



UNIVERSITY OF
CAMBRIDGE

**Who do you hang out with? A mixed-methods study on how
Chinese students' social networks relate to their oral proficiency gains
during study abroad**

**Author: Yushan Xie
University of Cambridge**

British Council ELT Master's Dissertation Awards 2018:
Special Commendation

Faculty of Education

MPhil in Education

Thesis

Title: Who do you hang out with? A mixed-methods study on how Chinese students' social networks relate to their oral proficiency gains during study abroad

Word Count: 19461

Abstract

This explanatory mixed-methods research examined the self-reported social network structure and English oral proficiency gains of 88 Chinese international students at a UK university, and analysed the relationship between their network structures and oral proficiency gains. Quantitative results were obtained through surveying the students, followed by interviews with four purposively-selected, typical respondents to qualitatively explore those results, in relation to how network structure contributes to language development.

Intracultural ties were the major source of the students' social networks. Fifty-six students developed strong and frequent relationships with both intracultural and cross-cultural ties. High density networks tended to be associated with a greater number of domestic peers. Students reported gains in oral proficiency: greater gains were found to be associated with higher-level performance-related descriptors, while lower-level descriptors produced smaller gains. The regression model showed that four network variables (density, strength, frequency and size) were found to significantly predict 17.7% of oral proficiency gains. Dense networks with only intracultural ties, with high frequency of communication, were perceived to limit access to language learning resources, while strong cross-cultural ties were perceived as beneficial for gains in oral proficiency.

Key words: social network analysis, oral proficiency gains, study abroad, higher education

Table of contents

Abstract.....	ii
List of figures.....	v
List of tables.....	v
Chapter 1: Introduction.....	1
Chapter 2: Literature Review.....	3
2.1 Setting the scene.....	3
2.2 Social network and language development during study abroad.....	4
2.2.1 Social network during study abroad.....	4
2.2.2 Oral proficiency development during study abroad.....	7
2.2.3 Researching language gains from a social network perspective.....	9
2.2.4 Bridging the research gaps.....	10
2.3 Research questions.....	12
Chapter 3: Methodology.....	15
3.1 Research paradigm and research design.....	15
3.2 Research procedures.....	18
3.2.1 Phase one: quantitative approach.....	18
3.2.2 Phase two: qualitative approach.....	27
3.3 Validity, reliability and ethics.....	29
3.3.1 Validity and reliability.....	29
3.3.2 Ethics.....	30
Chapter 4: Findings.....	32
4.1 Phase one: quantitative data.....	32
4.1.1 Social network structure.....	32
4.1.2 Oral proficiency gains.....	36
4.1.3 The relationship between network structure and oral proficiency gains.....	41
4.2 Phase two: qualitative data.....	45
Chapter 5: Discussion.....	54
5.1 Social network structure.....	54
5.2 Oral proficiency gains.....	55

5.3 The relationship between network structure and oral proficiency gains	57
Chapter 6: Conclusions	59
6.1 Summary	59
6.2 Contributions	59
6.3 Limitations	62
6.4 Personal and academic reflections	63
References.....	63
Appendices.....	69
Appendix A: consent form for questionnaire survey (English & Chinese versions).....	69
Appendix B: screenshots of the personal network questionnaire (English & Chinese versions).....	71
Appendix C: the can-do statements questionnaire (English & Chinese versions).....	77
Appendix D: consent form for semi-structured interview (English & Chinese versions)...	82
Appendix E: semi-structured interview protocol (English & Chinese versions).....	84
Appendix F: visualized network representations of interview participants.....	86

List of figures

Figure 1 Conceptual Framework: Linking Social Network with Oral Proficiency Gains.....	13
Figure 2 The Explanatory Sequential QUAN→QUAL Mixed-Methods Design.....	16
Figure 3 Visual Model for Explanatory Sequential Mixed Method Dsign Procedures.....	18
Figure 4 Some Screenshots of the Personal Network Questionnaire	22
Figure 5 ACTFL Proficiency Guidelines – Speaking.....	25
Figure 6 Visualized Network Representation of Xing’s Social Network.....	28
Figure 7 Phases of Qualitative Analysis	29
Figure 8 Frequencies of Network Variables	33
Figure 9 Frequency of Oral Proficiency Gains	40
Figure 10 Scatterplot of Regression Standardized Residual and Oral Proficiency Gains	42
Figure 11 Histogram of Regression Standardized Residual and Oral Proficiency Gains.....	43
Figure 12 Normal Probability Plot.....	43

List of tables

Table 1 Demographics for Phase One Participants.....	20
Table 2 The Personal Network Questionnaire Data Type	23
Table 3 The Can-do Statements Questionnaire Data Type.....	25
Table 4 Descriptive Statistics of Network Variables.....	32
Table 5 Correlation between Network Variables.....	34
Table 6 Comparison between Monocultural and Diverse Networks.....	36
Table 7 Descriptive Statistics of Can-do Statements Items	38
Table 8 Paired-samples T-test Results for 'Then' and 'Now' Tests Scores	39
Table 9 Descriptives Statistics of Oral Proficiency Gains (OPG).....	40
Table 10 Correlations between Network Variables and Oral Proficiency Gains	41
Table 11 Coefficiencts of Network Variables	42
Table 12 Summary of Regression Analysis for Sample Networks.....	44
Table 13 Summary of Regression Analysis for Diverse Networks.....	45
Table 14 Demographics of Follow-up Interview Participants.....	46

Chapter 1: Introduction

It all depends on which defining feature you prioritize. When you define a person, if you put language and nationality a bit further down in your list, it helps you see the different side of a person. There is a saying, 'the benefit of doubt'. For those you find very stereotypical, there is need for more efforts to get to know them. (Interview with Yi)

Following the globalisation of higher education (OECD, 2013), an enhanced awareness of the relationship between study abroad and language learning has become increasingly desirable (Kinging, 2009). This thesis presents an explanatory sequential mixed-methods study of Chinese students' English oral proficiency gains from a social network perspective in the milieu of study abroad in the UK. It aims to enhance the understanding of the social network structure of Chinese international students during study abroad, their oral proficiency gains and how their social network structure relates to oral proficiency gains.

