge – i.e., knowledge that relates to the topic of discussion. Three participants admitted that lack of shared knowledge about something leads to problems in comprehension. Angela shared her story of a classroom discussion about the education system in the UK. She said: "In the first module I [attended], they talked about education level in [the] UK which I didn't know because the level sound so complicated. So, whenever we got the discussion in the class, I got lost because I didn't know". Richard, an IDS from West Asia, told of his awkward feelings and comprehension issues when sitting in a crowd during dinner time with his local friends. He stated:

> *[I] feel a little bit awkward especially when in the crowd of local people having dinner and having a joke about local funny stories. I think when they were kids, they [watched] TV programmes which [were] different from me, so I couldn't really get it but when [they] talked something about work I share same experiences and that's all right.*

Moreover, Bobby also highlighted that one of the reasons he feels disconnection talking to his friends was unfamiliarity with the topic of discussion. He said:

I feel a little [disconnection] because I can only narrow down to jokes. I don't understand the jokes. Sometimes the topic they are talking about, the places that they go, for example when they want to go for a drink. We don't drink so we don't associate to that. In general I don't get their jokes much and I don't relate to their talk about their drinking and whatever.

It can be concluded from the participants' responses in their interviews that the occurrence of comprehension issues in communication can be caused by problems with the language, such as heavy accent or dialect, and fast-paced speaking, and/or by absence of knowledge about the topic of discussion. The results also suggest that the issue of comprehension not only occurs to participants, but also affects local people they talk to.

4.1.1.2   Reading, Writing and Speaking Effectively

Of 16 respondents, 14 explicitly reported language components and/or barriers as the challenging factors for them in reading, writing, and speaking effectively in both academic and daily life contexts. A distinctive manner of language pronunciation, known as accent, was found as one of the most challenging barriers to effective spoken communication for many participants. Harry, for instance, said: "I have a friend. She's sitting next to me at the office. At first time, when she [talked] to me I couldn't understand and respond her [even] a word because she has a very heavy accent". Similarly, Kathy stated: "The first time I attended my module; I was emotional because it was difficult for me to understand and say something in class. The accent was quite difficult. I didn't know it was English language. That was tough". Furthermore, Scott said: "Actually some people [have] strong accent. So, it makes it different. That's the one I find it very challenging to communicate at the beginning". Although accent seems to be a huge issue about the participants speaking effectively, it mostly occurred in their first year and/or the early period of their adjustment. This suggests that the longer the students stay, the fewer problems they face with accents. As Yuga said:

Initially I had the accent problem. I mean their accent is different and my accent is different. (Local people) accent is slightly different you know. Initially I had struggled to understand what they mean, but now I am used to it.

Another prominent language issue that the international students encountered in their spoken interaction is the rate of speech in a conversation. For Harry, Nancy,

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Kathy, Grace, Angela, Alex, Kitty, Bobby and Richard, when local people speak fast, it obstructs them from understanding the conversation and affects their motivation to actively get involved. Grace explained her first meeting with her supervisor. She recalled:

> *When I met my supervisor [at the first time] two years ago. I found it really difficult to follow what she talked to me. She's very nice, but she talked very fast, so I couldn't catch up what she's talking and couldn't respond properly.*

In a similar vein, Nancy said: "I'm just, sometimes, I cannot understand and talk to them (local friends) because they speak too fast". Bobby added: "I am fine to that accent. I think the speed is an issue. Sometimes they talk too fast and you can't make the words of it. I think the accent is fine, but the speed...". As with the accent issue, participants further mentioned that they found it less difficult to understand fast conversation than in their early days of adjustment; as Richard said: "First time not so much because local people speak really fast and after half a year I can used to it".

Another problematic issue in spoken communication is the language-use factor; some participants admitted that they struggled to communicate effectively due to their limited understanding of particular vocabulary, slang, idioms and even jokes. To illustrate, Nancy said: "At the workshop. I [couldn't] understand especially when they use idiom, so I just [kept] silent". Kitty also reported at the interview: "For daily life situation, I think it's very hard for me to catch up and sometimes if they get fun, I am quiet because they say some slang or several terms that I never get what they say". Moreover, Angela explained that she frequently did not understand her friends' English jokes. She said:

> *I do not understand because sometimes we cannot get any jokes or slang language from them. So, if they told us in funny way, I would say [I didn't] get it. They're laughing and I [wasn't]. I didn't get what's happening in a conversation. That happens a lot.*

The participants acknowledged that problems with language barriers also occur in written communication. Of the 16 participants, two reported that they find it difficult to interact via email in English. For instance, Angela explained: "As an international student, I think I don't have enough capability to deliver the message through the electronic one. You have something more in your head and when you try to type on the screen, [it] seems like no I need to talk". Another participant, Alex,

said that pouring out all his ideas and using formal expressions are problems for him in email communication. He specifically said: "In terms of expression used in English and pouring down all the ideas we want to express still one of the hardest parts in email itself". He further added:

> *Sometimes before I need to use very formal English, I got problem, you know. I really want to say this one, this one, and this one, but I need to go back to Google and check my email. That's I think the challenge because it's a formal communication. I still got a problem in using formal expression.*

The participants, in addition to difficulties in writing and speaking effectively, also conceded that they struggled to read effectively, due to language issues. For example, Kitty explained her difficulty in understanding the reading material. She said: "I need longer time to understand the reading passage. Sometimes, I have to read more than [twice] to understand it because many words are not familiar". Moreover, Scott said in the interview that reading old publications was a challenge for him during study. This was because he had to understand books with many old English words. He recalled:

> *The hardest part is when I came here I [started] reading about learning theories about Peugeot. It's hard to read it because the book [was] written 80-100 years ago translated by Russian. So, the language is really heavy there. They used so many ancient words. It was very struggle for me.*

It is clear from the participants' interviews that they find it challenging to effectively read materials and communicate, either in spoken or written form, for language barrier reasons, including accent, high speed of talking, and language use, especially during the early period of living in a foreign country. They also acknowledged that the longer they stayed, the less they struggle with the language.

4.1.2 Academic Expectation

Academic expectation struggles appear to be another concern for IDS in their journey. This theme is associated with the study and/or research challenges that the students encountered. Three sub-themes were identified from the results of interviews: research processes, supervision, and academic cultural differences.

4.1.2.1 Research processes

Since all participants are doctoral students, conducting research is the required process before they can graduate and get their degrees. The participants' responses in semi-structured interviews suggested that undertaking a research project was challenging and complicated. Of 16 participants, nine reported that they experienced expected and unexpected challenges in their research journey, ranging from the process of reviewing literature to the process of writing itself. For example, Angela explained that she gets confused about selecting the appropriate literature review for her research project. She said: "I got confused with the supervision and got confused with the literature. So [much] literature in this area and I didn't know which should I use". Lilian also struggled with the process of reviewing the literature, as it took a lot of time. She commented: "I think I [wasted] lots of time for the literature review."

Harry and Lilian highlighted that ethic procedures and recruiting participants were challenging for them in their research. Harry noted:

I am doing a qualitative study as well, so I am also looking for information about interview protocol, you know about finding [or recruiting] participants in a qualitative research and about you know the ethical approval ethic is a bit you know a bit challenging.

As with developing a literature review, Lilian shared that recruiting participants was unexpected and wasted much of her time. She specifically said:

The hardest part in my study [was] recruiting participants. That's very difficult especially in the school of (natural science). If you want to recruit patients to be your participants, you need to get consent from hospital and outside of hospital. It's also difficult when you are talking with human. This is annoying because you need to finish your study within three years and recruiting the participants for six months or sometimes a year. That's waste of time.

Some other participants pinpointed other concerns in their research. For instance, Grace viewed the data analysis process as a time-consuming stage in her research. She reported: "Analysing the findings because now I am doing analysing. I take for ages to do that". Another participant, Kathy, admitted that transcribing the interview was a tough research process that she had passed through. She stated:

When I was transcribing, I hurt my shoulders, so swollen here (pointing her shoulders). My shoulders [were] swollen, I had to see my GP. I [didn't] know it was because of typing. There was time I couldn't move them because of the transcription. I have to transcribe 39 interviews. It was tough.

On top of the research process challenges, writing the thesis seems to be the highest concern for the participants. Three of them – Yuga, Bobby and Nancy – particularly highlighted that writing would be an issue for them throughout the whole process of research. The problem with writing is most likely caused by the distinctive features of this type of writing. Yuga, for example, explained that she found it a struggle to write academically. She said:

> *I used to write in a flowery language because I have rich vocabulary of English and I can use you know different heavy words. Then, my supervisors told me "you are not there to please people. You have to write academic writing. Don't use flowery language [...] decorated language is not required in research. So, transition from that kind of writing to academic writing was difficult for me.*

Likewise, Bobby argued that the reason he struggled with thesis writing was that academic writing is different from other form of writing. He commented:

> *I don't mind my work. I don't mind lab work. I don't mind long hours. I don't mind staying late. I don't mind you know being necked. I don't mind being scolded. But, I do mind. I do feel pressure with thesis writing because scientific writing is different from normal writing or free writing or whatever form of writing.*

Unlike Yuga and Bobby who stated that the writing form makes thesis-writing difficult, Nancy's response indicated her inadequate English proficiency as the reason. She stated:

> *Sometimes when I write something as part of my thesis, I think it's okay. But, when my supervisors read it and they said, "it's not natural". So, they change the way to express the idea and after that "uhhh...I know this structure" and that worse "why [didn't] I think about that?". Yes, so, I think the most difficult thing I have here is academic English.*

It is clear from the participants' perspectives that the research process was not easy for them. Since research is a long, continuing process, each stage can be difficult, depending on the individuals.

4.1.2.2 Supervision

Another subtheme identified from the academic expectation struggle is the issue of supervision. Overall, participants reported good relationships with their supervisor(s). They also get lots of supervisory support, including advice, encouragement, feedback and research materials. However, nine participants acknowledged that they have issues with their supervisor(s). One of the foremost supervisory issues is disagreement between the student and supervisor. To illustrate,

George explained that there was sometimes a gap between him and his supervisor and the gap occurred as he understood the research better. He specifically reported: "When you understand a little bit, you become like you understand everything. Then this becomes the gap. He wants me to do something, I don't want to do it, I don't like it, I don't think it's important". Another participant, Angela, shared her struggle to convince her supervisors of her research idea at the beginning of her supervision period. She stated:

In the beginning of my supervision life, I got problems with my both primary and secondary supervisors because I got my idea and when I sometimes delivered my idea they didn't get it. Then, I tried to convince them and they still didn't get it and sometimes I got rage on myself and on them.

Moreover, Kitty revealed that a disagreement between her and her supervisor turned out to be an emotional experience. She said:

Many months ago, like we've got some discussion about like he [wanted] me to extract the data. We do systematic review and we need to extract the database like Scopus and other databases. He wants to cut down the amount of databases. He wants only three databases, but I want to have more databases because I think (the topic) is not very popular subject, that's why I need more databases to collect more articles if I can. After he cut down we have 3,000 articles to screen but I have five or six databases and I have 10,000 articles to screen but I prefer to have more articles to screen at that time and I can find the real articles I can. I can study hard. We [discussed] and he [persuaded] me but I [didn't] follow his instruction, so it's a little bit terrible moment at that time. I cried because I [couldn't] control my emotion because he's a little bit hmmm. I think he didn't expect that situation and he didn't know how to solve the problem at that moment. So, it's a little bit hard moment at that moment, hard situation.

Besides disagreement and miscomprehension of the research focus, another issue with supervision is contradictory ideas between supervisors. Saad, a participant from Western Asia, experienced this struggle when his primary supervisor was on sick leave. He had to consult on his research with a different supervisor and made some changes. He explained:

I usually face a problem [with supervisory], for example my supervisor is sick for three months, so I should meet another supervisor. There is time to find another one. Usually the second [supervisor] has different ideas. He will try to fix or to change what I [have written]. So, this is another problem.

To conclude, participants reported that they have several issues with their supervisors, including conflicts of ideas with their supervisors, and contradictory

ideas between supervisors. Regardless of the supervision issues, the participants convincingly informed that they have good relations with their supervisor.

4.1.2.3   Academic Cultural Differences

Since the participants are culturally diverse, academic cultural differences emerged as another subtheme in the academic expectation struggle. Three participants found the academic culture in the UK university different from what they have in their home country, and the differences often made them struggle. They specifically mentioned that the obvious differences are the way supervisors supervise students, and students' ways of learning. In terms of supervision methods, Richard said that supervisors in the UK seem to work differently compared to supervisors in his home country, and he struggled to adjust to this academic cultural difference. He commented:

> *The study here is good. But it's kind of different here. The supervisor is just leading you, but in (my home country) if you are doing PhD there the supervisor tells you what to do. So, it's kind of two different things, in (his home country) you do your supervisor's project [while] here you do your own project and your supervisor is only guiding you and not giving you direct instruction. Sometimes I feel difficult because I have to figure out by myself and if I haven't figured it out I feel like I give up. In (my home country), you get used to follow your supervisor's instruction to do before you finish. It might be easier because he gives you a one-step ahead instruction, and here you figure it out by yourself, maybe costing more time. That's the way of learning things, just different way of learning in different cultures.*

Similarly, Grace pointed that following the supervisor's academic culture is another challenge for her, in addition to the language barrier. She even highlighted that it does not really meet her expectations, saying:

> *Apart from language barrier, kind of way of culture thing during [my] study because if I study in (my home country), the supervisor would do instruct me very in detail so [the only thing] can do is follow or obey what he/she says "okay I will do it". But here, probably kind of culture thing. The study [is] really on me. I have to do everything and I feel like the supervisors [as] a kind of supporters. They do [give] instructions, but not much I expect. In (my home country) they (the supervisor) instruct and write everything, for example I have to deal with this part blablablabla very in detail as we have corrections and we have to listen to them.*

As for the students' learning style, Richard shared background on the culture of his home country that affects the way he and many people from his home country learn/study in overseas universities. He stated:

When I was attending trainings, you know in East Asia, there is [an] ashamed culture, so you are afraid of making mistakes because it can be ashamed. People laugh at you but actually here people don't care. Yes, it's about culture even (East Asian nationality) kill themselves if they are ashamed. I think that's why many East Asian people don't want to speak out loud. They are afraid of making mistakes in public. But in the module, I don't know what to say just listen to people share their ideas [and] sometimes I contribute one or two after [thinking] for a lot time.

It can be concluded from the participants' responses that academic cultural differences between home countries and the studying destination country can be very frustrating for them. The differences in the supervisor's role and in learning styles appear to be the reasons for their struggles in this category.

4.1.3　Health

The third theme of IDS struggle is the issue of health. As explained in the literature review (2.2.3), the theme is not only associated with physical circumstances, but also emotional and financial conditions. The participants' responses in the interview suggested that they experienced health struggles around financial, emotional and physical issues in their study life.

4.1.3.1　Financial

One of the concerns for the participants is the financial issue, as some of them are self-funding students. This includes the issue of tuition fees, living allowances and other monetary-related factors. To be more specific, four participants explicitly acknowledged that they had issues financially. Kathy, for instance, shared that she struggled financially and had to work to earn money. She said: "Because I am [a] self-funding student, I have a work where I go and make some money to look after myself [and] to pay my bill at least". She further reported: "This time when the school closes I work full time to make money to pay my bills. So it's difficult for me, it was [a] difficult journey because I have no financial support". With a different story, Lilian explained that they cannot go traveling because of financial issues, including expensive tuition fees and daily and/or living needs. She noted: "We cannot travel because we are whole family of five. Travelling would [be costly]. My

[tuition] fee is very big, and my husband fees, children's school, house allowance, and travel? That's too much".

Angela, a participant from Southeast Asia, said she had to spend much money to pay a proof-reading service, as this is not provided by the university for international students. She said:

I think the most important one for international students is [that] they provide proof-reading [service] or proof-reader – free for international students because you know it takes much amount of money for us. For example, I as a (doctoral) student, I have to write at least 40,000 words [which] means £400.00 for the proof-reading. It's costly.

Another participant, Saad, even compared the price of things between his home country and the UK to indicate that finance is a serious issue for him as an international student. He said:

I think UK [is] one of expensive countries in the world. Especially, for example, my [home] country, we don't have tax and the oil is cheap and good salary, but here everything is too expensive. The water, for example, we pay 20p in my country, but here £1 or more maybe £2. It's not just double, more than double. So, we should change our lives. In my country, I have a car, buy everything and go to the restaurant and [travel] from one city to another city. It's difficult to do it here.

It is obvious from the participants' responses that finance is a quite serious problem for international students, especially for those who are self-funded. The results also indicated that the absence of financial support, expensive tuition fees and living costs, are among the reasons for this issue.

4.1.3.2 Emotional

Another prevalent subtheme of health struggles for IDS is the emotional issue. This struggle includes all uncomfortable and unpleasant feelings that the participants have experienced. Of 16 participants, three revealed that they experienced feelings of loneliness. For example, Grace told the interviewer that she felt lonely in her first two years. She commented: "Sometimes, I'm really upset because I feel loneliness especially the first two years. There [were] no people who [could] connect [to] me because I came here as [an] alien/foreigner". Kathy, a participant from West Africa, said that she sometimes felt lonely, and this feeling was the reason behind her self-exclusion. She said: "I made myself so alone there because I am lonely". Another participant, Harry, explained that the feeling of loneliness he experienced occasionally occurred when no one talked to him in a crowd. He said:

Sometimes I feel like [being neglected]. Sometimes my friends, a group of friends and [I went] to a coffee shop and talked. [During that time] I sometimes feel lonely because they talk to each other. They tend to talk to each other because it's easy for them rather than talk to me.

Besides the feeling of loneliness, some participants mentioned that frustration, disappointment and shyness affected them in the process of learning and/or research. Bobby described his first-year study at the university. He experienced frustration with a new topic of research that he had never thought about before. He recalled: "In the beginning, I was a little bit frustrated because I was new to the topic and sometimes I [did] feel I [didn't] know anything, but she assured me that in time I will understand". Similarly, Renata told the interviewer the story of her first-year study. She felt disappointed and frustrated simultaneously on her first module. She said: "In the beginning, I was my first module was very disappointing, and I got really surprised because at that time I was really frustrated to study". Angela revealed that her shyness in asking a question in the class made her keep it to herself. She said: "I mean the personal question that [I] kept by myself because I was too shy to speak out. That's really, I will never forget about it".

Another uncomfortable feeling that the IDS experienced in their study journeys is boredom. Four participants explicitly acknowledged that they experienced the feeling in either their academic or personal life, and it did influence the process of study. For instance, Grace argued that the feeling of boredom she experienced in the study swayed her confidence in finishing the study. She said: "I found sometimes [it's] boring so I feel hopeless it wouldn't finish because it doesn't go smoothly my study". Scott's response in the interview indicated that the boredom occurred whenever he studied. He said: "Sometimes if I feel bored I go to another office to talk with my friend". A participant from Southeast Asia, Nancy, said that boredom during the Christmas holiday broke her concentration for studying, as she mostly stayed home. She noted: "Because there [was] long holiday in December and the new year and Christmas, so I stayed home most of the time, but I can tell that I [could not] concentrate on my study because I felt something boring". Meanwhile, Alex explained that he started to feel bored after three months of staying and studying. He specifically mentioned:

I was happy for maybe one or two months because I [saw] everything was new and something new is challenging, but then I think it's human when we finally felt disappointed to something including the university,

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the people and the condition [of] the city. I think after three months staying, I [felt] bored.

The participants' responses indicated that they often experienced emotional/uncomfortable feelings such as loneliness, boredom, frustration, disappointment, and shyness, and these could affect their processes of study and socialisation.

4.1.3.3 Physical

This form of struggle refers to the condition of being physically unhealthy, such as suffering from an illness. Of 16 participants in the study, only one of them, Yuga, stated that a physical issue affected her study life. The condition required her to defer her study to the following year. She said:

> *I was diagnosed [with an] illness. So, I had to undergo treatment for three months and I couldn't recover so the doctor advised me to have surgery. I had to undergo surgery and my travel ... oh it's so happened because my withdrawal was supposed to be two months, but I had one year.*

The above participant's response suggests that a serious health issue could be a stumbling block for the smoothest of studies.

4.1.4 Contextual Factors

There are three main subthemes of contextual factors: society; family; and living conditions and working environment. The sub-theme of society includes the issues emerging through the bigger scope of community; the family sub-theme covers the problems in the family-related scope; and the last sub-theme, living conditions and working environment, refers to the participants' personal and living environment issues.

4.1.4.1 Society

As previously indicated, the society subtheme relates to issues emerging in the society scope, both in the academic and non-academic context. From the participants' responses, five explicitly acknowledged that they experienced the feelings of discrimination and/or neglect as part of society. In terms of the academic context, most respondents said that discrimination and/or negligence occurs in classroom discussions. Richard, a participant from East Asia, mentioned that he felt

excluded from a classroom discussion due to the unfamiliar topic. He said: "I sometimes being ignored if they are discussing very local [topic] especially if you are in a group of local students. I sometimes felt ignored because they thought I don't know anything about it". In a similar vein, Grace told the interviewer that an unfamiliar topic was the reason of her isolation from a discussion. She said: "Whenever they talk about the topic which I don't know or which don't relate to this study, so I feel really isolated because they usually talk among those [who know] well about the topic". Moreover, Arnold revealed that he frequently felt ignored by his peers in a discussion because he could not catch up with the conversation. He said:

I got much, many [experiences] feeling being neglected because especially as I said previously if the peers for example working in the group and most of them were [native] and I couldn't catch up with their languages. And then, as a result I couldn't contribute to the discussion but then they didn't care whether I contributed or not in the discussion.

Another participant, Harry, told of his unusual experience when he attended a workshop at the university. He explained that the trainer only attended to local students, not international students. He commented:

Some training [courses] I don't think that I feel disconnected or neglected. Just only one training session, I feel so about you know the relationship between the trainer and participants. That trainer seems to discriminate. I am saying she's racist just use the term "discriminate". She seems to be [picky]. she tends to [be] nice to local people but to international students she seems to keep the distance, not really respect the ideas from international students compared to the local. I was really surprised because I think all the trainers at [university's name] they must be very professional, but I didn't feel like that and I am not quite sure. The trainer, she talked very quickly. Although in the class, there [were] some international students, she knew that but she didn't care.

In a non-academic environment, one participant from West Africa, Kathy, shared her experience of racism on a bus. She received unfair treatment from a passenger. She recalled:

I had felt racist. I have, I have been that's prejudice given to me. Someone has raised his pitch to me on the bus, his pitch on the bus, just the racist. He said "you black Nigar, get out of this country".

It is clear from the international students' responses that discrimination is a general issue they face in society. Some forms of discrimination they experienced are: racism, being excluded, neglected and isolated.

4.1.4.2   Family

From the results of the interview, it is indicated that family issues appear to become a struggle for IDS. This is a struggle not only for those who live alone, but also for those who have family with them. The apparent family issue for IDS who left their family in their home country is a feeling of missing family. This is reasonable, because doing doctoral study takes a long time. Of 16 participants of the study, seven indicated that missing family members was one of the struggles they faced in their study. Yuga shared her honest feelings about living far away from her husband and her mother-in-law, saying:

> *If I say that I am I don't feel anything I would be lying because they are my family after all. You know living away from your family is really difficult, it's not that easy. You know, you feel the absence of your family member when you live here. I feel that absence.*

George admitted living far away from family for the first six month was challenging. He said: "I stayed here for six months alone. It was terrible because I don't like to live alone. It was very bad for me". Moreover, Alex said that missing his boys could distract his study. He noted: "It's not easy especially when I miss my two boys. I didn't study well usually when I really want to be with them". Besides them, Renata, Harry, Kathy and Kitty also found it difficult to live far away from family.

For some IDS who bring their family along to the country of study, role conflict is a big issue. Lilian, for instance, said in the interview that role conflict frequently occurred in her first year as she had to take care of her children's needs. She said: "They [were] few challenges [we] faced in the first year. So, at that year I tried to settle down my children's school and studied English at the same time". Another participant, Arnold, said that taking care of his daughter while studying a doctoral degree was one of his concerns. He stated: "Because I live here with my daughter, so I am little bit struggling with taking care [of] my daughter especially how to prepare let say food before she goes to school". He further explained that this issue sometimes distracted his focus from finishing an assignment. He said:

> *I take longer to finish my deadline for example. Maybe if I don't have to look after my daughter, maybe I can finish much earlier. Because my time is divided between looking after my daughter and managing my time, that's why sometimes I finish all my assignment closing to the deadline.*

However, the issue of role conflict was also experienced by Kathy, a participant who left her family in her home country. She explained that her responsibility was not only to study, but also to look after her family and business in her home country. She commented:

I am a family woman. I have children and I have to look after [them] from here to (my home country). I have a business to look after. The business is in (my home country). I look after the business, trying to make sure not to put me down from here when I am doing my PhD. You see the distraction and how they are distracting me. I work. I look after family. I look after my business and do my PhD. It's 3 in 1. This is tough, so I see [and] categorise myself as a strong person.

From the participants' responses, it can be suggested that family-related issues, such as missing family, and role conflict, could cause serious struggles for the IDS, and may affect the progress of their study.

4.1.4.3   Living conditions and working environment

This subtheme is associated with daily life and study environment issues. Almost all participants, 13 of them, acknowledged that they experienced many concerns in their life adjustment and seven of them raised weather as a prominent issue. They said that they were shocked by the weather, as it is extremely different from that in their home countries. For example, Renata told in her interview that weather was one of the concerns during her adjustment. She said: "The weather really [made] me down because at that time when I [came] here, it's almost winter and I got shocked". In a similar vein, George, a student from Western Africa, mentioned that the weather in winter was very bad and made him uncomfortable. He commented: "When I came [here], the weather was very bad. It was very bad for me because I came from (Western Africa). The summer could be 45C and in winter could be 25C. It's very cold for me here". Moreover, Nancy pointed out the unfamiliarity of UK life due to the different weather she experienced in her home country. She said: "The weather [was] totally different from my home country. I [could not] see the sun in winter. At that time, I [was] not familiar with the life in [the city]". In addition, Kathy, Lilian, Alex, and Kitty acknowledged that unfamiliar and/or extreme climate conditions were a concern for them in their living adjustment.

Food-related issues were also reported as a concern for IDS in their adjustment. This is reasonable as they came from different cultures. Five participants

straightforwardly confessed that they found it hard to deal with food-related issues for many reasons. Arnold highlighted how religious practice was his reason for eating out carefully. He said: "My struggle here how would be for example getting proper food [or] proper meal, so that's why maybe I rarely eat out but prefer to cook myself because I feel [insecure] about the food from many places". Unlike Arnold, both Harry and Nancy pointed out that food unfamiliarity was the reason for their food concerns. Harry said, "It relates to the food. Some food, they are strange to me because I haven't seen any kind of food in (my home country)". Nancy said: "I [couldn't] buy and eat outside because you know, I am not familiar with the food here so [I] cook by [myself]". Another participant, Yuga, admitted that she took more time to deal with her food concerns, as she could not find a South Asian shop easily. She noted: "I am a vegetarian. I am a South Asian and very uncompromising with the taste. So, I [didn't] know where the South Asian shops are ... but eventually and slowly I got to know where are the shops and everything". Furthermore, Alex revealed that his kitchen life has become one of his concerns during his life abroad. He confessed:

I was very frustrated with my kitchen life. I really wanted to eat something delicious. I had in my mind [that] I wanted this one and this one, but I couldn't get those. So, I was very disappointed with my appetite because I couldn't cook well even until now.

Some other problematic living-condition issues experienced by some IDS are accommodation, open relationships, and fashion. Bobby told the interviewer that moving properties gave him a headache because the landlord asked him for a guarantor. He specifically noted: "I have one issue before [that was] moving between properties. We have rental issues in terms we have to get like guarantor". In relation to the open relationship issue, George mentioned that it was not easy to adjust to this, as he came from a very different culture. He commented, "The relationship here is more open. This is [the] most difficult for me because (in my home country) the majority is Muslim. Here is more open the relation between men and women, but when I become familiar [it's] fine". Moreover, Angela shared that she found it a struggle to adjust her life at the beginning because her fashion sense is different from most people's. She said:

Regarding the culture, it was hard for me for the very first time because I am wearing hijab...so probably some people look at me with cynical side of eyes. It's quite hard and difficult for me for the very first time, but so far I haven't experienced something bad to me.

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In relation to the working environment, one of the participants' concerns is an uncomfortable learning environment. Grace complained about the noise level at her study space: "I found [it] really struggle because of the noise level. Do you know my office is located next to the gate and many people [come and go] so very, very noisy". Alex also mentioned that he could not achieve much studying in his office or study room. He said: "When I start studying in my study space, I don't feel that I gain much because I am bored very easily. First, it's very quiet. Second, the room itself is very large and too many seats with no people". Additionally, Nancy reported that she sometimes found it difficult to find a comfortable environment for study. She said:

> I [came] to my study room. You know, at that time few people [came] to my room to study, just only me maybe and it's quite boring. Then, I change I [went] to the library. The library [was] quite noisy and then I change, I [came] to the [the] graduate school space, silent, silent study. I don't like the light in the graduate school. I don't like warm light, but I like white light because in (her home country) we usually use white light, not warm light, but in the silent study there are warm light. So, because it's too quiet in the silent study so that you can hear everything even you can hear heartbeat. At that time when they just [opened], see it's so quiet and I change again.

The results of the study indicated that the IDS experienced plenty of living condition struggles in adjusting their lives and study patterns to a host country, including issues in relation to weather, food, accommodation, fashion, open relationships, and the studying environment.

4.2 International Doctoral Students' Support Networks

Support networks are pivotal for IDS, as they are the source of support for them. The results from sociograms and semi-structured interviews indicated that there are three main support networks the students perceived during their study: familial, institutional staff members, and peers.

Table 6. Themes of international doctoral students' support networks

International doctoral students' support networks	
	Familial
	Institutional staff member
	Peers

4.2.1 Familial Support Networks

The results of the sociogram exercise indicated that family is one of the support network sources perceived by IDS in their study. From 16 respondents, 15 included family as their support sources in their sociogram, as shown in the following figure:
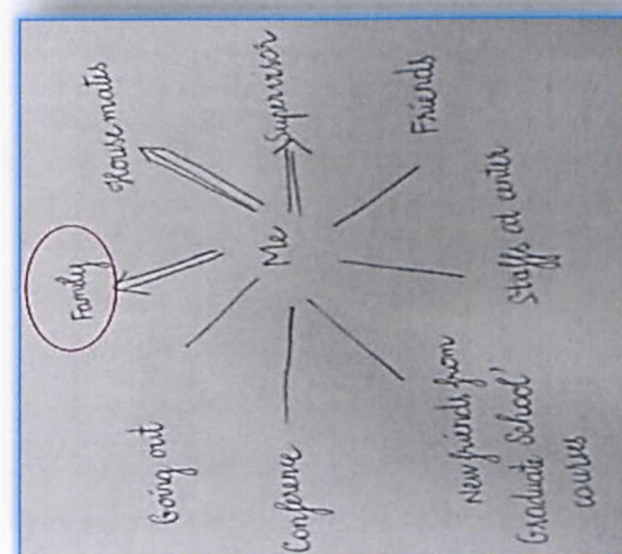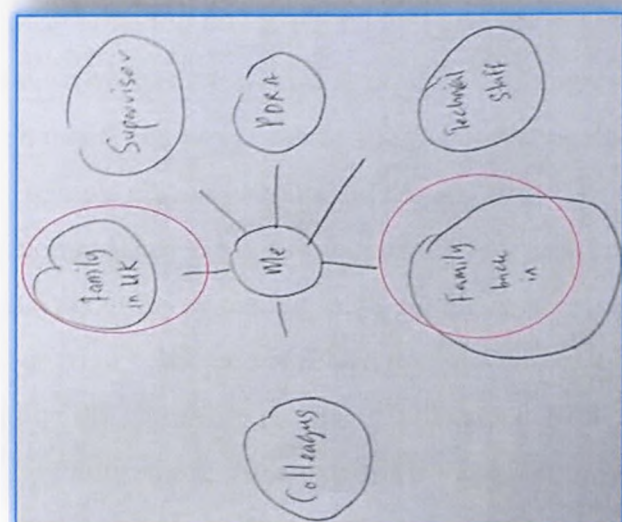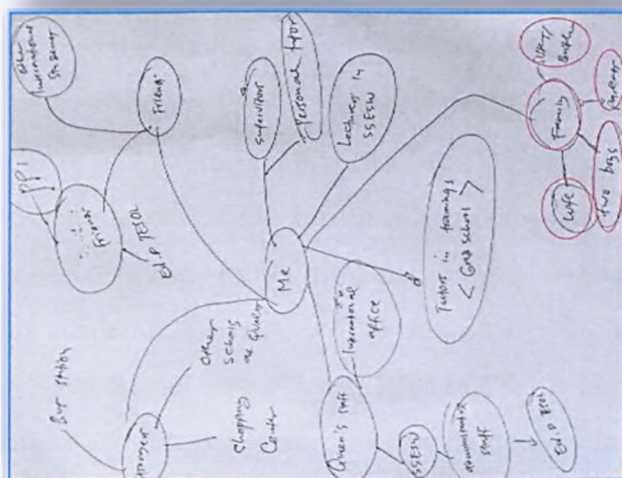
Figure 12. A selection of sociograms indicating familial support networks

From the selection of sociograms above, only one participant clearly details in his/her sociogram the family members who provided the support. Other participants described the familial support, which is red-circled, with a more general term *family*. However, the results of in-depth, semi-structured interviews indicated that this network includes all family members, including parents, siblings, spouses, children, and other relatives. The results of interviews also suggested that familial networks provide many supports for the participants, including emotional/moral, financial, and even academic assistance.

Among all respondents, 13 in this study highlighted in the interview that familial support is a great emotional and moral prop for them. The contribution of family members for IDS is mostly in the form of encouragement and advice. Harry, for instance, said that his wife, who accompanied him, gave him encouragement whenever he felt down. He said: "I came here with my wife. Luckily thanks to my wife, so every time when I'm down something like that, you know we can talk to each other, encourage others so it's not that much". Similarly, Kitty mentioned that her parents always encouraged her any time. She stated: "My parents are not from academic. They are not researchers. They just run their business. They don't know much about my academic field, but they give me mental supports like [encouraging] me anytime". Richard revealed that his wife is someone he discussed problems with, noting: "If I have life problems, I discuss it with my wife".