The globalisation of higher education has enabled students all over the world to live and study abroad (Bodycott, 2012). International higher education holds the promise of facilitating intercultural understanding, global citizenship and provision of opportunities for exchange between students from different backgrounds (Gareis, 2012). A commonly shared assumption about studying abroad is that students will naturally engage in frequent and meaningful social interactions with target language speakers, and develop linguistic and intercultural competence, simply from being surrounded by the target language and culture (Kinging, 2009). Empirical studies have shown, however, that the goal of engaging students, and helping them to achieve language development, is easier said than done (Bodycott, 2012; Isabelli-García, 2006).

The number of Chinese students studying abroad hit a record of 523,700 in 2015, with an increase of 13.9% on the previous year (Ministry of Education, 2016). Chinese international students have been stereotyped as being “only friends with other Chinese students” and “never speaking English” (Ruble & Zhang, 2013, p. 208). Studies have shown that social interaction of Chinese students studying abroad with non-Chinese students has been consistently identified as problematic and challenging (Gareis, 2012; Spencer-Oatey & Xiong, 2006). Chinese international students form the largest international group on campuses in the UK, but little is known about their second language learning experience from a social network perspective.

My research incorporates a series of innovative concepts and methods developed in social network analysis with second language research. It aims to understand Chinese students' English oral proficiency gains during their study abroad from a social network perspective that conceptualizes the promotion of language learning through the mechanism of social network support. The rationale behind the study has three dimensions. Firstly, it comes from my personal experience of studying abroad as a Chinese international student, socialising and learning English, and observing other Chinese students in similar situations. The experience gave rise to my deep interest in, and curiosity about, the target population's social network structure and second language learning experience during study abroad. Secondly, as the population of Chinese international students continues to grow every year in the UK, and the cohort is becoming immensely complex and vibrant, researching their network formation and language learning is of great significance (UKCISA, 2017). Thirdly, stereotypical views about Chinese international students, found in the research (Ruble & Zhang, 2013), emphasize the necessity and significance of giving them a voice.

The following chapters present my mixed-methods empirical work on Chinese international students' social network and their oral proficiency gains. Chapter two presents the review of literature review on relevant topics and concludes with four research questions. Chapter three presents the research paradigm followed by a detailed description of the research methods used in this study, including data collection and analysis. Chapter four presents findings generated from quantitative and qualitative approaches to answer the research questions. Chapter five discusses the findings in relation to literature on network structure and oral proficiency development, and the relationship between the both. Chapter six concludes the thesis with a summary, contributions and limitations of the study and my personal and academic reflections.

Chapter 2: Literature Review

This chapter begins by setting the scene of Chinese international students in the study abroad context in relation to their language learning and social experience. It then proposes a closer connection between network and language development studies. The chapter concludes with four research questions, aiming to address the link between oral proficiency gains and social network analysis in the milieu of study abroad.

2.1 Setting the scene

The number of international students in UK higher education was 438,010 in 2015-2016, with 91,215 students coming from mainland China (UKCISA, 2017), which exceeds any other country or region. Despite the positive experience of studying abroad, linguistic barriers and social experience have been regarded as among the biggest challenges for Chinese international students (Hail, 2015; Zhou & Todman, 2009). In terms of second language oral skills, Chinese students in the study abroad context have reported that they experience anxiety about speaking (Cheng & Erben, 2012), lack of confidence (Liu, 2013), difficulty in striking up conversations (Hail, 2015) and the need of a silent learning period in order to understand the norms and values of the speech community (Liu, 2002). Research has found stereotypical views about the linguistic competence of the Chinese cohort, who were perceived as students who “never speak English” and are “bad at English” (Ruble & Zhang, 2013, p. 207). In terms of social experience, studies have shown that Chinese international students interact less with different ethnic groups, rather forming ethnic enclaves with their domestic peers (Ross & Chen, 2015; Ruble & Zhang, 2013), which has been widely perceived as disengagement and isolation from mainstream campus life. Stereotypical views that have emerged about the Chinese international students cohort are that they are “socially awkward” (Ruble & Zhang, 2013, p. 207) and “always stick together” (Ross & Chen, 2015).

Such studies can generate insights, as long as it is kept in mind that any generalisations about specific cultures remain problematic. Cultural studies are frequently criticized for their inordinate degree of homogeneity, coherence and timelessness and, sometimes, for ignoring the complexity and singularity of the studied individuals (Brumann, 1999). Ross and Chen (2015) problematized the stereotypical perceptions of the Chinese cohort as indifferent

engagers. Such perceptions often lack the dual vision required to examine both students and the context, as well as the awareness of the disjuncture between the values and understandings of higher education during study abroad, on both sides. Therefore an enhanced understanding of the connection between Chinese students' social experiences and language development, based on their own perspective, is increasingly desirable, for the students, teachers and programme designers.

2.2 Social network and language development during study abroad

Many second language studies in the study abroad context, are outcome-oriented and reveal significant individual differences. Unsuccessful learners are often considered to be lacking motivation for learning, having low self-efficacy or using inappropriate learning strategies (Kinging, 2009). Thus, the nature of the study abroad context, and the learning that results from it, are frequently not appreciated or depicted in second language studies (Kinging, 2009). As suggested previously, the social network context – a depiction of students' social interactions embedded in the study abroad context – has been shown to have an impact on students' language learning during their stay (Dewey, Bown, & Eggett, 2012). Although social network analysis is an emerging field, and has been adopted as a useful tool to study the social experience of students during study abroad, it has not shown adequate engagement with second language studies. This study aims to bridge these gaps through linking the nature of study abroad and the language learning that comes from it by looking at language development from a social network perspective.

2.2.1 Social network during study abroad

Many studies researching students' social experience in the study abroad context are based on Bochner's functional model (Bochner, McLeod, & Lin, 1977). Researchers have recently started to apply social network analysis to probe further into students' social experience while studying abroad.