Furthermore, Alex explained that his family is the most important support source for his study life because they continuously gave him encouragement, advice, and help. He stated:

> First and for the very first is my family. We do communication online
> every day... morning and evening. My wife really supports my study. She
> always reminds me the importance of working hard and being discipline
> with my study. And my two boys, they are my energy, so doing a video
> call with them is giving me energy for my study. Also my parents, I need
> their suggestions to make sure that I am in the right tract in my study.
> You know sometimes, I feel lazy and sometimes I don't want to study at
> all. When I remember my parents and I call them, I feel like my study
> appetite is back. For my sister and brothers, I call them when I just need
> help to be honest.

Three participants in this study reported that family plays a significant role in their study because family is their source of financial support. Grace mentioned that her parents tried their best to help her in her study and one of the big supports that her parents provided was paying her tuition fees. She commented: "The family is a

very big support for me because my parents pay for my tuition fee. This is the most important and a big support (financial support)". Similarly, Kathy revealed that family is the only financial support for her. She stated: "Because I am a self-funding student, I have no funding from anywhere except from my family". Moreover, Yuga shared that her husband gave her both emotional and financial support. She specifically noted: "My husband is actually funding my study so he's being the key person of my research because he's the one. I am a self-funded student actually and he's funding my study so he's helping me [and] encouraging me".

In addition to providing emotional/moral and financial support, one participant from Western Asia, Saad, admitted that his wife sometimes gave him academic assistance. "My wife is a PhD student in information system under computer science. Five minutes ago, I called her about my work. She helps me and I help her. So, we can help each other". He further explained in his later interview about support from his wife. He stated:

> *My family of course, because they are actually good [and*
> *understandable]. For example, my wife picks up my children from school*
> *and stays with them while I am here without them. We usually help each*
> *other and even with my study as what I said. If I have any problems, I*
> *call her.*

The additional data from the analysis of IDSTA also indicated that family is one of the major supports for IDS. From 100 thesis acknowledgments, it was found that the students expressed their gratitude to family members in 91 cases. Similarly to the participants' interview results, the results of content analysis also indicated that the most support the students perceived is emotional and/or moral, followed by financial and academic assistance. The following extracts from thesis acknowledgments highlight IDS' perceived familial supports.

> *Love and thanks are extended to my father, mother, and sisters. They*
> *gave me strong support and encouragements in the process of writing up*
> *this thesis. Their love made me strong and gave me courage to face any*
> *difficulties. (Emotional support, IDSTA005)*

> *I am very grateful to my delightful wife, my better half who apart from*
> *managing to be the best mother for my children could hope to have*
> *continually strengthen me with her trust, faith, and encouragements.*
> *(Emotional support, IDSTA014).*

> *Big thanks to the best mother, Dr Sarah Abdullah[2], my father Mr Ahmad*
> *Haji Saud Zakir and my only brother Mr Abdullah Ahmad Hatim for*

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[2] All identifiers from IDS theses acknowledgments are pseudonyms.

being truly understanding and providing financial backup for me.
(Financial support, IDSTA019)

To my wife Wenzhou and my son Max I offer my thanks for suffering the
last one year. I am particularly indebted to my wife Wenzhou for her
financial support in the final stage of my study through her hard work as
a community worker at the St. George Y.C.D limited (Financial support,
IDSTA094)

I ought to make a special mention of the support given by my husband,
who in addition to sharing the burden of housework, also gave me
intellectual guidance throughout the project, helped me clarify many
ideas in the course of numerous discussions we have had on various
parts of my thesis (Academic assistance, IDSTA085)

From the data of sociogram, interview, and text analysis in this study, it is clear that family plays a significant role for IDS, as it is one of the major sources of support for them, including emotional/moral, financial and academic assistance.

4.2.2 Institutional Staff Member Support Networks

As previously explained in the literature review (2.4.3), institutional support refers to any support offered and given by a university to the students, including academic, practical and social/personal. The results from the sociogram exercise indicated that all respondents have got institutional staff member support. Unlike with familial support, the participants describe the perceived institutional support with many different terms in their sociograms. The support comes from supervisors, academic staff, training tutors, school staff, and university staff. Figure 13 below features photographs of sociograms that include these network sources.

Figure 13. A selection of sociograms indicating institutional support networks

All participants who have been assigned supervisors – 14 of them – made a specific category for the supervisor as a source of support. In their interviews, all declared that supervisors are influential individuals who support them academically. In this sense, supervisors help them progress with their research project by guiding the way to conducting research, proofreading the manuscript, and helping at every stage of research. Nancy said that her supervisors guided her on how to appropriately carry out her research: "My supervisors [are] very helpful for me. They help me how to do my research and every month I [meet] them face [to] face at least once a month, [but] sometimes twice a month". Likewise, Kitty said her supervisor guided her and helped her to analyse data. She noted: "Obviously, my supervisor is the one [who] most affected my study. He's a statistician, so he's very helpful to help me [analyse] the data and [guide] me for my project". Moreover, Harry expressed his gratitude to his supervisor's academic help, especially for correcting every single mistake in his writing. He said:

And my supervisor I know is so busy, but she still spends some time you know [to] ask me [whether] I need help. She likes to consult me what I should do for my study. I really appreciate her patient. You know, English is not my first language, so when I [wrote] just like a protocol or something and when I [saw] the feedback there [were] lots of correction. She was very patient so that she could correct every word, every mistake I [made].

Aside from giving academic assistance to the students, supervisors could be a source of support for non-academic issues, according to the interview results. One of the respondents, George, explained how his supervisor helped him with both academic and non-academic problems:

My supervisor helps me in anything even in lifestyle. He helps me in my research of course and helps me understand in lifestyle. I travelled with him many times to the conference, so I learn from him many things even in lifestyle not in research only.

Another institutional support source is other university staff. Although the participants did not really specify university staff in their sociograms (Figure 13), they specifically mentioned them in their interviews. Other university staff include all staff in the university, such as librarians, international office staff, school staff, finance staff, and technical staff. The results of interviews showed that all participants perceived various support from the staff, ranging from academic to technical assistance. Angela, for instance, found that a tutor at the graduate school

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supported her academically. She said: "Regarding the staff about hmmm instructor or tutor in [the] graduate school. They are really magnificent regarding how they support [me] with trainings as [an] international student". Alex, for instance, found that librarians supported him academically by providing the books he needed. He said:

> *I think the library people are very helpful here. They are amazing. For example, when I [emailed] to school librarian, I asked her I needed three important books related to my topics and then she replied my emails promptly and two weeks after I got those three books. She bought the books and contacted me that the books [are] available and [asked] me to take the books.*

The interview results also indicated that the university staff are a source of practical support for participants over issues such as visas, report forms and lab equipment. George explained that the staff at the international office helped him sort out his visa issue, noting: "Sometimes I have got problems with visa issue, I went to post-graduate centre to ask them, so they give me a lot of support I need". Angela said that school staff guided her in completing forms she was not familiar with. She said: "University staff particularly at the school [where] I am studying. So, they help me to figure out on how to complete the form because there are some forms that I have to fill in [such as] engagement form". Moreover, Bobby described how technician staff were helpful when it came to laboratory equipment problems. He said:

> *Of course, the technical staff more on work on a related issue like the equipment is down. Most of them are really helpful. Sometimes, we have some discrepancies, so we have lack of sample for the lab, so we just shot them in the email and they will help us.*

In addition to academic and practical assistance, the results of the interview suggest, academic staff provide emotional support. Renata reported that she felt relieved after she met her personal tutor and counsellor because they paid attention to her well-being issue. She commented: "I find personal tutor and counsellor [are] really helpful for international students to build our wellbeing here. It's not all about academic actually, but it's about how we settle the feeling here". Although she found the counsellor was helpful, she regretted not using the service earlier. She said:

> *In (my home country) we are supposed to talk about our problem with the family instead of outsiders, while here actually the university provides counsellor. So, whenever we have problems we can go there. And I just got that at the end of my second year. Actually, it's almost too late to*

realised that. Some people [reminded] me to go to counsellor, but I [ignored] that. Finally, I [went] to counsellor and it worked, and I [found] the counsellor is a good listener even [gave] me solution as well,

Institutional staff member support, according to text data analysis results, was found to be one of the most perceived sources of support for IDS. All students in their acknowledgment pages mentioned that their supervisors had assisted them academically; 65 noted that their supervisor provided moral support; and six stated that their supervisors helped them financially, especially for attending and/or participating in conferences. The data of text analysis also showed that other university staff members, including academic, technical, and administrative, provided support for IDS. The following quotations extracted from IDSTA reflect perceived institutional staff member support:

First at all, special thanks go to supervisors had been involved in this PhD research project, Dr. Daniel Armstrong and Professor Kathy Wong, whose ideas, supports for this thesis writing and ways to conduct research professionally had profound influences on my research and developments during the project time and beyond. (Academic assistance, IDSTA016)

I would like to express my sincere appreciation to all my supervisors, Prof. Christopher Walker, Prof. Brian Danes, Dr. Mei Chen, Dr. Liew Ma. Without their permission, I can't get the opportunity to perform this significant research. What's more, they always give me warmly encouragement and invaluable help during my study. (Academic assistance and emotional support, IDSTA056)

I would like to express my sincere gratitude to my supervisors Dr. Thamrin Rogers and Dr. Elise Quinn for their continues financial support through my PhD studies (Financial support, IDSTA050)

Many thanks go to Dr. Marco Gonzales, Dr. Nancy Yan, Dr. Bella Douglas, Dr. Paula Millar, Mr. Troy Steward, Mr. Jonathan Patterson, Mr. Paul Armstrong and Mr. Karl White for their technical assistance with my experimental work. I also want to give my thanks to Ms. Sandy Murphy, Mr. Kieran Tunner, Ms. Josephine Farkas, Ms. Jennifer Boyd, and other school staff for their assistance (Technical assistance, IDSTA002)

In short, the results of the analysis indicated that all IDS perceived institutional support, primarily from their supervisor and other university staff. The support they received is not limited to academic support, but is also practical, financial and emotional.

4.2.3 Peer Support Networks

Another support network perceived by IDS identified from sociogram and interview is peer support. The support of *peer* in the participants' sociogram is described in specific terms. As shown in figure 12, and red-circled, the representation of peer support includes officemates, PhD colleagues, friends from the same country/country community, work colleagues, friends in the home country, local friends and housemates.
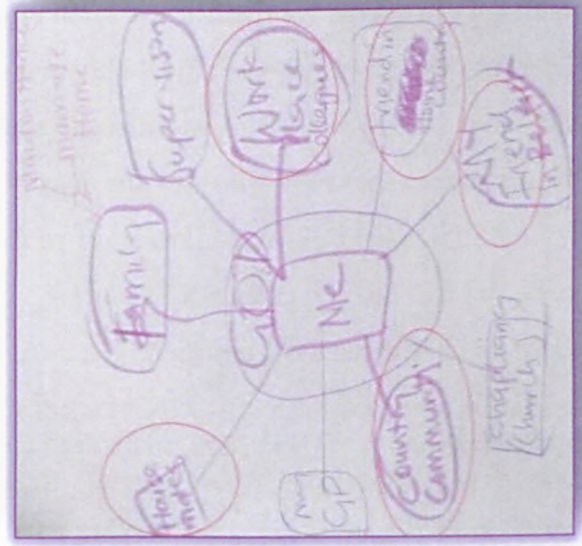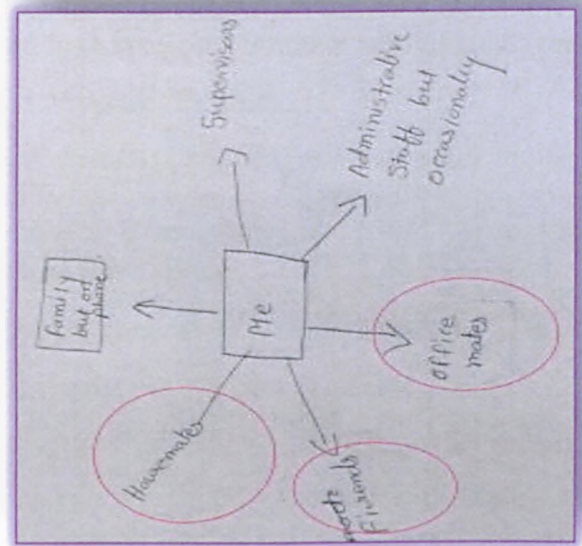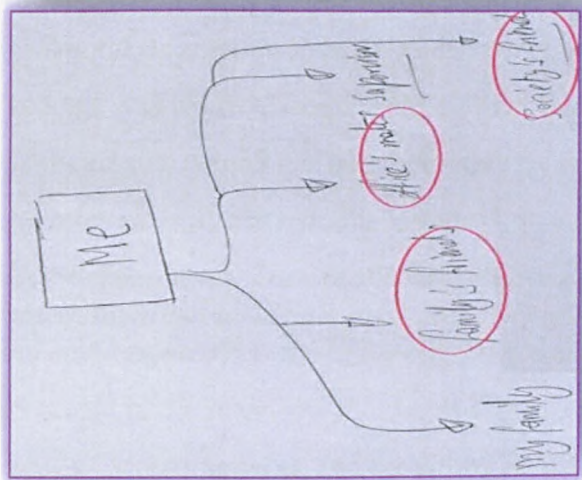
Figure 14. A selection of sociograms indicating peer support networks

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The results of interview indicated that all respondents got much support from their peers. The most common perceived supports are academic and emotional/moral. In relation to academic support, all participants reported the source of this support was from officemates and PhD colleagues. Grace, for instance, shared that her officemates helped her with her study by answering her questions and providing relevant information. She noted:

[I] got officemates. They really help me so much because whenever I ask something about academic area [related] to my study, they willing to help and find some related resources for me. They are another big support for my study.

Scott told in the interview that he and his doctoral friends helped each other academically by reading work and providing feedback. He said: "I am interacting with my doctoral friends here. We always learn from each other. We have read each other's work as well at least to provide feedback." Moreover, Arnold specifically explained his experience with his helpful colleague who was willing to explain statistical analysis. He said:

And then I ask colleagues for example in this case my colleague who's doing mathematics science. He is really helpful to help me what I couldn't understand from the statistics training and what I couldn't understand from the quantitative course.

The peers network is also found to be a source of emotional/moral support for IDS. The results of interview indicated that all participants perceived this support from their peers, including friends from the same country, local and international friends, and church friends. Richard, for example, reported that he sometimes got emotional support from the same country friends, who shared experiences and gave encouragement to one another. He said: "Other friends, they are (co-national) PhDs who study here. We sometimes have party together, share our experiences, and give encouragement". Kathy said her local and international friends gave support when she was sad because her mom had passed away. She said: "I have friends outside who are locals and who are from other countries. They help me a lot especially when I was left by my mom. I wouldn't have done it without my friends in (here). They contribute so much". Grace explained that her friends in church were always good listeners to her stories, and gave her advice about the struggles she faced. She noted:

Once a week because I go to church [on] Sunday. Then, I go to Bible study once in two weeks. So, I usually communicate how I struggle in my study. They are really good support and I feel, ahhh, I feel really encouraged. There's [always] someone even local people concern on me. I feel really relieved.

In addition to the data from sociograms and interviews, the results of IDSTA analysis also suggest that IDS received much support from their peers, including academic, practical and emotional/moral support. From 100 acknowledgments, more than 50 students expressed thanks to their peers for the academic and emotional support they perceived. The following extracts indicate the peer support that IDS perceived, articulated in their thesis acknowledgments:

> *Last but not least, I's also like to acknowledge the great support of my doctoral colleagues – Adrian, Clara and Tsevone caring attitude and language assistance significantly helped with the writing of my dissertation. (Academic assistance, IDSTA043)*

> *I am grateful to my colleagues Melanie Dubnick, Andrew McBride, and Cillian O'Kelley for their valuable comments and for Airin Wen for sending readings from the Columbia school of law. I am grateful to Stephen Leonard and Trevor Boyd for their editing. (Academic assistance, IDSTA076)*

> *Last but not least, thanks to my fellow post-graduates Tom, Melanie, Stacey, and Claire. In particular, special thanks to Bella, whose friendship, support and encouragements were most sincerely valued. (Emotional support, IDSTA087)*

> *My humble thanks also go to all my friends: Al-Adib; Michael and Mamota for their sincere support and advice forget for their warm friendly cup of hot chocolate. Also Naser Al-Kaff, the best housemate I ever live with (Emotional support, IDSTA027)*

To conclude, peers are another central support network for IDS, as identified from the data. This network mainly provides academic, emotional or moral support. Officemates, PhD fellows, friends from the same country, and even housemates are included in this support network.

4.3 Managing the Struggles

As indicated in the previous section (4.1), IDS experience struggles during their study. This section provides the participants' perspectives on how they managed and overcame study and personal issues they encountered. The results of the study indicated that the participants found various ways to successfully manage their struggles, including taking advantage of support provided, making use of technology resources, seeking help from others, and self-managing. Table 7 below shows the identified themes, and each theme will be discussed further in the following subsections.

Table 7. Themes of international doctoral students' managing struggle strategies

International doctoral students' strategies to manage struggles	Taking advantage of provided support
	Taking advantage of technology resources
	Seeking help from others
	Self-managed

4.3.1 Taking Advantage of Provided University Support

One of the solutions to participants' management of their struggles is taking advantage of support provided. In this case, they used the facilities they can access from the university to sort out their study concerns, including attending seminars and workshops and accessing the library and other study rooms.