Bochner's functional model is one of the earliest attempts to study the social interaction network of international students during study abroad (Bochner, Hutnik, & Furnham, 1985; Bochner et al., 1977). Friendship patterns of international students tend to belong to three distinct social networks, each serving a psychological function. The primary source of one's

social network during study abroad consists of bonds with co-nationals, its function being to rehearse, express and affirm the home culture and values. Such reinforcement of their cultural identity may make them less willing to adapt to the new environment, however (Ward & Searle, 1991). Hence, the consequence of international students relying on co-national networks is inhibition from developing social relations with non-compatriots (Church, 1982), which can also adversely affect language acquisition (Maundeni, 2001).

Another source of students' networks consists of links with host-nationals, its function being largely instrumental, facilitating academic performance, language development and professional aims. Studies have found, however, that the formation of meaningful social relationships with host-nationals is more difficult (Ross & Chen, 2015), and the absence of such relationships greatly hinders having a positive experience of living and studying abroad (Maundeni, 2001). The third source of students' networks consists of non-compatriot international students, its main function being recreational as well as providing mutual social support based on a shared foreignness. Many advantages of forming social relationships with multi-nationals have been found. Students have opportunities to engage in multi-intercultural communication. Further, Hendrickson, Rosen and Aune (2011) suggest that speaking the target language among multi-nationals is less intimidating and allows language learning.

Social network analysis is the study of social relations among a set of socially relevant actors (network members), connected by one or more ties (relations) (Borgatti, Everett, & Johnson, 2013; Borgatti & Ofem, 2010; Scott, 2012), and has been introduced to the research on the formation of social relationships of internationals during study abroad (Hendrickson et al., 2011; Rienties & Nolan, 2014). When researchers describe personal networks, the subjects are known as the 'egos', the people with whom they connect are known as 'alters', and the relationships between them as 'ties' (Chua, Madej, & Wellman, 2014, pp. 102–103). The social capital embedded in a social network comprises opportunities for advantageous access to information flows and resources (Neri & Ville, 2008; Pena-López & Sánchez-Santos, 2017).

Researchers have examined overall social network formation and have found that network variables, such as total network size, frequency of contact, strength of relationship, where contacts are from, and network density, largely explain the general social support acquired during the sojourn (Hendrickson et al., 2011; Maundeni, 2001; Tanaka, Takai, Kohyama, Fujihara, & Minami, 1997). The quantity of social support can be determined from both the

size of the network and the frequency of social interaction. Ward and Kennedy (1993) found that sociocultural adjustment was predicted by the quantity of interaction with host nationals. High-quality relationships, for example, strong relationships, were found to be linked to satisfactory social support (Searle & Ward, 1990), which can be explained by Wellman's (1998) conceptualisation of meaningful social relations. Strong ties are associated with intimacy and a voluntary investment in the relationship, an interest in being together through interaction in multiple social contexts and a sense of mutuality, with the partner's needs known and supported (Wellman, 1998).

Similarity, as a network variable, is based on the homophily principle that contact between similar people occurs more often than between dissimilar people (McPherson, Smith-Lovin, & Cook, 2001). Similarity is measured by looking at the extent to which the ego's characteristics are similar to certain characteristics of the alter (Crossley et al., 2015). In other words, as Aristotle noted, people "love those who are like themselves" (Aristotle, 1934, p. 1371). In the study abroad context, cultural backgrounds play a major role in structuring the networks in such an ethnically diverse society (McPherson et al., 2001), reflected as the three different sources of an individual's network in Bochner's functional model (1977). Empirical studies have found that high levels of similarity in one's network during study abroad helps to reinforce home culture and identity (Maundeni, 2001; Tanaka et al., 1997); however, others have shown that homophily limits an individual's social world in a way that has powerful implications for the information they receive, the attitudes they form and the interactions they experience.

Another important network variable is density. Density indicates whether one's friends know each other, and is measured by dividing the number of actual alter-alter ties by the number of possible alter-alter ties (Crossley et al., 2015). Researchers have argued that greater social support is often related to high network density (Walker, Wasserman, & Wellman, 1993), while Burt (2000) conversely posited that a network with high density may imply redundancy, constraining access to new social ties and bridges that could provide alternative sources of social support or capital.

In summary, having discussed relevant network theories and studies in the study abroad context, five network variables, namely, size, strength, frequency, similarity and density, have been shown to provide an overall understanding of one's network structure. This study aims to

examine Chinese students' social networks from these five aspects during their study abroad in the UK.

2.2.2 Oral proficiency development during study abroad

Recent studies on measuring language acquisition during study abroad have frequently been driven by global constructs of language ability, with an emphasis on social interactive competence in speaking ability, usually related to assessing it within particular modes of communication, and aiming to define the outcomes (Kinging, 2009). Some important questions arise, however. How do we know that study abroad programmes are effective, in terms of facilitating such language development? How can we measure such language development in the study abroad context?

There are three dominant approaches to measuring oral language gains during study abroad: pre/post-tests, observed interactions and retrospective self-assessment. Pre-/post-tests, for example, the American Council on the Teaching of Foreign Languages (ACTFL) Oral Proficiency Interview (Brown, Dewey, & Cox, 2014; Dewey et al., 2014; Magnan & Back, 2007), have been widely used to obtain the linguistic evidence that indicates progress in oral proficiency. One disadvantage of this approach is that learners may experience perspective shifts between pre- and post-tests during the study abroad programme as their standard of measurement for the pre-/post-tests may change, due to increased exposure to the tasks being assessed (Brown et al., 2014). Another question concerns the extent to which the definitions of oral proficiency during study abroad, as operationalized in standardized tests, reflect the realities and dynamics of natural oral language use and learning (Kinging, 2009). Proficiency may be composed of unique, individual repertoires, as students abroad may develop perfectly legitimate varieties or styles of speech that are not necessarily enshrined as correct by the pre-determined standards in such tests (Kinging, 2009). In addition, some researchers have collected speech samples (McManus, Mitchell, & Tracy-Ventura, 2014), or studied natural interactions through conversation analysis (Kurata, 2007, 2010), to assess oral proficiency development. Such methods provide rigour, with respect to the students' language repertoire, but they are often based on short-term observations and tracking of students' language development.