Many participants, nine of them, reported that attending seminars and workshops is really helpful for them in dealing with many of their academic concerns. Nancy specifically stated that attending workshops improved her language proficiency. She said: "When you are a PhD student [...] you don't have many [chances] to practice your English. That's why I participate the workshop as [many] as possible to improve my English". In a similar vein, Arnold acknowledged that his attendance at workshops and seminars could help him cope with his language barriers, especially dialect. He noted: "Because I'm not good [at] interacting informally, that's why I attended the training. Most of the training staff were native and that really helps me cope with the language barrier. That really helps me". Moreover, both Angela and George used the workshops to improve their communication skills. Angela said: "There are some workshops, training, and seminars that really help me [improve] for example my academic writing skill or for example presentation skill or how to engage with the audience whenever I present my research". George also commented: "I try to do lots of things like [taking] language courses at the university. I took few courses in language also some [are about] how to interact with people like presentation, VIVA, or how to communicate".

Besides improving language proficiency and communication competencies, workshops and training help some participants, such as Renata, Lilian, and Arnold, in many other ways. Lilian, for instance, revealed that training participation made her more active. She stated: "I finished these 30 days within my first year. I have finished 67 days. I never feel [bored] for that. I really enjoy [participating] in the training and it [makes] me active". Renata conveyed that she could enrich her knowledge and broaden her network through workshop participation. She said: "The training at the graduate school is a good way to see how other students react [to] their difficulties as well [...] and during the training I got the knowledge and also good connection with others". Similar to Renata's statement, Arnold explained that training occasionally helped him to solve his study problem. He stated:

> *Maybe if [we] just ask our colleagues, it's not sufficient I mean because of course there are also some limitations in knowledge and skill and then maybe especially time to help me. In this case, going to training, for example, SPSS training or statistics training really [helps] solve or provide more additional knowledge and additional information that my colleagues cannot provide.*

Maximising access to the library for literature resources, and other study rooms provided, is another way for participants to manage their study struggles. Some described how they sometimes could not focus on studying, and/or got bored of studying for many reasons, such as the unconducive and monotonous atmosphere of study spaces. Therefore, they accessed other available rooms that were comfortable and conducive to study. To illustrate, Kathy described how she often went to the library when she could not concentrate on studying in her office. She noted: "I just need to click [installed applications] and they will appear. So, that's why it sometimes makes you run away from study space. If that's the case, I would go to library and focus there to study". Similarly, Renata used the library as a place to study when she got stuck in her office. She said: "If I have no idea, I will get stuck and I feel not comfortable and I move to the library". Moreover, Alex made use of many available and public spaces in the university surrounds to make him comfortable for studying and reading. He commented: "So, for reading I just go to the library or other buildings like [the] graduate school or Peter Frogatt, just to get different atmosphere and atmosphere of learning".

From the interview data, it can be concluded that the participants tended to utilise university support, such as taking and attending training and workshops, and accessing plenty of available study spaces to manage their struggles.

4.3.2   Taking Advantage of Technology Resources

The results of the interviews indicated that another strategy applied by the participants to alleviate and/or overcome their study and personal issues is to take advantage of technology resources. In this digital era, technology has been well developed and is easy to access. The students' life cannot be separated from technology, because it is a very useful resource to support study. Four participants mentioned that they utilised technology as a medium of learning and information. Harry, George and Kitty said that they learned the language through technology, such as news, radio, and movies. Harry specifically said: "But you know, time by time I try to listen more you know news [on] BBC, YouTube, or whatever sources and I can say my listening skills improved and I can understand or I can adapt to the culture". Unlike the three participants, Angela wielded technology to delve into important information she needed quickly. She recalled her experience: "You know, whenever they got the discussion, I grabbed my phone and [tried] to search [what is it meant by] A level, GCSE, so I had material to go with the discussion".

Technology also can be a problem solver for communication concerns. For international students, one prevalent problem is the feeling of missing family and friends, as they left their home country and family to study. The majority of participants in this study acknowledged that technology is helpful to alleviate this feeling. They used various technology services and applications, such as phone calls, video calls, and social media applications. Nancy, for instance, called her family every day to minimise her homesickness. She said: "I call my family every day. I can see them and talk to them every day, face-to-face, I can see my house, I can see everyone in my family". Likewise, Kathy stated that the development of technology has made her life easier because she could see her family members on a video call whenever she missed them. She said: "Technology makes thing easier. I do not only just hear their voices, [but also] see them. I have everything [such as] Skype, WhatsApp, Messenger. I see them whenever I want to see them. I chat with them whenever I want to chat with them". In addition, technology is useful for communication in an academic setting. Two participants, Yuga and George, pointed

out in interview that technology helped them manage their communications with their supervisors. George described how he emailed his supervisor when he could not meet him face-to-face. He said: "My supervisor is sometimes out. So, we only communicate only with email. So, work, information and everything between me and my supervisor and my collaboration is through email". With a different story, Yuga shared her communication experience with her supervisor when she was far away collecting data. She reported:

> *I was there six months for data collection, we used to have supervision meeting on Facetime. She has [an] iPhone. I have [an] iPhone and our iPhones have Facetime application where you can see and talk to the person. We used to have that kind of meeting.*

Seven other participants explained that technology was used as an entertainment platform. They said technology was effective in entertaining them, as it contains many features and programmes which please them. For example, Grace acknowledged that the use of technology was advantageous to get rid of her boredom in studying. She noted: "Whenever I get bored, I listen to music [or] watch (my home country) drama and it makes me feel refreshed". In line with Grace, Scott managed his boredom in his study space by watching soccer or television shows. He commented: "I am always alone in my office. So, sometimes I even watch soccer game or movies if I feel bored". Some other participants, like Bobby, Alex, Lilian, Angela, and Kathy highlighted how technology could be an alternative solution when they felt lonely, lazy, and bored during their study.

The participants' perspectives suggest that technology offers some solutions for the participants to deal with both personal and study struggles. With interesting features and programmes, it is a great source of learning, communication, information, and entertainment.

4.3.3   Seeking Help from Others

This is the most common strategy used by the participants to cope with their struggles. All participants shared that this strategy seemed to be the most effective since they could get help on the spot. Regarding the ways of seeking help, the data shows that direct approaches, such as asking questions, seeking clarification or repetition, and making spoken suggestions were prevalent in their use by the participants for their concerns. Richard, for instance, asked his tutor questions during a session when he missed the point. He stated: "I talk to her. I try not to make

misunderstanding in the session by talking to her and ask her question". Angela raised a point that there is no harm in asking questions, which was why she asked lots of questions when she met her supervisor. She said: "Ask more because there is no harm if you ask more questions. I ask more about what's happening? What should I do? And then why should I need to fix this term?" Besides asking questions, the participants tend to ask for clarification and repetition, especially when it comes to language problems. Saad often asked for clarification and repetition when he could not understand the talk. He said: "I try to change myself by asking 'What do you mean? Explain more! Say it again!' until I understand what he said". Similarly, Nancy used to ask for repetition when she could not understand local students' speech. She said: "Sometimes the local students [talked] too fast and I [couldn't] understand and [asked] them to repeat slowly".

Some participants reported that they sought help indirectly, especially when they could not meet the person face-to-face. In this case, they used a medium to ask for help – email. Bobby, for example, pointed out that he contacted university technical staff when he needed lab help. He commented: "Of course the technical staffs more on work on a related issue like the equipment is down […] we just shout them in the email and they will help us". Scott used email to seek help from other university professors to check his work. He noted:

> *Another thing is since I most reading literature about my thesis, I have contacted two or three professors from different university. One is from Canada. I asked him to check my concept map. It's my essential part of my doctoral research. I got feedback from him. Also I got couple of questions about metacognitive knowledge I [contacted] with I couldn't remember his first name but his last name is Star. He works in [the] USA as far as I can remember. The last one is about dimension of self-concept, I [contacted] with (name). He used to work [at] Oxford University. He is now working in Australia. His email was really clear.. He said that there is conflict like there is opinion and there is another opinion. He also [forwarded] my email to one of his colleagues. He told me when I have another question or other ideas, I can contact [him] because it's useful.*

To conclude, seeking help from others appears to be one of the most reliable strategies used by the participants to handle their struggles. They applied both direct and indirect ways of getting help from others. The direct version of this strategy can be in the form of asking direct questions, asking for repetition and clarification, and asking for advice; the indirect way utilises a medium to get the help.

4.3.4 Self-Managed

Self-management is another strategy used by the participants to deal with their encountered struggles. As described in the literature review (2.3.4), the self-managed strategy is one which does not rely on others and is handled by the participants themselves. There were plenty of approaches participants took for this strategy. One is to reflect on previous experience. Five participants used their previous experience to manage concerns encountered in the adjustment process, so that they adjusted quickly to the new environment. For instance, Arnold said that he adjusted quite well because he had lived abroad before: "I think because I have experience living in a foreign country, so I did not need much time [for] adjustment". Similarly, Renata did not find it really difficult to adjust to the university system and services, because she had experience studying at a foreign university. She said:

> *Because I was late, so I looked at the information by myself and also my previous study in Australia give me, Oh I can tell you something. I did my master's degree in (an Australian University). I came to the university in time. So, I got numerous exposures from the university, including the service/what they provide and then, from them I know that the university in developed country like here they have like our own account for computer. So, when I came here I already got that in my mind. Although I am late, I know where I should go. So, I [contacted] the study librarian by myself. That's my initiative because I know that from my previous experience in my master degree, also our account in the computer.*

Two participants, Harry and Nancy, revealed that they struggled to adjust to local food because they were not familiar with its taste. To cope with the concern, Harry said that he cooked meals at home and invented recipes from the existing ingredients. He noted: "So, we adjust by you know try the new things and then adapting everything into a new our own flavour and that's about food adjustment". In a similar vein, Nancy reported that she rarely ate out, just adjusted food with available ingredients. She said: "…now I try to choose many types [of ingredient] to renew my food".

Another way that some participants employ this strategy is by having positive traits, such as persistence and positive thinking. They argued that this way was quite helpful. For George, he always pushed himself to focus on his research and assured himself that he could manage to solve a research problem. He said: "First, I tried to focus on my research. Then, I told myself [that] I can manage everything". Moreover, Kathy always tried her best to continue learning and find every possible way to learn. She shared her experience in her training: "I am always the last to go to

get out of the class in the training because I wanted to learn and I didn't want to stop. If I don't know this, I do this". However, some participants managed their problems with traits that people consider as negative. For example, Kathy used to be taciturn when she was treated with racism on the bus. She said: "Diplomatically, I managed it [...] Nobody knew it was me because the way I managed it, ignored and laughed at the man, he became ashamed of himself and everyone there was also mad". Another participant, Renata, chose to exclude herself from others to cope with her struggles. She said:

> I tried to isolate [myself] from [others]. You know, we have gathering, many times I didn't attend [it] because I think that I see people are so happy while I was not happy. I feel like something's wrong with me and I feel not confident with that. And everyone is mingled to one another except me. So, I feel like "Oh! I am an alien" among them. So, it's better to isolate myself then.

In addition, the participants also managed their struggles in other ways, such as hanging out and doing part-time work. Two participants highlighted how taking a break by going out or hanging out is an effective way to build up their focus on studying. Alex explained that going out of his room, even for only five minutes, made him relieved. He reported: "When the weather is good, I always go out. You know going out even for only five minutes, for example walking, that's really helpful and I go back to my study space". Similarly, Angela argued that hanging out helped her feel refreshed. She noted: "I can't focus on my study whenever I feel not interested. I can't motivate myself [...] I go to city centre flattering myself to buy something and some stuff and go back to the school and start studying". With regard to part-time work, two respondents conveyed that working helps them to cope with their struggles. Renata, for example, explained that part-time work benefits her to improve her speaking proficiency. She said: "I think working is good to improve my speaking proficiency". Kathy mentioned in the interview that she had to do part-time work to fund her daily needs, because she is a self-funded student. She noted: "I have my workplace because I am [a] self-funding student, I have a work where I go and make some money to look after myself [and] to pay my bill at least".

To conclude, self-management is one of the prevalent strategies for IDS to alleviate their struggles. In this sense, they took many approaches, including reflecting on previous experience, cooking by themselves, recipe invention, persistence, positive thinking, hanging out and doing part-time work. The results also

suggest that ignoring antagonists and self-exclusion could be helpful ways to manage the struggles.

4.4   Concluding Remarks

This chapter has presented the findings of the analysed data in relation to the three main issues of this study. The first issue of this study concerns the struggles experienced by IDS. The findings indicate that IDS experienced expected and unexpected struggles during their study journeys, occurring in both academic and non-academic environments. The four main identified themes of IDS struggles are: communication; study and research matters; health; and society, family, and living conditions. The second issue relates to IDS social networks. Both primary (IDS sociograms and interviews) and text analysis (texts of IDSTA) data suggest that there are three main support networks IDS have perceived during their study: familial; institutional staff member; and peers. The last issue of the study is about IDS strategies to manage their struggles. The findings show that IDS employed a number of strategies that seem to work to alleviate and/or overcome the encountered struggles, such as taking advantage of university-provided support, using technology resources, asking for help from others, and self-management. In the next chapter, I will present the discussion of the research which correlates the findings with previous studies and related theories.

Chapter 5. Discussions of the Study Findings

This chapter presents the findings of the current study interpreted in relation to previous studies of international/doctoral student experiences, and related theories on self-efficacy and social networks, with the purpose of gaining a deeper understanding of the experiences of IDS studying in a UK university. In line with the research findings chapter, the discussion undertaken in this chapter is structured based on research questions. The first part of the discussion (5.1) will consider the results in relation to gaining a deep understanding of IDS struggles. In the second part (5.2), I discuss the findings of IDS-perceived support networks. I provide discussion on how IDS manage their struggles in section (5.3). Finally, this chapter will conclude with a brief summary of important aspects discussed in this chapter (5.4).

5.1 What struggles do international doctoral students face in their study journey?

This study reveals that being IDS is challenging yet rewarding. Based on the results of the study, I found four major challenges that IDS faced in their academic and personal lives, including language, academic expectation, health, and contextual factors.

5.1.1 Language

One of the most prevalent challenges experienced by IDS is language challenge consisting of two interrelated issues, (1) comprehension; (2) reading, writing, and speaking effectively. The majority of the participants, 14 of them, acknowledged that language barriers affected their comprehension in conversation and this hindered them from actively getting involved in verbal social interaction. The problem of language barriers in spoken communication is a classical issue for international students, as it has been highlighted in most studies on (e.g. Abrar, 2019; Abrar & Mukminin, 2016; Alsahafi & Shin, 2017; Cao, et al. 2018; Gbadamosi, 2018; Wright & Schartner, 2013). Among language issues, accent was found to be the most stated problem to cope with in verbal communication. Accent is simply a unique way of pronouncing language, influenced by speakers' native language or dialect (Edwards, 1997) and characterised with particular phonological variation,

rhythmic stress and emphasis (Cheng, 1999; Lippi-Green, 1997; Stewart & Vaillette, 2001). Most participants admitted they found it challenging to understand the words articulated by their local friends, tutors, and supervisors because the accent is distinctly different from what they had heard or learned. This result indicated that unfamiliarity with the accent is one of the determining factors of difficulty in verbal communication. In addition to the accent issue, the result of the study also shows that speed of speech and language-use issues obstruct participants from actively joining in conversations.

Although these issues are frequently experienced by the participants, they admitted that the problems occurred more in their first year or the early period of their adjustments. Yuga, for instance, declared that she struggled with the local accent at the beginning, but was now used to it. Similarly, Richard who struggled with the local people's speed of conversation, confessed that he could adjust well after a half-year of intense communication with a local. This indicated that length of stay and frequency of communication are two influential factors in adjusting to the language issue in spoken communication. The findings support Li and Zizzi's (2018) study results. Their participants revealed that they experienced difficulty with language use, especially in their first semester of study. In addition, the results show that the participants extended their networks with the society in which they resided to address their spoken communication issue.

The results of the study also showed that language barriers affect the participants' written communications., as indicated by two participants, Angela and Alex, who found it difficult to communicate via email in English. The issues in using formal expressions and organising ideas were noted as challenging factors in written communication for the participants. The occurrence of language problems in both spoken and written communication seems reasonable, as English is not their first language. This corroborated Sato and Hodge's (2009) study result, which highlighted language barriers as the most challenging issue for non-English native speakers.

5.1.2 Academic Expectation

From the participants' responses, three sub-themes were identified for the academic expectation struggle theme. The first obvious struggle for the participants is the research process. As explained in finding sections (4.1.2), nine participants explicitly said that they faced many challenges in their research, including searching

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and reviewing for appropriate literature, the ethical procedures process, participants' recruitment, transcribing interviews, and writing the thesis. Of those problems, writing seems to be the most challenging for the participants. Some argued that writing a thesis required mastery of academic writing, a form of writing different from other types. As Hartley (2008) noted, academic writing is a particular style of writing which academics use to explain the intellectual boundaries of their disciplines. It means that academic writing is not just ordinary writing, but is a rigid, logical, and well-structured style in a specific academic field. Some other participants confessed that in addition to the writing style, language barriers made the writing process more challenging. It is clear that the difficulty in adjusting themselves to an academic writing format and language barriers are the factors which slowed down their progress in writing the thesis. This study finding is in line with the results of studies investigating international students and English foreign language writer's academic writing (Al-Khasawneh, 2010; Singh, 2015; Tang, 2012) which separately concluded that the writers' lack of knowledge and skill in academic writing, as well as language proficiency issues, are the major problems for them in writing academically.

In contrast with Hunter and Devine (2016), who revealed that one of the serious issues for doctoral students is negative supervisor interaction and relationships, this study found that all supervised participants are on good terms with their supervisors. However, that is not to say that they did not find any supervision problems. Some participants – Angela, George, and Kitty – shared that they sometimes had different ideas from their supervisors, but that did not affect their relationship or interaction. Additionally, contradictory ideas between supervisors was identified as another supervision issue in this present study. Saad explained that he sometimes got confused when his primary supervisor was on sick leave; he had to consult with his second supervisor, and had to change the structure and contents of his thesis. Despite having some supervision issues, all participants acknowledge that their supervisors were helpful and supportive with their projects, giving advice and feedback. The supports perceived by IDS indicated that supervisors performed a variety of tasks, as noted by Petre (2010) and Russell (1996), including providing supervision, monitoring and improving students' performance, giving advice and feedback on students' work.

Another subtheme regarding study and research struggles is academic culture differences. As Perso (2012) argued, culture includes everything that makes one group or a community distinctive from another, including educational aspects. Thus, it is reasonable that the participants experienced academic cultural differences because they come from different cultural backgrounds. Regarding this, some participants commented on the different nature of the learning process they experienced during their study. This finding is similar to study results from Abrar and Mukminin (2016), who explored international graduate students' classroom discussions. They found that academic cultural difference, particularly the learning system, was a concern encouraging participants to actively get involved in classroom discussions. Another prominent issue within this subtheme is the difference in the supervisor's role from participants' past educations in their home country universities. This academic culture discrepancy led to confusion and conflict for participants when it came to the supervision process, since they expected and preferred more input and guidance from their supervisors. This result corroborates Kim's (2007) study which found that advice interaction that was different from participants' expectation and/or past experiences became a problem for international students in supervision process. Therefore, it is necessary for supervisors to be aware of how their international students view their roles (Charles & Stewart, 1991) in order to minimise the gap in academic culture difference, particularly in supervision.

5.1.3 Health

The study reveals, in relation to health struggles, that the participants suffered physically, financially, and emotionally. However, problems with emotion or psychological factors were identified as the most prevalent struggles within the theme. Some participants shared that they experienced the feeling of loneliness. This feeling refers to a distressing experience as a realisation of discrepancy in a required and meaningful social network (De Jong-Gierveld, 1978; Perlman & Peplau, 1981; Weiss, 1973). One participant in the study in particular said that her loneliness lasted for two years. She further added that there were no friends to connect with, and she felt like a stranger in the environment. This indicated that social networks are required for international students; the absence of preferred relationships, networks, and culture and/or linguistics environment in society, could trigger the occurrence of the feeling (Sawir et al., 2008). In addition to the feeling of loneliness, the result of

the study showed that the participants experienced other emotional or uncomfortable feelings, including frustration, disappointment, shyness, and boredom. The findings of the study support the results of other studies (Alsahafi & Shin, 2017; Bamgboje-Ayodele et al., 2016; Carter et al., 2013; Corner et al., 2017; Elliot et al., 2016; Gebhard, 2012; Hansen et al., 2018; Hwang et al., 2015; Sato, 2016; Sawir et al., 2008) which highlighted how international students frequently experienced emotional and/or psychological struggles in their study life.

5.1.4 Contextual Factors

In relation to society, the study finds that the act of discrimination is an issue that the participants struggled with. Some participants shared in their interviews that they perceived discrimination, including intimidation and ignorance, both in academic and non-academic environments. As Hanassab (2006) indicated, the act of discrimination can be defined as negative and destructive acts that result in denying someone's life and opportunity. Regarding the case that the participants experienced, the intimidation that Kathy experienced from another passenger in a bus clearly showed that she was denied and treated unfairly in a community. Similarly, the ignorance that Harry perceived in a workshop denied him the opportunities to actively participate in the programme. It is clear that intimidation and ignorance could be classified within the act of discrimination. The finding of this study confirms the study results of Ye and Edwards (2015), who they found that discrimination is one of the prevalent issues experienced by Chinese international doctoral students. Some other studies (e.g. Acker & Haque, 2014; Bonazzo & Wong, 2007; Green & Kim, 2005; Malau-Aduli, 2011; Park et al., 2017; Wu et al., 2015) also highlighted how international and/or doctoral students frequently perceived the act of discrimination.

Family was found to be another concern for IDS. The most apparent issue with the subtheme is the feeling of missing the family. The participants stated that they missed their families while studying here, especially those who came to study alone. The existence of family is indeed important as it is a source of support, particularly emotional or psychological support (Hercog & Van de Laar Le, 2017). The participants who bring along their family members to the country of study destination face another prominent issue, role conflict. They felt it a struggle to manage their time between family and study. This finding supports Vekkeaila et al.

(2013) and Carter et al. (2013), who revealed that balancing family and study life is a challenge and a disengagement trigger for doctoral students.

In addition to society and family concerns, living conditions and working environment caused further serious struggles for the participants. Of 16 participants, 13 acknowledged that they struggled with the conditions of life in the country of destination due to cultural and geographical differences. One obvious struggle mentioned by the participants is the weather. Seven participants found the weather extreme and quite disturbing. The problem with weather was also highlighted in the studies conducted by Rabia and Hazza (2017) and Wright and Schartner (2013). They revealed that the weather was a serious issue for international students' adjustment and an external reason for their reluctance to interact with others. Another prominent result from the 'living conditions' sub-theme is food concerns. Some participants shared three main factors of the issues: unfamiliarity with Western food; religious practice; and personal taste. The occurrence of this concern is plausible because the participants come from different cultures than the host. This finding confirms previous studies (Malau-Aduli , 2011; Rabia & Hazza, 2017; Wang et al., 2018) which indicated that food concern is a common issue for international students caused by cultural differences. Other living conditions concerns identified from the participants' responses are accommodation, relationship types, fashion sense, and uncomfortable places to study.

5.2 Which support networks do international doctoral students perceive in their study journey?

Theoretically, social network is a social structure of nodes comprising individuals who communicate with one another and share resources (Butts, 2008; Liccardi et al , 2007; Nedeva, 2000; Ye, 2006). For international students, the social network is instrumental, as it is a source of support in adjusting to a new environment (Coleman, 1988; Kim, 2001; Ye, 2006). The study revealed that the participants socially relied on the networks they have and/or develop. The data from sociograms, interviews, and documents from the page of IDSTA indicated that there are three main supports for the IDS: familial; institutional staff members; and peers. The various support sources perceived by the participants showed that they

fundamentally have strong social networks which could provide the needed support for them.

5.2.1 Familial Support

The study results indicated that familial support is one of the significant social networks perceived by the participants in their study journey. The support from family members is pivotal for individuals and/or students, including IDS since families are society's most important building block. Having a strong network of supportive family helps IDS enhance their mental well-being and social connectedness to others. The data shows that, most participants, as reflected in their sociograms and from their interviews, reported that their family members, including parents, children, siblings, and other relatives, were the biggest source of emotional or moral support. They particularly described that whenever they felt down and discouraged, they shared their feelings, and asked for advice and motivation from their family members. Further, the data showed that family gives great financial support to the participants. Of 16 participants, five are self-funded students who rely on their families to help them pay tuition and living costs.

In addition to sociograms and interview data, the documents analysis of IDSTA indicated that family is one of the central support networks for IDS. From 100 acknowledgments, 91 contained expressions of thanks for familial support. Similar to the results of the participants' interviews, the results of IDSTA analysis indicated that emotional or moral, financial, and academic assistance are the types of perceived support by IDS. Such findings on the role of familial support for IDS confirm previous studies on international students' support (Le et al., 2016; Pimpa, 2012; Stevenson & Bland, 2017). They highlighted how familial support is instrumental for international students, as the family provides various kind of support, including emotional, financial, and also practical. Further, Pimpa (2012) outlined in her study that support from the family was sometimes given before study enrolment, such as in deciding the study destination.

5.2.2 Institutional Staff Member Support

Regarding staff member institutional support, the data in this study showed the significant role of this social support network for the participants. As outlined in

(2.4.3), institutional support includes all support networks provided by the university. The most prevalent institutional staff member support was perceived from supervisors. All supervised participants reported that their supervisors tirelessly gave them academic assistance for their research, including guiding the research, providing reading materials, and giving feedback. The participants further claimed that the assistance from their supervisor was beneficial for them to be on the right track and successful in completing research. Additionally, the results of document analysis also showed the supervisor as the pivotal academic support source for IDS graduates. All 100 acknowledgment documents included information on the supervisor's academic assistance. This suggests that the supervisor could be considered as one of the key persons for successful doctoral research. However, the literature (Armstrong, 2004; Zhao et al., 2007) emphasises the need to maintain a good relationship with the supervisor, as this is the key to effective supervision. In other words, having a good relationship with supervisors helps the participants to experience a satisfactory process of supervision and progress to research completion. On the other hand, ill-fated supervision relationships could affect students' research progress and completion (Vekkaila et al., 2013). In addition to supervisors, the data from interviews indicated that the participants also got academic support from other university staff, including librarians, school staff, and tutors. The role of the librarian in supporting international students has been highlighted by Hughes (2016). In her study, she concluded that librarian support is important for international students' transition in a host university.

Further, the study also indicated that institutional support provides emotional or moral support for IDS. As mentioned by Renata in her interview, the counselling service made her feel relieved, and built up her well-being because the counsellor patiently listened to her story and gave her some suggestions. However, she admitted that she initially felt reluctant to come to a counsellor, because it was not common to share problems with outsiders in her culture. Unfortunately, the university counselling service, which can be a source of emotional or moral support for international students, seemed to be under-utilised by the participants. Other than Renata, no participants reported that they visited the counselling service; and whenever they faced personal or physiological problems, they preferred to seek help from others instead of a counsellor. The participants' reluctance to meet counsellors

confirms the Komiya and Eells (2001) study, which remarked that international students were reluctant to seek counselling services when having personal problems.

The participants' perspectives of how beneficial the institutional support in their study indicated that that this support network is instrumental. Previous studies (Ali et al., 2016; Arambewela et al., 2006; Gopee & Deane, 2013; Lértora et al., 2017) have highlighted that institutional staff member support is important for the students, including international students, to successfully progress and complete their study.

5.2.3 Peer Support

The last support network identified in this study is peer support. This support network was described by the participants in different terms in their sociograms, including colleagues, friends, officemates, co-national friends, and housemates. Among these, officemates and/or PhD colleagues were quite frequently mentioned by the participants in their interviews. The support type perceived by the participants from their officemates/PhD colleagues was mainly academic assistance, such as providing research information, answering academic-related questions, reading work and providing feedback. Some other participants revealed that their officemates/colleagues were also great helpers in overcoming their emotional concerns, such as giving advice, encouragement, and suggestions whenever they were under pressure. This indicated that the role of officemates/PhD colleagues is significant in supporting the academic and emotional aspects of IDS. Likewise, the findings of this study resonate the findings from the study of Jairam and Kahl (2012). They found that academic friends' professional and emotional support was significant for the successful degree completion of doctoral students.

Aside from officemates/PhD colleagues, other peers with which participants were in contact outside of the university office also provided support, especially emotional or moral support. The type of emotional support from other peers differed from that offered by officemates or PhD colleagues. Whereas emotional support from officemates or PhD colleagues is limited to doctoral students' specific problems and issues, other peers' emotional support related to general encouragement. Among the peers, many participants highlighted that their friends from the same country, known as co-nationals, gave them much emotional support by listening to their stories, and giving encouragement and advice. Interestingly, they also said that they

felt more comfortable with discussing issues with their friends from the same country. This is reasonable, as co-nationality implies a common language and cultural similarities. Having the same language allowed individuals to express themselves better in communication and feel closer and less formal (Taha & Cox, 2016).

Additionally, the text analysis from IDSTA also showed that the peer network was found to be one of the major networks for IDS. Similar to the results of interviews, the most perceived support was academic assistance and emotional or moral support. This result is in agreement with other studies (Lee, 2017; Evans, 2015; Jairam & Kahl, 2012; Thomson & Esses, 2016; Quintrell & Westwood, 1994; William & Johnson, 2011; Zaccagnini & Verenikina, 2013), which concluded that peer support can help the international students cope with their personal and academic issues.

5.3 How do international doctoral students use the perceived network to address the struggles in their study journey?

The participants admitted that the struggles they experienced did affect their lives and study as well as slowed down their progress. However, they also shared some strategies that seemed to work to manage their struggles. The findings of the study identified four main themes: taking advantage of support provided; making use of technology resources; seeking help from others; and self-management. Their ability to address their struggles, in general, shows that they possess a sense of self-efficacy (Bandura, 1993).

5.3.1 Taking advantage of provided support

Many participants revealed that benefiting from university-provided support is one of the most helpful strategies to alleviate some of their encountered struggles. The most stated university support that the participants used is attending training and/or workshops. In the UK institutions, attending training/workshops is required for research/doctoral students with the purpose of providing an excellent framework to lay out the expectations of doctoral research skills in their pursuit of an academic career, and to superimpose the requirements non-academic employers have for graduates (Statement of the UK Research Councils, UK GRAD Programme, 2001).

Although they have to accomplish 30 days of training/workshops, the participants in the interviews acknowledged that they tried their best to attend training and/or workshops, as these helped them to manage their concerns, especially academic problems. Nancy and George, for instance, found the training or workshops helpful in overcoming their concerns about language and communication for academic purposes. Lilian felt the activities in training helped her to be more active and motivated in her study. Furthermore, Renata and Arnold commented that training/workshops provide knowledge and networks for them. The usefulness of training and workshops in overcoming international/doctoral student academic problems is also indicated in other studies (Cao et al., 2018; Vekkaila et al., 2013). Their findings suggest that training and workshops are significant in helping IDS academically, including alleviating problems with language barriers/communication and enhancing their knowledge and research skills.

Besides attending training/workshops, the participants benefited from other provided support to manage their study struggles, including maximising their access to comfortable study rooms, such as the library. Some participants commented that the library offers a convenient environment for them to study, as it is equipped with a complete collection of books and literature, quiet rooms, and a computer for every desk. This indicated that the library is a central academic support for international students. This finding is consistent with Hughes' (2016) study, which concluded that the library plays an important part in supporting international students in a host university.

The participants' keen efforts to manage their academic struggles by frequently attending the training/workshops and accessing the library indicates that they possess a sense of academic self-efficacy. Having academic self-efficacy, the participants have beliefs and judgments about their own competence in controlling their learning and academic activities (Bandura, 1993; Midgley et al., 2000; Zimmerman, 1995).

5.3.2 Taking advantage of technology resources

Consistent with the previous studies on international students (Abrar & Mukminin, 2016; Gebhard, 2012; Khawaja & Stallman, 2011) which found that the use of technology helped the students alleviate their challenges, the findings of this study indicated that technology becomes one of the important factors to help the participants overcome their academic and non-academic struggles. As indicated in

their interviews, the participants benefited from technology for many different purposes, including as a medium of learning and information, communication, and entertainment. The multiple use of technology suggests that its development has been integrated into every aspect of life.

One of the most interesting findings within this theme is when one participant, Yuga, shared her valuable experience in using technology. Unlike other participants, her response indicates that she also used the technology for distance learning with her supervisor. When she was away from the university to collect the data, she had monthly meetings via the Facetime application with her supervisors to discuss her research progress, theories and other topics related to her research. This suggests that technology could be an effective solution for distance learning. As Rashid and Elahi (2012) noted, technology is significant in distance learning because its use can effectively replace the traditional face-to-face communication between teacher and students. Furthermore, the efforts of Yuga and other participants to use technology to overcome their academic and non-academic struggles showed that they have high self-efficacy. With self-efficacy, individuals set their goals, try hard to achieve them, and develop coping strategies to manage stress and pressures (Bandura, 1986; Poyrazli et al., 2002).

5.3.3 Seeking help from others

This strategy was noted as the most common strategy used by the participants in overcoming their struggles. All participants acknowledged that directly seeking help by asking questions, and asking for clarification and repetition are helpful because they can solve communication problems on the spot. For instance, when they have difficulty in understanding unfamiliar vocabulary in a talk, they can figure out its meaning by asking their speaking partner(s) questions. If they make such approaches, they obviously implement speaking strategies (Douglas, 2007) to cope with their communication struggles. O'Malley and Chamot (1990) and Tarone (1981) separately conclude that the implementation of speaking strategies in communication is important because it can help the speakers to negotiate the meanings not shared with speakers of the target language. The finding of this study confirms other study findings (Abrar, 2019; Cao et al., 2018) which highlight how seeking for help from others, such as asking questions, sharing with friends and

teachers, and asking for clarification and repetition, could help the students cope with their communication issues.

In addition to asking for help directly, the study revealed that some students asked for help indirectly due to the distance issue. Scott, for example, used a technological platform called email to get help from other professors in a different country, and he found it effective. What Scott had done indicated that technology is useful for distance communication. Moreover, previous literature (Derks & Bakker, 2010; Tolmie & Boyle, 2000) highlighted email as a common and useful computer-mediated communication which is largely used in work and education settings because it has some advantages, including allowing for instance access of information and files, allowing for mass sending of messages, allowing for easy referencing, paperless and accessible from everywhere. Despite enormous advantages, the use of email has some limitations, including lack of non-verbal and social context clues, and requiring a considerable amount of time in checking and replying to messages (Hassini, 2006).

The variety of participants' efforts in seeking help from others, including asking questions and asking for clarification, repetition or advice both in direct and indirect ways showed that they, once again, have a sense of self-efficacy in handling all the problems they experienced. As Bandura (1993) noted, individuals with self-efficacy are able to manage and control threats and pressures with both perceived coping self-efficacy and thought-control efficacy.