The third type of measure, the then-now retrospective self-assessment, in which participants retrospectively self-report their abilities, using can-do statements, prior to the study abroad period (labelled 'then'), and provide an additional rating of their abilities when taking the survey (labelled 'now') (Brown et al., 2014, p. 264). The difference between 'then' and 'now' ratings indicates oral proficiency gains. The strengths of retrospective self-assessment can be summarized in three ways. Firstly, it helps to reduce the possibility of drop-out, and to avoid perspective shifts because participants are asked to evaluate their abilities for both 'then' and 'now' scenarios using the same standard of measurement in a single test (Rohs & Langone, 1997). Secondly, self-assessed can-do statements usually provide a large repertoire of language activities associated with communicative settings. For example, descriptors in the National Council of State Supervisors for Languages and American Council of the Teaching of Foreign Languages (NCSSFL-ACTFL) can-do statements range from informal to formal conversations that are related to study abroad contexts (ACTFL, 2015; Brown et al., 2014). Thirdly, can-do statements can capture the changes brought about by study abroad in terms of students' dispositions toward language learning, boosting their communicative ambition in speaking, or altering the motives underlying such strategies (ACTFL, 2012; Brown et al., 2014; Kinginger, 2009). These changes are rarely captured by standardized tests or speech samples.

The reliability of self-assessed results has attracted some debate, however, because of the possibility of overestimation or underestimation in ability assessment, which is an inherent weakness of self-reported language abilities (Davidson & Henning, 1985). Researchers have investigated the correlation between self-estimated ability data and more objective measures of the same abilities, and have generated inconsistent results (Edele, Seuring, Kristen, & Stanat, 2015). However, findings have suggested that the accuracy of self-assessment depends on how closely the descriptors are associated with the learners' language learning experience (Ross, 1998). The NCSSFL-ACTFL provides a coherent set of can-do statements that are relevant to the familiar and concrete study abroad context (ACTFL, 2015), which facilitates learners to relate their abilities to their learning experience. In addition, it has also been shown that the accuracy of self-assessment can increase as learner experience and proficiency increases (Engelhardt & Pfingsthorn, 2013). A number of studies that have adopted NCSSFL-ACTFL can-do statements have been empirically validated in the study abroad context and have been shown to effectively help learners to evaluate their abilities accurately (Brown et al., 2014; Dewey, Belnap, & Hillstorm, 2013; Dewey et al., 2012).

Despite the different methods used to measure oral proficiency gains, studies have largely yielded consistent results, showing that study abroad is a productive environment for language development. Study abroad students generally acquire more fluency than their counterparts at home. Such language development is frequently reflected in the way that they appropriate specific, fluency-enhancing features of spoken grammar and style (Brown et al., 2014; Dewey et al., 2012; Kinginger, 2009; Llanes & Muñoz, 2009).

2.2.3 Researching language gains from a social network perspective

As discussed earlier, study abroad studies have demonstrated the disjuncture between product-orientation and process-orientation (Kinger, 2009). The central point of relating language development to social networks is that the social capital encapsulated in learners' networks can indicate a means of enhancing the rate of language resource accumulation. Such a relationship between language development and social networks allows the research to connect language development and the nature of study abroad experiences. Social network analysis has been used to study the social interactions of international students during their study abroad stay, but very few studies have attempted to study oral proficiency gains from a social network perspective.

Dewey and his colleagues conducted a series of studies on students during study abroad, looking at oral proficiency gains from a social network perspective (Dewey et al., 2012; Dewey et al., 2013). They developed the Study Abroad Social Interaction Questionnaire (SASIQ), which asked students to generate a list of native speakers or alters with whom they spoke the target language to investigate the variables of the students' personal networks. Retrospective then-now self-assessment was used to capture the oral proficiency gains in the target language. Then, network variables, along with other predictors, for example, pre-departure language proficiency, personality and programme design, were combined, and regression analysis was run to investigate the relationship between various predictors and the self-perceived gains in speaking proficiency.

Dewey et al. (2013) found that the 30 learners of Arabic enrolled in study abroad programmes in either Morocco or Jordan, on average, developed six friends or acquaintances outside the host family. Students developed deeper relationships with Arabs. Measures of density showed that the size of learners' individual social groups was generally small, typically including only

two or three people. Both studies showed that learners perceived significant gains in their speaking proficiency during study abroad (Dewey et al., 2012; Dewey et al., 2013). A total of 204 American students learning Japanese, enrolled in programmes in Japan, reported the greatest gains at novice level, followed by intermediate, advanced and superior (Dewey et al., 2012). Students enrolled in study abroad programmes in Arab countries indicated the greatest gains in relation to survival skills. The least gains were associated with areas where a ceiling effect came into play, and challenging areas where tasks were at advanced and superior levels (Dewey et al., 2013). Greater gains were found in lower-level tasks, but the least gains were seen in higher-level tasks, which involved discussing abstract matters, dealing with linguistically unfamiliar situations, speculating and hypothesizing, and engaging in conversations at a level beyond the superficial.

Regression analysis indicates that network is a key contributory factor to oral proficiency gains (Dewey et al., 2012; Dewey et al., 2013). The strength of the friendship was found to be an important predictor of language gain (Dewey et al., 2013): the stronger the students' level of friendship with Arabs the higher their gains in Arabic were likely to be.

2.2.4 Bridging the research gaps

Inspired by the aforementioned two studies, the present research examined Chinese students' social network structure, their oral proficiency gains, and the relationship between these two constructs. The following section identifies research gaps in the literature that was discussed above, and how this study attempts to address these gaps.

Firstly, previous studies that have attempted to link social experience with language development during study abroad have either looked at very limited network variables or incorporated variables, such as pre-departure confidence and length of study programme. Further, they only preliminarily explored the relationship between network structure and second language development, without probing into adequate details and the complexities of such a relationship. The availability of results to map onto the conceptualisation of the network framework remains inadequate. Although SASIQ claims to capture the size, strength, frequency, density and dispersion of students' social networks, results concerning these network variables have not all been reported in the research findings. In order to narrow down the scope, and provide more details of the social experience of study abroad, this study only

looks at how social network variables contribute to the prediction of gains in oral proficiency. Five social network variables were examined, namely, size, strength, frequency, density and similarity, in relation to how they individually and collectively contribute to gains in oral proficiency. Details are presented in the next section.