5.3.4 Self-management

Another strategy that shows the participants' possession of self-efficacy is self-management. In this sense, the participants tried their best to overcome the problems themselves. Self-reflection was noted as one of the participants' efforts in facing their struggles. The participants reflected on similar previous experiences to overcome situations they came across, especially during their adjustment process. Renata, for instance, solved her confusion in accessing the university services by recalling her previous studying abroad experience. The use of participants' self-reflection obviously indicates that they possess the quality of self-efficacy. In social cognitive theory, the self-efficacy construct is included in self-reflection, which is a self-referent mode of thinking that individuals refer to in order to evaluate, modify and change their own thoughts and behaviour (Bandura, 1986, 1997).

Another participants' effort which falls into the self-management strategy is having positive traits. There are two positive characteristics noted from the participants' interviews. Firstly, some participants reported that being persistent was one of the effective ways to cope with the struggles. Their persistence was reflected in their study/research process, and in finding solutions. They argued that continuing with learning and concentrating on their study/research are better solutions for their academic concerns. They also commented that they tried their best to find another solution when their previous efforts did not work. The tireless efforts that the participants pursued in solving their problems indicated that they have self-belief and judgment on themselves to organise and execute action – and this is known as self-efficacy (Bandura 1986; 1997). Secondly, some other participants maintained their positive motivations and thinking. They shared the belief that positive motivations and thoughts effectively relieved their worries in a way that they always assured themselves that they could manage and handle their academic problems. Theoretically, motivation plays a key role in the learning process, and its absence may discourage learners from studying, possibly halting their learning once they experience hardship in the process (Dörnyei, 2001; Gardner, 2007; Palmer, 2009). Therefore, it is important to note that positive motivation plays a significant role for the students in their study. In relation to self-efficacy theory, motivation is closely related to self-efficacy. Bandura (1993) posits that the self-efficacy function in individuals' motivational processes can reflect the intensity and persistency of their effort. The participants' intensity and persistency in managing their problems shows that they possess a sense of self-efficacy. Moreover, this finding supports Abrar and Mukminin (2016), who found that maintaining positive motivation helped international students to improve classroom engagement.

In addition to self-reflection and maintaining positive traits, the participants of the study also mentioned that they used other ways to alleviate their problems, including recipe invention for their food concerns, part-time work for their communication and financial issues, and shopping for their boredom. Some of these results are consistent with other previous studies which highlighted part-time work (Acker & Haque, 2015; Khawaja & Stallman, 2011) and shopping (Saravanan et al., 2019) as effective ways for IDS to manage their challenges.

On top of this, what caught my attention during the interviews was when two participants shared that they used behaviours that most people perceived negatively

to manage their struggles. One participant, Renata, socially isolated herself from others. She specifically reported that she chose not to communicate and attend any gatherings with her friends in an attempt to manage her uncomfortable and diffident feelings. In general perspective, social isolation is considered negative as it refers to pervasive feelings of marginalisation, loneliness, dissatisfaction, and heightened levels of interpersonal distress (Reynolds & Constantine 2007), resulting in withdrawal or inability to effectively integrate into one's social milieu (McClure, 2007). It indicates that the occurrence of social isolation could be caused by an individual's psychological condition. This study result is in contrast with a number of previous studies (Khawaja & Stallman, 2011; Wu et al., 2015) which reported that social isolation is a frequent challenge that international/doctoral students faced in their study. Another uncommon behaviour that one participant, Kathy, adopted to manage her struggle was to ignore an antagonist. She perceived an act of racism/discrimination on a bus, but just ignored it and this worked. Although ignorance is predominantly assumed as negative behaviour, because it means a state of being unaware and lacking knowledge, but it is not always a disadvantage (McGoey, 2012; Smithson, 2008). In a certain context, as Kathy experienced, being ignorant could be a better choice to avoid complications. Seeing how effective an act of ignorance that Kathy used to cope with perceived racism suggests that ignorance can be effectively used as psychological protection.

5.4   Concluding Remarks

In this chapter, the interpretations were made on the findings related to IDS experiences studying in a UK university. In most cases, the findings of the study are in agreement with studies referred to in this study, but some differed from the arguments of past studies. For example, previous studies on supervision highlighted that many international students suffered from ill-fated relationships with their supervisors, but this study found that the relationship between the participants and their supervisors was good, even though there are some issues, such as disagreement over ideas. Another contradictory result from the previous study is the way some participants managed their struggles. Two participants, Renata and Kathy, used unusual ways of overcoming their problems, behaviours that most people consider as negative. Renata, for instance, self-excluded herself from others to alleviate her

uncomfortable and diffident feelings, and Kathy chose to be ignorant when she was discriminated against on a bus. Although these behaviours are seen as negative, they seem effective in managing the participants' struggles in certain contexts.

Further, the discussion of the study indicates self-efficacy and social networks play a significant role in IDS study life. The existence of self-efficacy among IDS was shown by the way they managed the struggles that came across in their study life; and the perceived supports from various networks, including familial, institutional staff members, and peers. These networks helped them academically, socially, and psychologically. This confirms my previous argument that self-efficacy and social network are required components for IDS to succeed (2.1.5). The next chapter will present a summary of the findings of the study, along with a note of research strengths and limitations, research implications, and research recommendations.

Chapter 6. Conclusion of the Study

In this last chapter of the thesis, a brief summary of the findings of this study will be presented. Subsequently, a note on the research strengths and limitations will be provided. Besides these, the chapter further outlines the implications of the study, with recommendations for further research.

6.1 Research Summary

The general purpose of this study has been to gain in-depth understanding of IDS experiences of studying in a UK university, and how they negotiated the challenges they faced. In doing this, using a qualitative design with a case study approach, I have examined the students' experiences with three research questions. The first research question was intended to explore the struggles that IDS experienced in their study journey. The second research question was to identify the support networks they perceived in their study journey. The last question was to elicit on how the participants managed their struggles. The summary of the research findings for each question is given in the following points.

1. The study has revealed that the nature of IDS' experiences is, in general, rewarding and challenging. Based on the findings as discussed in Chapter Four (4.1), the participants experienced expected and unexpected struggles in their journey as doctoral students in a foreign country. Four themes were identified as the main struggles for the participants, and one of them is language. This was noted as one of the prevalent struggles for IDS. Two interrelated factors, including *comprehension* and *reading, writing, and speaking effectively* contributed to the participants' language struggles, which they experienced both in academic and non-academic environments. However, this struggle mostly occurred in the early period of their stay. Most participants admitted that the longer they stayed the fewer language struggles they experienced.

The second theme identified is academic expectation. Unlike language struggles, this struggle specifically occurred in the academic milieu. The results of the study indicated that the research process was a major struggle for the participants. They experienced many struggles throughout the process of their research, including selecting the literature review, ethical procedures, collecting the data,

transcribing the interview and writing their thesis. Supervision was also identified as a concern for some participants. Although the participants admitted that their relationship with their supervisors was generally fine, disagreement over ideas was unavoidable. In addition to that, another concern faced by some participants was academic culture differences. The differences of learning styles and the role of the supervisor were noted as the main differences from the participants' academic culture in their home university.

Health is another theme identified from the findings of the study. Some participants acknowledged that they struggled emotionally, financially, and physically. Among the health concerns, most participants acknowledged that they experienced uncomfortable feelings, including loneliness, frustration, disappointment, shyness, and boredom, and these feelings occasionally affected their learning and research progress. Another health issue that affected the study progress is physical. One participant had to undergo surgery and it affected her study for a whole year. Unlike emotional and physical struggles, financial struggles might be less likely to affect the participants' study, but it was found to be a serious struggle for the participants' personal lives, especially those who are self-funded.

The last identified theme of the first research question is society, family, and living conditions. In terms of society, the study revealed that some participants perceived acts of racism/discrimination both in academic and non-academic environments, such as in the classroom, in the café, and on the bus. For the family subtheme, a feeling of missing family was a common one shared by the participants, as they live far away from their families. Conflict between the roles of student and parent was found to be another serious issue in relation to family. Unlike the missing family issue, role conflict occurred to participants who brought their family members to the country of the study destination. Regarding living conditions and studying conditions, some participants experienced many struggles due to cultural and geographical differences, such as weather, food, relationships, fashion, and the study environment.

2. Based on the study results from sociograms, interviews, and document analysis of IDSTA, there are three central support networks perceived by the participants, one of which is familial support. This social network includes all individuals within the family, such as parents, siblings, children, and other relatives. This

network was found to be a pivotal source of emotional support for the participants. In addition, for those who are self-funded, family is a reliable network for financial problems during their study.

Further, institutional staff member support was another significant network for IDS. The support in this network mainly came from supervisors. All supervised students mentioned that their supervisors played a significant role in their academic lives. In addition to supervisors, other university staff, including the librarian, administrative staff, school staff and university counsellors, helped the participants to deal with academic and psychological concerns.

The data of this study also showed that peers represented another important network for IDS in supporting their study. This network is based on friendship and includes officemates, colleagues, housemates, and friends from the same country. The type of support mainly provided by peers is academic and emotional or moral.

3. The study also identified strategies that the participants adopted to cope with their struggles. Firstly, most participants benefited from support provided by the university. The prevalent university support used by the participants was attending workshops or training. Many participants stated that workshops and/or training helped them to manage their academic struggles, particularly language barriers in an academic context, and research skills. Other than attending workshops and/or training, some participants maximised their access to campus facilities – for example, the library, and other study room facilities – to find a better atmosphere for their study.

Secondly, another strategy that seemed to help participants overcome their struggles is taking advantage of technology resources. The majority of participants shared that they used technology for multiple purposes, including as a medium for information and learning, communication, and entertainment. Furthermore, the result of the discussion indicates that technology plays roles in distance learning as it mediates the long-distance issue.

Thirdly, seeking help from others was noted as another way for participants to manage their struggles. The participants reported they seek help both in direct and indirect ways. Based on the findings of the study, direct ways of seeking help, including asking questions and asking for clarification, advice, and repetition, were considered more effective, as they could generate immediate

help. However, this is mostly effective when there is face-to-face interaction between the speakers, not for long-distance communication. The study also showed that some participants seek help indirectly for long-distance communication. In doing this, they used a common computer-mediated communication platform called email. Although they could not get immediate response, participants argued that the use of email to ask for help is quite effective.

Lastly, the study found that a self-management strategy was often used to alleviate the struggles. What it is meant by self-management is a strategy initiated and executed by the participants themselves. The data showed that there were plenty of ways that the participants adopted this strategy, including self-reflection, recipe invention, persistence, maintaining positive motivations and/or thinking, part-time working, and shopping. The most interesting finding in this study was that some participants used uncommon self-management strategies that most people considered to be negative behaviours, such as being ignorant, and self-isolated; however, the participants ascertained that these behaviours made them feel relieved and helped them alleviate their struggles.

6.2 Research Strengths and Limitations

In this section, the strengths and limitations of the research will be outlined, especially relating to the sample, data collection, and data analysis. The sample used in this study was relatively small, at 16 IDS. The representation of the sample was in line with the aim of the study to elicit the individual experiences of the participants. The findings of this study have contributed new insights and perspectives on the IDS experiences in their academic and social life in the UK. With reference to the existing literature on the related topic, limited studies are available exploring exclusively the experiences of IDS. Therefore, the outcomes of this study would be helpful in understanding their specific issues through their own perceptions and experiences. Consequently, the insights of the participants may help the educational providers in the UK to modify or introduce necessary strategies to suit the cross-cultural requirements of these students. However, since the sample was small, and the study was conducted only in a UK university, claims regarding the representativeness of the sample or the generalisability of the results are not being

made; and the experiences of this sample of participants may not be the same as in other universities, both in the UK and other countries.

Although the number sampled in this study was small and the results could not be generalised, the participants were from heterogeneous backgrounds – males and females from different age groups, pursuing different majors of study in a UK university, and coming from different linguistic groups. The heterogeneous sample helped us to better understand similar patterns in terms of cross-cultural aspects, and this might not be generally possible with a homogeneous ethnic group sample. Therefore, this information will be useful for the institutions to formulate appropriate strategies and to offer IDS better supporting services.

The main data collection technique in this present study was semi-structured interview. The use of the semi-structured interview, with non-prescriptive question lists, allowed the participants to openly share their perspectives and experiences, and discuss specific aspects that they felt pertinent to their individual experiences. However, Cohen et al. (2000) detailed that the researcher needs to be aware of the influence of the interviewer, the influence of the interviewee, the interaction between the two, and the content of the questions when using semi-structured interview as a data collection method. Therefore, in this present study, in-depth, semi-structured interview was not a sole method of data collection. I used a new and innovative data collection technique called the sociogram, which successfully facilitated the understanding of the research issue regarding the support network in an elaborate manner. Thus, the use of the sociogram has greatly contributed to the study as it provided scope for the respondents to visualise the participants' social network, and helped me as a researcher to better understand and explore their experiences in-depth. Additionally, I also used document as an additional data collection method, and its results were employed to triangulate the interview data to answer research question three.

In analysing the data, I mainly used thematic analysis. This analysis allowed for the identification, analysis and reporting of patterns within the data set. However, thematic analysis has been criticised for being vague or poorly defined (Holloway & Todres, 2003). Some believe that the data collection and analysis stages are blurred (Attride-Stirling, 2001) and that the method allows researchers to select extracts to support themes the researcher would like to see, therefore lowering the validity of the research. Therefore, to help me address some of the issues of reliability and validity

of the analytical process using thematic analysis, during the research process I referred to Braun and Clarke's (2006) six-staged framework for thematic analysis.

6.3   Research Implications

My findings have implications for both universities and prospective IDS. The results of the study, from both sociograms and interviews, indicated that IDS had fairly strong institutional support networks in their study lives. They shared the view that they received much support and help in particular from university staff, including supervisors, administrative personnel, international and/or graduate student officers, librarians, and university technicians. However, only one participant mentioned attending and making use of the university counselling service – the other fifteen did not. This failure to mention counselling services by most IDS who participated in the study implies that they never used the service and/or possibly did not know about all the services offered by the university. It is therefore important that schools and universities ask all doctoral students at the initial stages what types of services they need to meet their needs. It would make sense for the universities and schools to enhance the role of supervisor, as it is central to doctoral students' needs; the supervisor can, for example, spot students who need immediate help, and can encourage them to take the necessary steps to address study issues.

Although the study's findings relate to the perspective of IDS, home or local students may experience similar struggles in their studies, such as understanding the language and culture of international students, problems with academic matters, and personal, social, and psychological issues. To meet the needs of students, the university needs to facilitate potential collaborations and discussions between home and international students – for instance, providing advisory sessions that benefit both groups. This will give them a better chance to manage the struggles they face, and to extend their social networks, particularly with university staff and other students. In a broader sense, this provision would help the doctoral students, including IDS, to improve their knowledge and skills, and to meet the demands of the UK education system.

Moreover, in detailing the challenges IDS face in studying and living in a foreign university, the study results imply that prospective IDS planning to study abroad need to prepare psychologically for challenges that may arise in their new

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environment. This requires that they acquire ample information, and enhance their knowledge of potential issues. These issues may be associated with all matters relating to the host country, including language use, the education system behind doctoral programmes, culture and customs, and climatic conditions. Along with this information, they should also be aware of strategies to overcome challenges they might encounter. In addition, it is important for prospective IDS to develop an attitude of social connectedness, establishing contacts and friendships with the host nationals and other international students. It would also be advantageous if they could use – and maximise – facilities offered by the university, considering the multiple associated rewards, including broadening their knowledge and skills, managing their problems, and extending their social contacts.

6.4   Research Contributions and Recommendations

In eliciting IDS experiences, this study has contributed significantly to research methods around IDS-related issues. To collect the data, I employed a relatively new and innovative method called sociogram. This method allowed me to successfully visualise and capture a picture of IDS' support networks or support systems during their doctoral studies. Additionally, it helped me as the researcher to facilitate interactive and communicative interviews with participants from diverse linguistic and cultural backgrounds. Following the success of applying this approach to generating data, it is recommended that further research projects apply it to various topics and disciplines of study. In addition, further studies could also use sociogram as a data analysis method (e.g. to explore degrees of inter-relatedness, distance, and nexus).

This study makes another contribution, as its findings reveal a gap in the literature specific to the discussion of IDS. Specifically, these findings may help researchers to develop a framework to articulate the experiences of IDS. Despite this significant contribution to the literature, however, it is important to continue research on this group of international students, since there is still scope for future studies into the individual experiences of IDS. As this research investigated the issues only from the perspective of the students, further research may be enriched by including the perspectives of the participants' network and/or support sources, such as family members, friends, spouses and supervisors, in order to initiate a more in-depth and

comprehensive discussion on the phenomenon. Moreover, future longitudinal research is required to capture IDS experiences over time, since the current study, using a case study approach, has shown that the transition process is ever-changing. Therefore, research that captures these contextual changes over time would yield broader knowledge and deepen our understanding of these students' experiences overseas.

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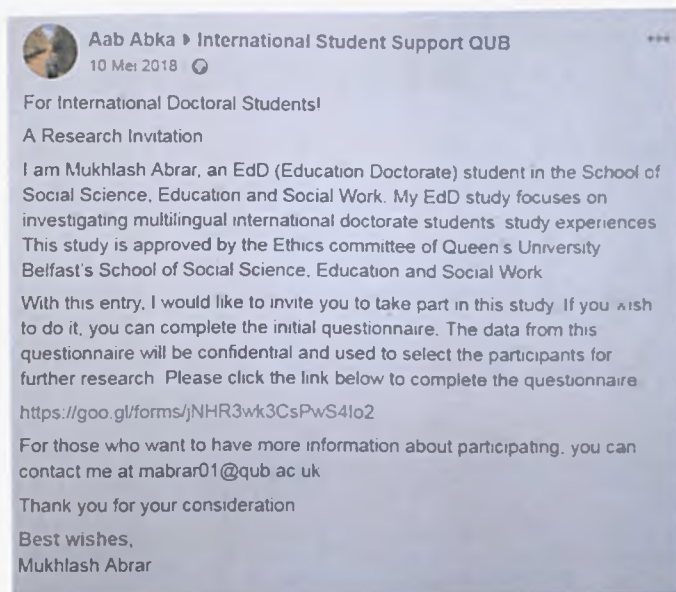
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Appendices

Appendix 1. The screen shot of research invitation

Aab Abka ▶ International Student Support QUB
10 Mei 2018

For International Doctoral Students!

A Research Invitation

I am Mukhlash Abrar, an EdD (Education Doctorate) student in the School of Social Science, Education and Social Work. My EdD study focuses on investigating multilingual international doctorate students' study experiences. This study is approved by the Ethics committee of Queen's University Belfast's School of Social Science, Education and Social Work.

With this entry, I would like to invite you to take part in this study. If you wish to do it, you can complete the initial questionnaire. The data from this questionnaire will be confidential and used to select the participants for further research. Please click the link below to complete the questionnaire.

https://goo.gl/forms/jNHR3wk3CsPwS4lo2

For those who want to have more information about participating, you can contact me at mabrar01@qub.ac.uk

Thank you for your consideration

Best wishes,
Mukhlash Abrar

Appendix 2. Initial Questionnaire

Initial Questionnaire

I have read the email which explains the research about international doctoral student experiences at one university in the United Kingdom.

(Please tick the following boxes to indicate you have read and understand the email before completing the questionnaire)

☐ I understand that the email is asking me to participate in this research.

☐ I understand that all the information gathered from initial questionnaire will be used to select the participants for further research.

☐ I want to do the interview.

Please complete this following questions.

Name　　　:

Gender　　:

School　　:

Study Programme　　: ☐ Full-time

　　　　☐ Part-time

Years of Study　　: ☐ First-year

　　　　☐ Second-year

　　　　☐ Third-year

　　　　☐ Above third-year

Country　　:

First Language　　:

Language instruction at school :

Wish to participate in the study : ☐ Yes

　　　　☐ No

Appendix 3. Interview Protocol

Interview Protocol

An Exploration of Multilingual International Doctoral Students' Experiences at a Public University in the United Kingdom

Please design/draft your sociogram which is a chart that shows your social relationship during your study period as a doctoral/PhD student (who do you communicate with and support your study?). Feel free to do it in either English or your primary language.

Interview

1. What was it like the day you arrive in Belfast?
   Following-up questions
   - What do you think about Belfast and Queens?
   - Is your culture different from the culture in Belfast? If yes, how did you adjust yourself in a new environment/culture?
   - Do you like living and studying here? Why?
2. Where is your family?
   Following-up questions
   - How's your feeling w/without your family living here?
   - How do you manage the feeling?
3. In communication with the others, do you find some challenges? Please explain!
   Following-up questions
   - Do you sometimes feel unconnected when you are communicating? If yes, how do you feel about it?
   - How about digital communication, such as email or text message? Do you find it helpful?
   - Which do you prefer, face-to-face communication or digital communication? Why?
   - Who help you face the communication challenges? How do they help you?
   - What other strategies do you do to overcome the challenges?
4. Do you have any modules/training/research meeting during your PhD/ doctoral study?
   Following-up questions
   - How's your participation in the classroom/training?
   - Have you experienced unconnected/ feeling neglected in communication in the classroom/training? If yes, how's your feeling?
5. Tell me about your study space?
   Following-up questions
   - Tell me your routine activities in your study space?
   - Do you share the office with some other PhD students?
   - How often do you communicate with your officemate(s)?

- How do you communicate with them? Face to face or digital communication?
- How do you feel when your officemates are not around?
- How do you manage the feeling?

6. Tell me about your supervisory relationship?

   Following-up questions
   - How often do you communicate with your supervisor?
   - How do you communicate with them? Face-to-face or digital communication?
   - Which type of communication do you prefer with your supervisor? Why?
   - Do you sometimes feel disconnected when you communicate with your supervisor? If yes, how do you feel?

7. Tell me about you friendship and how often you communicate with them.
   - Local friends?
   - Co-national friends?
   - Other PhD students from different schools and countries?

8. In general, how is your doctorate study experience here?

   Following-up questions
   - Do you find it easy to study here? Why or why not?
   - Think of some teachers/lecturers/staffs with whom you work. Would you recommend them come here? Why or why not?

Sociogram Follow-up Questions

9. What are your relationship with the people in the sociogram?

   Following-up questions
   - Who are the people?
   - What is your relationship with each person?
   - How are they helpful in your studies?
   - How are they unhelpful?

10. Have you got any help/support from the university regarding to your academic life?

    If yes,
    - In what way you have used support services at the university?
    - Are you satisfied with the provisions and services? Give the details!
    - What advice would you give to the people/ staff of support services?

    If no,
    - Do you know that university provides support services for international students?
    - Have you attended orientation programmes at the university?
    - Would you like to use the support services provided by university?

Appendix 4. Consent Form

Consent to Participate in Research

I have read the attached information letter which explains the research about how the feeling of loneliness is experienced and negotiated by international doctoral students at one university in the United Kingdom.

(Please tick the following boxes to indicate you have read and understand the attached information letter)

☐ I understand that the letter is asking me to participate in this research.

☐ I understand that all the information gathered will be kept strictly confidential and that my name and any identifiable information will not be included in any reports.

☐ I understand that this research includes photograph for the sociogram (artefact) that I will construct.

☐ I understand that data generation event will be audio-recorded.

☐ I understand that participation is voluntary and that I am free to withdraw my consent from the study.

☐ I understand that this research will be published in form of a Doctoral dissertation and other academic publications such as journal articles and conference presentations.

(Please tick one of the following boxes to indicate whether or not you agree to taking part):

☐ I AGREE to taking part in the above research

☐ I DO NOT AGREE to taking part in the above research

Participant's signature: _____ Date: _____

(Name)

Appendix 5. List of doctoral thesis

Acknowledgments	Field of Study
IS001	Education
IS002	Engineering (Aerospace)
IS003	Children's right
IS004	Education
IS005	Pharmacy
IS006	Education
IS007	Education
IS008	Education
IS009	Education
IS010	Children's Right
IS011	School of Politics
IS012	School of Law
IS013	School of Pharmacy
IS014	School pf Pharmacy
IS015	Faculty of Engineering
IS016	School of Mechanical Aerospace Engineering
IS017	School of Pharmacy
IS018	School of Pharmacy
IS019	School of Biomedical Science
IS020	School of Pharmacy
IS021	School of Education
IS022	School of Geography
IS023	School of Modern Language
IS024	School of Sociology, Social Policy and Social Work
IS025	Department Social Anthropology
IS026	School of Education
IS027	School of Biological Sciences
IS028	School of Sociology, Social Policy and Social Work
IS029	School of Management
IS030	School of History, Anthropology
IS031	School of Education
IS032	School of Geography
IS033	School of Social Sciences, Education, and Social Work
IS034	School of Engineering and Physical Sciences
IS035	School of Education
IS036	School of Pharmacy
IS037	School of Electronic, Electrical Engineering and Computer Sciences
IS038	School of Electronic, Electrical Engineering and Computer Sciences
IS039	School of Politics, International Studies and Philosophy
IS040	Management School
IS041	Institute of Electronics, Communication, and Information Technology
IS042	School of Education

IS043	School of Psychology
IS044	School of Medicine. Health, and Life Science
IS045	School of Electronic, Electrical Engineering and Computer Sciences
IS046	School of Sociology, Social Policy and Social Work
IS047	School of Electronic, Electrical Engineering and Computer Sciences
IS048	School of Politics, International Studies and Philosophy
IS049	School of Mechanical and Aerospace Engineering
IS050	School of Electronic, Electrical Engineering and Computer Sciences
IS051	School of Pharmacy
IS052	School of Education
IS053	School of Engineering and Physical Sciences
IS054	Management School
IS055	School of Politics, International Studies and Philosophy
IS056	School of Pharmacy
IS057	School of Engineering and Physical Sciences
IS058	School of Education
IS059	School of Mechanical and Aerospace Engineering
IS060	School of Pharmacy
IS061	School of Electronic, Electrical Engineering and Computer Sciences
IS062	School of History, Anthropology
IS063	School of Law
IS064	School of Chemistry and Chemical Engineering
IS065	School of Electronic, Electrical Engineering and Computer Sciences
IS066	School of History, Anthropology
IS067	Institute of Theology
IS068	School of Social Sciences, Education, and Social Work
IS069	School of Engineering and Physical Sciences
IS070	School of Biological Sciences
IS071	Queens Management School
IS072	Queens Management School
IS073	School of Engineering and Physical Sciences
IS074	School of Electronic, Electrical Engineering and Computer Sciences
IS075	School of Education
IS076	School of Law
IS077	School of Electronic, Electrical Engineering and Computer Sciences
IS078	School of Electronic, Electrical Engineering and Computer Sciences
IS079	Management School
IS080	School of Medicine and Dentistry
IS081	School of Electronic, Electrical Engineering and Computer Sciences
IS082	School of History, Anthropology

IS083	School of Aeronautical Engineering
IS084	School of History, Anthropology
IS085	Management School
IS086	Faculty of Science
IS087	School of Geosciences
IS088	School of Pharmacy
IS089	School of Geosciences
IS090	School of Sociology and Social Policy
IS091	Department of Town and Country Planning
IS092	School of Finance and Information
IS093	Department of Electrical and Electronic Engineering
IS094	School of Geosciences
IS095	Department of Agriculture and Food Economics
IS096	Department of Electrical and Electronic Engineering
IS097	School of Law
IS098	Faculty of Engineering
IS099	Department of Electrical and Electronic Engineering
IS100	Institute of Theology

Appendix 6. Sample of Transcription

Arnold's transcription

|	
Me	What was like the day you arrived in (this town)?
Arnold	Well, maybe language barrier would be/was my main concern. I was quite surprised because the English with the dialect they use here was totally out of my...
Me	imagination?
Arnold	out of my mind. That's really concerns me because when I join the class, I would like to say that maybe 10 percent of the content I would understand, the rest would be gone somewhere...were going somewhere. That would be my concern. But then, because so many channelling facilities in this case then I [could] try I mean tried to deal with my weaknesses in understanding the content let say by reading the resources because there are so many resources from the library. That's maybe the first experience.
Me	How's your feeling with your family living here?
Arnold	I am happy but it's also my concern during my study in this journey. Because I live here with my daughter, so I think I am little bit struggling with taking care [of] my daughter especially how to prepare let say food before she goes to school.
Me	Okay
Arnold	And then the most challenging thing would be how then I divide I manage my time between looking after her and managing my study and sometimes it would be difficult. That's why sometime...
Me	Overlap?
Arnold	No, I mean I take very longer. I take time to finish my deadline for example. Maybe if I don't have to look after my daughter maybe I can finish much earlier. Because my time is divided between looking after my daughter and managing my time that's why sometimes I finish all my assignment for example closing to the deadline. Sometimes I also ask for extension because of this issue. I think that's in general.
Me	How do you manage the concern or feeling?
Arnold	well, I would like to say that my situation living with my family can provide plus and minus. I couldn't imagine how I would be if I am not staying with my daughter. For example, maybe I will miss her a lot but because her living staying with me here I couldn't have that issue. Another issue [comes] how then I can manage between looking after her dealing with managing my study. So, that's really my concern. So, there are two sides positive and negative living with my daughter and family because last time my time was also here. So, there are two contradictories [issues] positive and negative. And [another] thing [is] these two can be avoided. There are always two sides because as I said I'm not sure I could manage my study if my daughter is not living with me while at the same time I am not sure I mean I would be more optimal when I stay here by myself not with my family.

Appendix 7. Initial Coding
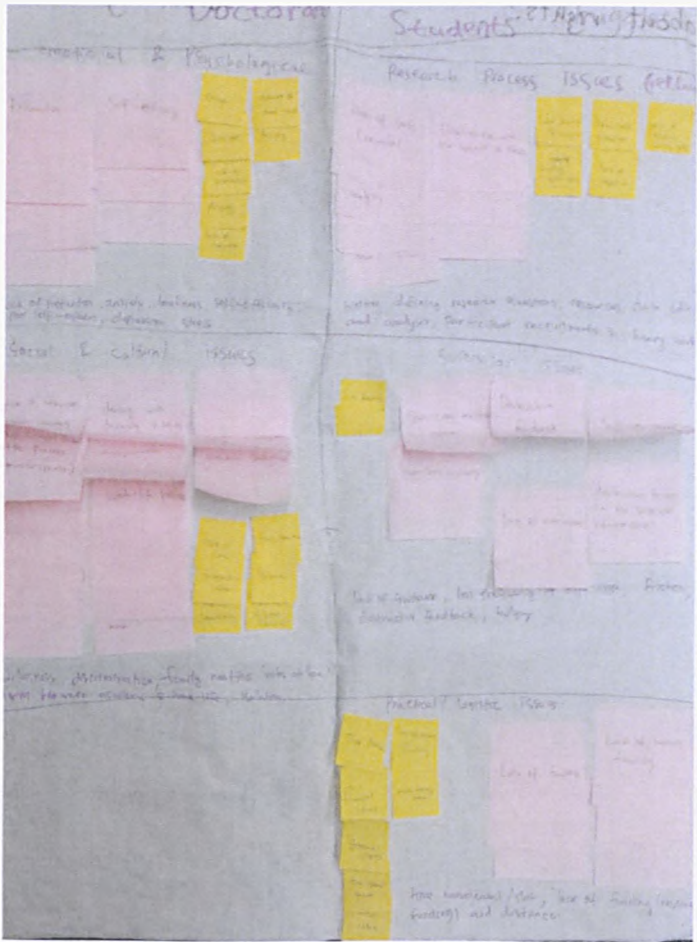
Appendix 8: Details of Journal Review from Abstract and/or Conclusion

Author(s)	Research Type	Participants	Location	Key Findings
Abrar (2019)	Qualitative (Narrative/ interview)	2 Indonesian master students, They majored in education (1), and computer science (1)	UK	• Challenges include language-related issue, individual factors, and cultural differences. • Coping strategies, include applying speaking strategies (e.g. asking repetition and clarification)
Abrar & Mukminin (2016)	Qualitative (Phenomenology/ interview) Purposive sampling	8 Indonesian master students. They majored in education (2), biomedical science (2), management (2), law (1), and chemistry (1)	UK	• Challenges includes language barriers, individual matters, and academic cultural differences • Coping strategies include having the verbal response, utilising learning resources, and maintaining positive motivation
Alsahafi & Shin (2017)	Mixed-method (questionnaire and interviews)	Undergraduate and postgraduate program students from Saudi. For quantitative 100 students participated from 17 universities. For qualitative, 7 participants were interviewed.	Australia	• Factors affecting the study: a. Language proficiency b. Academic factors (classroom activities and assessment methods) c. Social factors (homesickness and loneliness) • Coping strategies includes improvement of language competence, time managements, and mixing with others.
Cao, Zhu & Meng (2018)	Qualitative (Consensual qualitative research/ interviews)	Chinese master and doctoral program students. Total participants are 18 (ten males, eight females; twelve master students, six doctoral students)	Belgium	• The sources of academic stressors are Academic competency, academic culture shock, academic resources, intercultural communication and pressure • Coping strategies include problem-coping strategies to deal with competency-related

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Study	Methodology	Country	Participants	Findings
				challenges; forbearance coping for other types of academic stressors. • Social network: co-national peers emerged as the primary source of Chinese students' social support in academic learning, followed by support from multi-national students, university/tutors, and host students, respectively
Gebhard (2012)	Qualitative (interview and observation)	US	International students (non-specified program) No statement about the number of participants and their home country.	• The challenges include academics, social interactions, and emotional reaction to their new life. • To manage the problems, use of behaviours that can adapt to the new culture were applied, including use of supportive people, imitation, and reflection.
Khawaja & Stallman (2011)	Qualitative (Focus-group interview)	Australia	International students (non-specified program) Total number of participants 22 from South Korea (7), China (4), India and Taiwan (2 from each country) and from Vietnam, East-Timor, Iran, Indonesia, Mauritius, Singapore, and Nigeria (1 from each country).	• Challenges include adjustment, social isolation, English language skills, academic difficulties, unmet expectations, employment, culture shock and psychological distress • Coping strategies include the use of technology and being more active.
Lee (2009)	Qualitative (Interview)	US	Master and doctoral students from Korea. Total number of participants are 6, master students (3) and PhD students 3. They majored in foreign language education (3), curriculum and instruction (1), language &	• They experienced multilayer challenges, including students' English proficiency, differences in sociocultural values and educational practices between two cultures, individual differences, and classroom environment were intertwined. • Individual instructors can do much to help