Secondly, many second language studies conducted in the study abroad context have shown a strong preference for investigating the social ties that are formed and maintained through communication in the target language, while neglecting social ties with co-nationals (Dewey et al., 2012; Dewey et al., 2013; Isabelli-García, 2006). These studies provide very focused presentations of students' social ties with target-language speakers, but only partially reflect students' social networks in the study abroad context. Despite the assumption that social ties with co-nationals may not directly relate to language development, as learners tend to speak their first language with co-nationals, such relations should be included in the investigation of network studies for two reasons. Co-nationals have been found to be a significant part of a student's network during study abroad (Bochner et al., 1977). On the other hand, co-nationals may not necessarily have a direct impact on language learning, but they may help enhance the self-esteem and cultural identity that would influence an individual's perception of the target language and culture, and their motivation to adapt to the environment (Ward, Bochner, Furnham, & Furnham, 2001). This study acknowledges the significant role co-nationals play in a student's social network during study abroad, and so includes co-nationals in the whole study.

Thirdly, previous studies have demonstrated preferences for either quantitative approaches or qualitative approaches when linking social networks and language development during study abroad. The former have documented a holistic picture of network structure, and how network structure predicts language gains (Dewey et al., 2012; Dewey et al., 2013), while the latter have focused on in-depth individual cases of social ties and language learning (Isabelli-García, 2006; Mitchell, 2015). Mixed-methods research promises to yield the most fruitful results in network studies (Hollstein, 2014). The quantitative approach allows prediction of the impact of network structure on language development. The strength of the qualitative approach lies in its ability to exploring the complexities of network formation and language development, and to elaborate on the details and realities of such prediction. This study adopted a mixed-methods approach, drawing on the strengths, and minimizing the weaknesses, of purely quantitative and qualitative approaches.

Lastly, the quality of network data collected from instruments used in second language studies attracts concerns. The Study Abroad Social Interaction Questionnaire repeatedly asks students to answer the same questions about each alter and alter-ties. For example, if one participant generates 10 alters in their network, questions concerning tie strength and frequency would be repeated 10 times. Such repetition is likely to increase the complexity of data entry, and impose a cognitive burden on participants (Stark & Krosnick, 2017; Tubaro, Casilli, & Mounier, 2014). Recent developments in social network analysis focus on network structure analysis through description and visualisation (Borgatti & Ofem, 2010). There are few studies that have benefited from recent novel developments in the field of social network analysis, for example, interactive network data collection and network visualisation. Studies have shown that these tools not only greatly facilitate survey engagement and interaction, but also help to reduce the cognitive burden of the respondents that is involved in network capture, which would enhance the validity of network data collection (Hogan et al., 2016; Stark & Krosnick, 2017). An interactive graphical interface was adapted from the Graphical Ego-Centred Network Survey Interface (GENSI) to collect network data, to increase participant engagement, and to enhance the validity of network data (Stark & Krosnick, 2017).

2.3 Research questions

Following the call for tensions between product and process foci to be ameliorated (Kinging, 2009), the study proposed to link student language development with study abroad social experience (see Figure 1). Four research questions, in a QUAN→QUAL sequential order, were addressed.

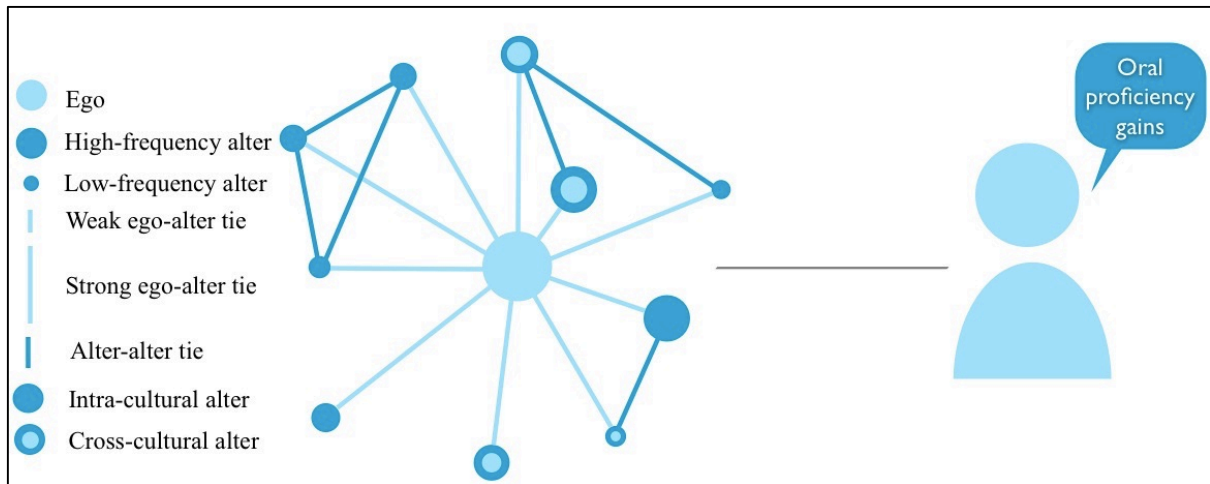


Figure 1 Conceptual Framework: Linking Social Network with Oral Proficiency Gains

Research question 1: What is the social network structure of Chinese international students during their experience of studying abroad in the UK?

Stereotypical views about Chinese students' social networks have been found in the research (Chen & Ross, 2015; Ruble & Zhang, 2013). What is the composition of Chinese students' personal networks from their personal perspective, in terms of the size, strength, frequency, density and similarity of their networks? How many friends do they usually hang out with during study abroad? How frequent and strong are these social relationships? To what extent are they similar to their friends, in terms of linguistic background? How dense is their social network – do their friends know each other? To what extent do Chinese students' personal accounts of their social network structure align or reject stereotypical views? These questions were answered by presenting a holistic picture of students' network structures, consisting of five network variables, and based on self-reported data collected from the personal network questionnaire.