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		literacy development (1), and educational psychology (1)		• students participate in class discussions more actively
Li & Zizzi (2018)	Qualitative (Ethnography/ interview/ fieldwork)	Graduate (Master) program students. Two participant were participated. One of them is from Thailand (music major) and another one is from Indonesia (mathematic major).	US	• Challenges in social interaction are language and cultural barriers. • Engagement physical activities developed and strengthen multicultural friendship
Lin & Scherz (2014)	Qualitative (Phenomenology/ interview/focus- group interview)	Master and doctoral students. The number of participants were 5 from three different countries (non-specified)	US	• The challenges faced by participants include cultural and linguistic challenges
Malau-Aduli (2011)	Mixed-method (Survey and focus-group and individual interview)	Undergraduate students. Total number of participants was 46 students majored in medical. They are from Malaysia, Singapore, Canada, Hong Kong, Taiwan, Republic of South Korea and Thailand. For survey, all students participated and 12 students participated in focus-group and individual interviews.	Australia	• Survey, focus group discussion and individual interviews revealed that language barriers, communication skills, cultural differences, financial burdens, heavy workloads and discriminatory bottlenecks were key factors that hindered their adaptation to the Australian culture • The study concluded that the faculty needs to provide both academic and moral support to their international medical students at three major intervention points, namely point of entry, mid-way through the course and at the end of the course to enhance their coping skills and academic progression
Park, Lee, Choi, & Zepernick (2017)	Qualitative (Interview)	Doctoral and master students. The total number of participants is 9 (8 doctoral and 1 master; 5 Korean, 3	US	• Primary challenges are language barriers and discriminations • The factors associated with successful

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Study	Methodology	Sample	Country	Findings
		Taiwanese, and 1 Chinese)		adjustment were personal perception, social support, strong mentoring relationships, religious belief, and use of campus services
Rabia & Hazza (2017)	Qualitative (Case study/interview) Stratified sampling	16 Undergraduate students from Arab (male (12), female (4); Saudi Arabia (6), Kuwait (4); Jordan (2), Iraq (1), Oman (1), Syria (1), United Arab Emirate (1)	US	• Multiple factors obstructed Arab international students' academic success includes culture shock, language barrier, cultural differences, and isolation.
Sandekian, Weddington, Birnbaum, & Keen (2015)	Qualitative (Narrative/ interview)	4 female graduate students (master and doctoral) from Saudi. There was not enough information about their major except one of them enrolled at special education.	US	• Challenges faced related to students' insufficient English language skills, differences in their comfort levels interacting with American and Saudi men, positive relationships with both male and female faculty members, and generally positive feelings about their experiences at their university of choice • prior experiences with mixed-gendered educational environments led to differing levels of comfort with developing relationships with men
Sato (2016)	Qualitative (face-to-face interview)	6 doctoral students at physical education program. They are from Japan (1), Taiwan (2), and South Korea (3).	US	• Challenges faced included research challenges; academic, social, and hierarchical relationships with doctoral advisors; burnout; and situation-specific anxiety
Son & Park (2014);	Qualitative (Group and individual	7 international doctoral students (6 male and 1 female; 1 Iraqi, 3 Libyan, 2 Indonesian and 1 Chinese. They	Australia	• International PhD students meet situations where they have to deal with a range of language problems, cultural differences and

Study	Method	Participants	Country	Personal matters
	interview)	majored in science (3), business (2), engineering (2).		personal matters
Wearring, Le, Wilson & Arambewela (2015);	Qualitative (Interview) Purposive sampling	10 postgraduate Vietnamese students (5 master and 5 PhD; 8 females and 2 males)	Australia	• The participants struggle with language, assessment, and Western teaching and learning styles • Local students often lumped them together with other international students, who sometimes had no desire to befriend or work with them; therefore, they experienced loneliness and a sense of discrimination.
Wright & Schartner (2013)	Mixed method (survey and interview)	Post-graduate program (Master) No information for survey participants. For interview, 14 participants participated (13 females and 1 male; 2 from Saudi Arabia, 1 from Turkey, and 13 from China/Taiwan).	UK	• Participants remained frustrated by a perceived 'threshold' barring successful interaction with English speakers and they experiences many challenges, including language proficiency and sociocultural adaptation
Wu, Garza & Guzman (2015)	Qualitative (Case study/interview)	Undergraduate and graduate program students. 10 participants participated in the study (7 females and 3 males; 2 Chinese, 2 Taiwanese, 2 Japanese, 1 South Korean, 1 Saudi Arabian, 1 Mexican, and 1 Vietnamese).	US	• International students struggled with academic challenges, social isolation, and cultural adjustment. • To overcome these challenges, students have adopted resources that mainly are derived from the university

Author	Methodology	Participants	Country	Findings
Zhang & Brunton (2007)	Quantitative (Survey)	They majored in different programs, marketing (2), education (2), business (2), exchange student (2), business (1), and computer science (1). 140 Chinese students from different institutions and programs in Auckland: university (71), polytechnic (2), private tertiary (35), language school (26) and others (6); masters' (5), bachelors' (36), diploma (63), certificate (11), language (25).	New Zealand	• The participants struggled with language, increase of loneliness feeling and social interaction with hot national
Bamgboje-Ayodele, Almond, & Sakulwichitsinu (2016)	Qualitative (Thesis review and Focus group discussion)	4 final-year doctoral students (all females). The research areas of their PhD are: e-learning (2), e-health (1), and e-supply chain management (1)	Australia	• There are three particular issues for the participants, including administration, research, and personal.
Bireda (2015)	Qualitative (structured Interview) Purposive sampling	5 female doctoral students from the University of South Africa Ethiopia campus	South Africa	• Three main three main challenges for female doctoral students, including academic, psychological, and home/work related
Carter, Blumenstein, & Cook (2013)	Quantitative	Female doctoral students	No information	• The study confirmed Brown and Watson (2010) key points that several challenges for women include in the timing of a doctorate; the tension between domestic and academic demands; access to conferences;

Study	Methodology	Country	Participants	Findings
				• supervisory relationships and the significance of family pleasures and responsibilities. • The study also ethnicity, age, marital status and abuse history are also factors affecting women's doctoral progression.
Click (2018)	Qualitative (Interview) Criterion sampling	US	Graduate students (Master program) The participants were 31 (15 females, 16 male) from different country of origin, such as China, India, Indonesia, France, Benin, Vietnam, Greece, Columbia, Russia, South Korea, Kazakhstan, Iran, and Rep. Congo	• The Participants experienced research difficulties, such as coming up with a good idea, and others struggled with more specific skills like data analysis. • Two-third of participants described using specific library resources—usually online resources—for their research.
Cornér, Löfström, & Pyhältö (2017)	Quantitative (Survey)	Finland	248 doctoral students (majored in social sciences, art and humanities, and natural and life sciences)	• Some participants experienced lack of satisfaction in supervision and stress • Experiences of lack satisfaction and equality within the research community and a low frequency of supervision were related to experiences of burnout and attrition intention.
Elliot, Baumfield, & Reid (2016)	Qualitative (phenomenology/ photograph/ narrative interview) Purposive sampling	UK	14 international doctoral students from outside UK, including Western Europe, Eastern Europe, North America, East Asia, West Africa, Central Asia, South East Asia, South Asia, and South America. They also studied in different college/school, such as art, social sciences, medical, and social and engineering.	• There are three transitions the students had, including personal, societal, and academic. • Loneliness and academic culture differences are some challenges • The use of third space, being resilience, and having commitment help the students succeed in the transition.

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Study	Method	Country	Participants	Findings
Ezebilo (2012)	Qualitative (Interview) Purposive sampling	Sweden	16 full time doctoral program students (6 local students and 10 international students)	• The challenges faced by international doctoral students include less access to sources of information and cultural shock • The coping strategies used by the respondents include seeking for help from colleagues and asking for more support from supervisors as well as learning the Swedish language.
Heng (2019)	Qualitative (interview)	U.S	18 Chinese undergraduate program students (6 male students and 12 females; 9 first-year students and 9 from second-year). They studied in some major, including mathematics/economics, business, and film.	• The participants experienced academic challenges, such as writing and speaking in classroom discussion
Hunter & Devine (2016)	Mixed-method (Survey/observation/open-ended questionnaire)	Canada	186 doctoral students from nine countries, including Canada (58.7%), United States (28.2%), United Kingdom (4.9%), Australia/New Zealand (2.4%), Norway (2.4%), France (0.5%), and South Africa (0.5%).	• Nearly 50% of the respondents confessed that they had problems with their supervisors. • Supportive relationships, at the departmental and advisor level, reduced emotional exhaustion and intentions to leave academia • Emotional exhaustion was positively related to doctoral students' intentions to leave academia
Kim (2007)	Qualitative (Phenomenology/interview)	U.S	8 Korean doctoral program students (They are in their fourth/fifth/sixth year of PhD in some programs, such as chemistry, urban planning, social science, and engineering)	• Students' perceived barriers to establishing successful advising relationships include the following: discrepancies in the ways Korean students and their American advisors envision advisement and communication;

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Author (Year)	Method	Sample	Country	Findings
				Korean students' passive attitude in initiating the advisor–advisee relationship; and advisors' unavailability to students.
Kusek (2015)	Qualitative pilot study (Questionnaire and interview)	26 undergraduate and graduate program students; China (7), India (7), Saudi Arabia (6), Bangladesh (2), Poland (2), Tanzania (1), and Philippine (1).	U.S	• International students at the subject university feel a low level of engagement with the local community • Some felt uncomfortable with learning environment (small and insufficiently exciting college)
Maher, Wofford, Roksa & Feldon (2017)	Qualitative (in-depth interview)	18 doctoral students from Biomedical PhD program (11 female students and 7 male; 16 local students and 2 international students; 16 identified as white)	U.S	• Faculty advising (both positive and negative), laboratory rotation experiences, self-efficacy components, and changing professional goals all play a role in the early doctoral program attrition process
Pyhältö, Toom, Stubb, & Lonka (2012)	Mixed (Survey and questionnaire)	669 doctoral candidates (female: 496; male: 169) from three faculties at the University of Helsinki: the faculty of Arts, including Fenno-Ugrian, Scandinavian and modern languages, world cultures, art studies, and philosophy; the faculty of Medicine; and the Faculty of Behavioural Sciences, including psychology, educational sciences, phonetics, and teacher education.	Finland	• The students struggled with general working processes, domain-specific expertise, supervision, the scholarly community, and resources.
Tsevi (2018)	Qualitative (case study/Interview)	5 international undergraduate students (3 males and 2 females). They are from Pakistan (2), China (1), Japan (1), and Ghana. They studied in accounting, business, economics,	U.S	• Students experienced both academic and non-academic challenges • Strategies adopted included involvement in out-of-classroom activities and dependence on family and friends.

Study	Methodology	Participants	Country	Findings
Vekkaila, Pyhältö, & Lonka (2013)	Qualitative (Interview)	16 behavioral sciences (educational sciences, psychology and cognitive science, speech sciences) doctoral students (female: 11, male: 5) from a major research-intensive Finnish university. and engineering.	Finland	• Varying disengaging experiences including inefficacy, cynicism, and sometimes exhaustion.
Wang, Leen, & Hannes (2018)	Qualitative (Photo elicitation/ interview)	5 South American international students (2 males and 3 females). They are from Brazil (3), Ecuador (1), and Peru (1).	Belgium	• The challenges in adjustments include socio-cultural adjustment, academic adjustment, and psychological adjustment • Individual factors such as students' acculturation strategies and coping mechanisms, and situational variables like social interaction and cultural discomfort affect their adjustment.
Wang & Li (2011)	Qualitative (Interview)	8 PhD and 2 professional doctorate students (4 males and 6 females). Participants were from six countries in Asia, the Asia Pacific and the Middle East. Their research areas included education (3), information science (3), law (1), public administration (1), economics (1) and communication (1).	Australia	• The interviewees reported a range of both positive (inspired and confident) and negative (frustration and uncertain) feedback experiences.
Yan & Pei (2018)	Qualitative (Interview)	12 international students (no specified country origin and programmes)	U.S	• Four major themes emerged: (a) their on-campus experiences; (b) the off-campus experiences; (c) their reasons for unpleasant experiences, and (d) their suggestions for professors and peers to be more inclusive

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Author (Year)	Methodology	Participants	Country	Findings
Acker & Haque (2015)	Qualitative (semi-structured interview)	27 doctoral students (22 females and 5 males). Among the participants, 10 are black students, 4 white students, and 13 drawn from a range of other ethnicities and nationalities, including Indigenous, East Asian, Latina/o, Middle Eastern and South Asian	Canada	• Two interrelated themes emerging from the data are highlighted in the study: (1) surviving financially and (2) dealing with divisions and diversity.
Hansen, Shneyderman, McNamara & Grace (2018)	Quantitative (Survey)	253 international students from 40 degree programs. The participants from East and Southeast Asia (37%), South Asia Caribbean (18.5%), South Asia (15.6%), Europe (14.8%), and South America (7.4%).	U.S	• International college students experience high levels of acculturative stress • Immersion in a student's native culture was positively associated with acculturative stress, while immersion in the U.S. culture was negatively associated with acculturative stress.
Sawir et al., (2008)	Qualitative (Interview)	200 international students (101 females and 99 males). They're from many regions in world, including Southeast Asia/Pacific, Northeast Asia, South Asia, Middle East/ North Africa, Europe, Canada/U.S./U.K, and Latin America	Australia	• Two thirds of the group had experienced problems of loneliness and/or isolation, especially in the early months • The creation of stronger bonds between international and local students in the educational setting, helping international students to remake their own cultural maps on their own terms, is key to a forward move on loneliness.
Green & Kim (2005)	Qualitative (In-depth interviews)	12 Korean female international doctoral students.	US	• Some participants experienced the act of discrimination. • The participants did some effort to address discrimination/stereotypes, such as interacting with diverse individuals to find comfort zone, and maintaining supportive

				relationship.
Dickerson et al., (2014)	Qualitative (Collective case study/ interviews)	10 doctoral students (7 white; 2 African American, and 1 Asian)	U.S	• Participants experienced some challenges, especially balancing one's academic life with other obligation • Support and encouragement from family, friends, and other doctoral students to be the most beneficial coping strategy.
González (2006)	Qualitative (Phenomenology)	13 Latina female doctoral students	U.S	• The participants had both positive and negative experiences. The positive experiences came from wide-institutional and department supports. • Cultural isolation, discrimination, tokenism, and lack of financial support were the negative experiences the participants had.
Gbadamosi (2018)	Qualitative (Focus group discussion and interviews)	38 international students (10 were married, 26 were single and 2 were divorced. Twenty-two were in the 18–29 age category, 9 were 30–39, 5 were 40–49 and 2 were over 50. The majority, 20, were pursuing a first degree programme, while 14 were enrolled in different master's programmes and the remaining 4 were studying in various other programmes at the university)	UK	• The challenges faced by international students included language barriers, discrimination, culture shock and limited opportunities for interpersonal relationship. • The strategies to overcome such challenges included benefiting social media and using provided support and resources from university.
Hanassab (2006)	Quantitative (Survey)	640 international students (369 males and 271 females; there were 327 students from Asia, 158 from Europe (excluding Canada), 62 from the Americas, 39 from Southeast	U.S	• International students coming from different regions experience discrimination in various degrees. • International students experience more discrimination off campus compared to on

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				campus
		Asia, 27 from the Middle East, 7 from Oceania, and 6 from Africa. There were 14 student respondents from Canada)		
Robati & Tonkaboni (2017)	Qualitative (Phenomenology/ interviews)	45 doctoral students (28 from state universities, 13 from universities of medical sciences and 4 from Islamic Azad universities across the country in various fields)	Iran	• The participants experienced discrimination, such as the lack of cross-border communications, lack of social justice, lack of economic justice, non-equality of universities and lack of equal opportunities
Ye & Edwards (2015)	Qualitative (Interview and focus group discussion)	11 Chinese PhD students (4 males and 7 females from a range of disciplines, including Applied Linguistics, Chemistry, Design Innovation, Education, Electrical and Electronic Engineering, Finance, and Information Management and Systems)	UK	• The participants experienced some challenges such as discrimination and language problems • To overcome the challenges, the participants did some strategies, including being autonomous, writing for publication, and resourcing.
Zhang (2016)	Qualitative (Interpretive phenomenology)	10 Chinese international students (4 males and 6 females)	US	• The participants experienced reported to have some challenges, including silence in the classroom, being treated as invisible, forming new friends, lack of support for ESL learners and balancing study and life.
Janta et al., (2014)	Qualitative (Netnography; internet + ethnography)	Doctoral students around the world (non-specified number of participants and country of origin)	N/A	• Loneliness is a major problem for doctoral students • Some strategies to alleviate the loneliness are by having social interaction (interacting with peers and attending doctoral forum); professional development (publishing journal, being professor assistance, leading

Wette & Furneaux (2018)	Qualitative (narrative frames and semi-structured interviews)	31 incoming international students from 20 countries: 12 from East Asia (China, Indonesia, Japan, Malaysia, Cambodia, Vietnam); 5 from West Asia (Bangladesh, Pakistan, Kazakhstan, Turkey); 7 from The Middle East (Egypt, Kuwait, Saudi Arabia, Jordan, Sudan); 3 from Europe (Spain, Greece, Hungary); 4 from South and Central America (Mexico, Brazil). 19 master students and 12 doctoral students.	UK and New Zealand	a conference); and escaping from doctorate (attending language classes, and couch surfing). • Participants faced some challenges in writing (unfamiliarity with aspect of source-based, critical and writer responsible-writing; self-perceived inadequacies regarding their knowledge of discipline-specific academic vocabulary, metadiscourse strategies, and the ability to compose concise, coherent text. • To solve the challenges, the participants developed independent learning strategies and asked for advice and supports

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