Besides the three classic network variables, size, strength and frequency, similarity and density were also included in the network structure. The impacts of both density and similarity on social support in an individual's network have been found to be both positive and negative (Bochner et al., 1977; Burt, 2000; Walker et al., 1993). There is a need to understand how these two variables influence language development in the study abroad situation.

Research question 2: What are the self-reported then-now retrospective English oral proficiency gains of Chinese students while studying abroad?

Do Chinese international students achieve English oral proficiency gains during study abroad, according to their own accounts? How much have they progressed overall? How much have they progressed in terms of communicative practice associated with different proficiency levels, from basic communication to exchanges beyond superficial? These questions were answered by researching the oral proficiency gains in interpersonal communication achieved during study abroad by comparing then-now self-assessment using NCSSFL-ACTFL-based can-do statements (ACTFL, 2015). Participants were asked to rate their speaking abilities in two scenarios, ‘then’ and ‘now’, the difference between which indicates their oral proficiency progress.

Research question 3: What is the relationship between Chinese international students’ social network structures and their oral proficiency gains during study abroad?

As mentioned in the literature, preliminary findings in previous studies have found that social network structure is key to predicting gains in oral proficiency (Dewey et al., 2012; Dewey et al., 2013). This study probes further into the details of the complexities of how the five network variables predict oral proficiency gains. After conducting statistical analysis of network variables and gains in oral proficiency, and answering RQ1 and RQ2, regression analysis was conducted to investigate the relationship between the five network variables and proficiency gains.

Research question 4: In what ways do the views of Chinese international students concerning the relationship between network variables and oral proficiency gains help to explain the quantitative results regarding the relationship?

Having obtained a holistic picture of the relationship between network variables and proficiency gains using quantitative methods, this study was also aimed at obtaining qualitative data to explain the quantitative findings in relation to the reality and dynamics of such a relationship. This question was answered by conducting follow-up interviews, and mapping qualitative data onto quantitative findings through thematic analysis.

Chapter 3: Methodology

This chapter begins with a discussion of the research paradigm and design that provided the philosophical and methodological basis for the explanatory sequential QUAN→QUAL mixed methods used to address the research questions. Then, the research procedures for the quantitative and qualitative phases are presented. This chapter concludes with discussions about validity, reliability and ethics.

3.1 Research paradigm and research design

The present study adopted an explanatory sequential QUAN→QUAL mixed-methods design, based on pragmatism, to draw on the strengths and weaknesses of purely quantitative and qualitative approaches.

Pragmatists are interested in examining practical consequences and empirical findings to help them to decide what action should be taken in order to better understand real-world phenomena (Johnson & Onwuegbuzie, 2004). Pragmatism embraces a more pluralistic or compatibilist approach, offering pragmatic epistemic values or standards and the justification for the combination of mixed ideas and methods (Johnson, Onwuegbuzie and Turner, 2007). The underlying principle of pragmatic research is that research approaches and methods can be mixed in a variety of ways as mixed methods draw on the strengths and minimize the weaknesses to best frame, address and provide answers to the research (Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2010).

Based on the philosophical foundation provided by pragmatism, the methodological approach in this study adopted an explanatory sequential QUAN→QUAL mixed-methods design combining both quantitative and qualitative approaches with an emphasis on the quantitative approach (see Figure 2). This sequential mixed-methods design involved two phases, whereby I conducted quantitative research, analysed and then built on the results to explain them in more detail using qualitative research methods (Creswell, 2014). The sequential mixed method features compatibility of both quantitative and qualitative methods and the cumulative effect of inferences generated in each consecutive stage (Ivankova, 2014). The following paragraphs present the quantitative and qualitative phases respectively.

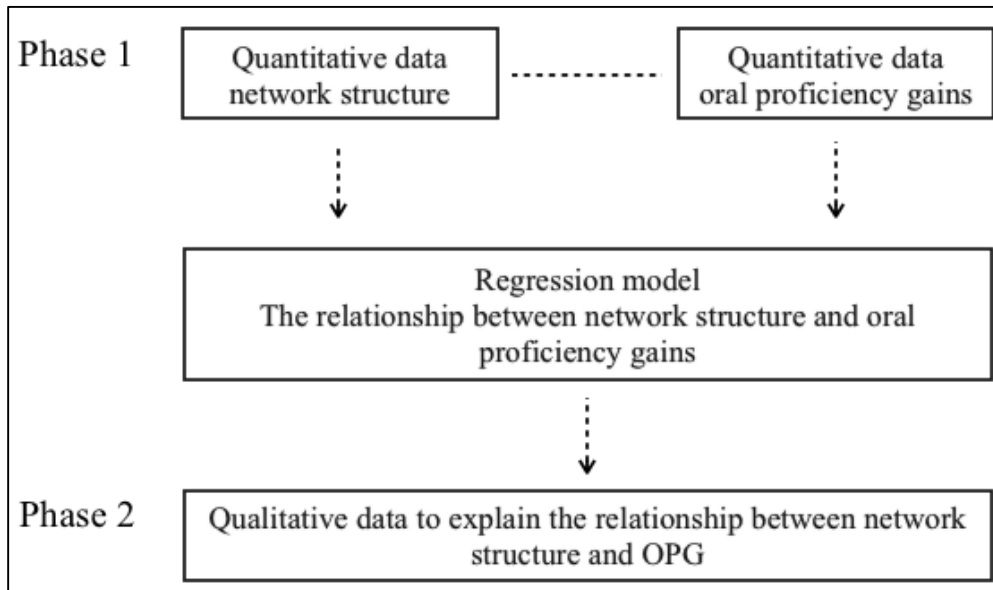


Figure 2 The Explanatory Sequential QUAN→QUAL Mixed-Methods Design

(Ivankova, Creswell, & Stick, 2006)

Phase one involved collecting self-reported survey data to address the general patterns of students’ social network structures and their oral proficiency gains, and the relationship between these two constructs, using a quantitative approach. Quantitative methods are useful for testing hypotheses, and obtaining precise and numerical data that allow statistical analysis to be conducted, and a general understanding of the research questions to be generated (Hollstein, 2014; Johnson & Onwuegbuzie, 2004). Furthermore, data collection using quantitative methods can usually be done quickly, allowing large-scale research to be conducted (Johnson & Onwuegbuzie, 2004), which suits the statistical nature of network and language proficiency data.

RQ1 and **RQ2** aimed to examine a relatively large sample, and collect quantitative data on participants’ network structures and oral proficiency gains. Having answered the first two questions, to address **RQ3**, multiple regression analysis was conducted to discover how various network variables could predict students’ oral proficiency gains. However, the results produced using the quantitative methods were abstract, static and general, and could not capture the dynamic, complex and idiosyncratic nature of the relationship between network structure and oral proficiency gains in the real-life circumstances of studying abroad. These issues were addressed from a qualitative approach in phase two.

Phase two involved follow-up interviews to provide qualitative data to answer **RQ4**, and to explain and elaborate on the quantitative results concerning how network structure contributes to oral proficiency gains. This phase was informed by the quantitative findings from a selection of interview participants, and the development of interview protocols that were used in this phase (Creswell, 2014). Participants for follow-up interviews were purposively selected on the basis of three different levels of oral proficiency gains, revealed by the quantitative results, and were asked to elaborate on the quantitative findings generated in the regression model for **RQ3**. Qualitative data derived from in-depth personal narratives and accounts, and the analysis thereof, helped to refine and explain those statistical results, with regard to their reality, meaning, dynamics and idiosyncrasies (Hollstein, 2014).

In summary, situated in a pragmatic paradigm, the explanatory sequential QUAN→QUAL mixed-methods design integrated both statistical techniques and an interpretive approach. It aimed firstly to provide a general understanding of students' network structure, oral proficiency gains and the relationship between these two constructs. Findings from the qualitative approaches then helped to further map onto, clarify, and explain the inferential statistics generated in phase one. The format of the research design is summarized and visually represented in Figure 3.

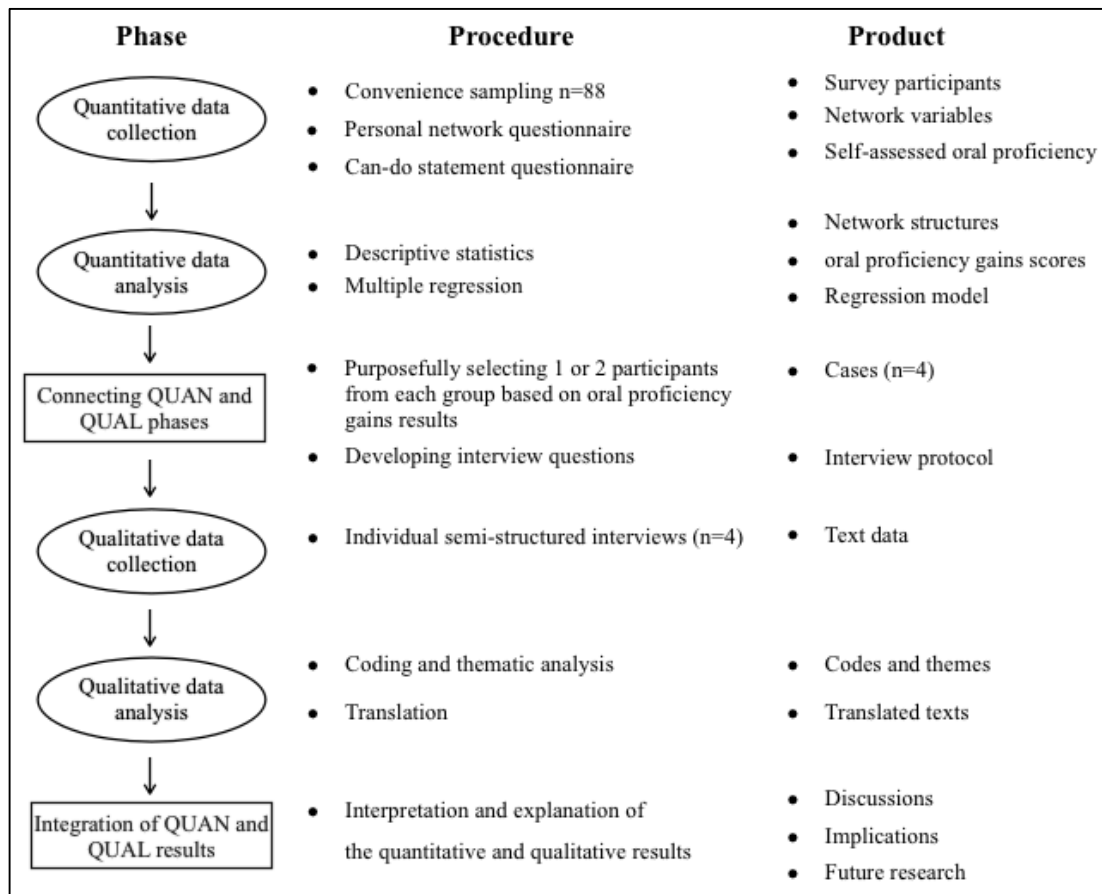


Figure 3 Visual Model for Explanatory Sequential Mixed Method Design Procedures (Ivankova, Creswell, & Stick, 2006, p. 16)

3.2 Research procedures

This section presents the research procedures in detail, guided by the explanatory sequential QUAN→QUAL mixed-methods design.

3.2.1 Phase one: quantitative approach

Phase one aimed to answer the first three questions, providing quantitative results in relation to the general understanding of network structures, oral proficiency gains, and the relationship between these two constructs. This phase involved quantitative data collection from an online survey, and data analysis using SPSS. The following presents the details of the participants, the data collection and data analysis.

Participants

Convenience sampling was used in phase one to collect quantitative data. Participants were selected from a single UK university. The chosen university was the most accessible and convenient university from which the researcher was able to recruit potential participants. Here, the population of Chinese students accounted for around 5% of the total full-time student population. The chosen university consisted of high-achieving students, with a high level of English oral proficiency, as the university required all applicants to demonstrate high English proficiency before they began their proposed course of study. Chinese students studying at this university could offer insights into how advanced English speakers developed their social network and oral proficiency during study abroad. The selection of these students was based on non-probability sampling, so caution should be exercised when it comes to the generalizability of the results. Although convenience samples are not based on probability sampling, and do not allow for statistical generalisations to be made, they can contribute to quick exploration of some hypotheses (Battaglia, 2008).

Invitations to participate in the study, along with consent forms (see Appendix A), were sent out through my personal contacts and the Chinese Students and Scholars Association at this university. The participants in phase one included 88 Chinese international students, currently enrolled as full-time degree students at the chosen university, accounting for 8.3% of the entire population of Chinese international students at this university. A total of 93 responses were collected; four participants did not complete the second half of the questionnaire and so their responses were discarded; one response was from a postdoctoral staff member and was discarded. Of the total sample, 21.6% (N=19) were undergraduate students, 39.8% (N=35) were master's students, and 38.6% (N=34) were doctoral students. Of the sample, 45.6% (N=41) had started their degree at the chosen university the previous October. The average length of experience of studying abroad at this university was about two years, ranging from six months to six years. The demographics of the phase one sample are presented in Table 1.

Table 1

Demographics for Phase One Participants

	Number	Percentile
<i>Programme</i>		
Undergraduate	19	21.6%
Master	35	39.8%
Doctorate	34	38.6%
Total	88	100%
<i>Length of stay</i>		
Less than 1 year	41	46.6%
1-2 years	13	14.8%
2-3 years	7	8.0%
3-4 years	22	25.0%
More than 4 years	5	5.7%
Total	88	100%

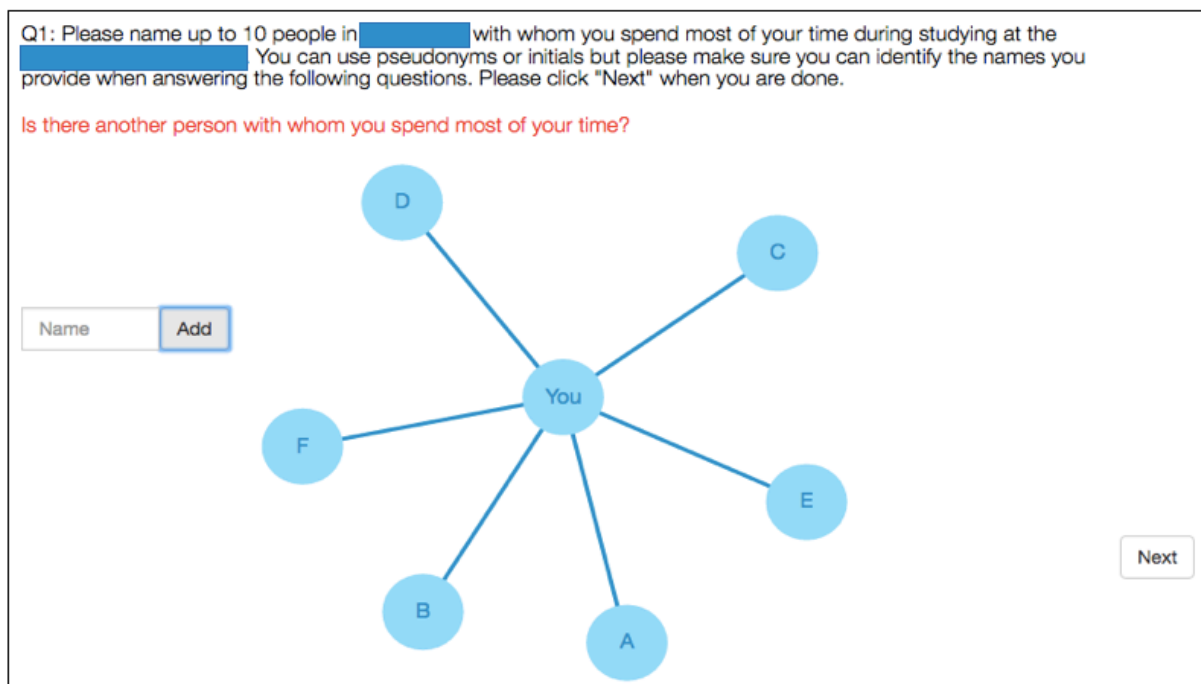
Data collection: *the personal network questionnaire and can-do statements questionnaire*

Phase one data collection took place from mid-April to mid-May 2017. This involved an interactive online survey, consisting of two parts: the personal network questionnaire, to collect network data, immediately followed by the can-do statements questionnaire to collect oral proficiency data. The following presents the details of the survey instruments.

The personal network questionnaire is a web-based graphical interface adapted from GENSI (Graphical Ego-Centred Network Survey Interface) (Stark & Krosnick, 2017), developed to collect social network data. This customized interface visualized network representations that were built upon the scaffolding of a series of alter circles and ties, surrounding the focal individual or the ego, throughout the questionnaire. Participants input network data by manipulating the visual images of the alters and ties. The questionnaire contained questions designed to investigate ego-alter ties, strength and frequency of ego-alter ties, and linguistic and nationality attributes of alters and alter-alter ties. A pilot helped to refine the wording of these questions.

Participants were firstly asked to generate five to 10 friends with whom they spent most of their time during study abroad at the university, in order to indicate the size of their network (Q1) (see Figure 4). A visual representation of an individual's network would appear on the screen, with a series of circles representing their friends surrounding the focal circle,

representing the participant (see Figure 4). Then, they were asked to report the strength and frequency of each social tie on a five-point Likert scale (Q2 & Q3) by dragging all the circles into five boxes representing the five different scales (see Figure 4). Next, participants were asked to report their friends' attributes, and categorize their friends in relation to the language they normally spoke with their friends, and where their friends originally came from (Q4 & Q5). Participants were asked to drag each circle to different boxes representing linguistic and nationality backgrounds. Finally, participants were asked to indicate alter-alter ties in their networks by creating a line between two alters if they knew each other (Q6) (see Figure 4). Based on the answers to the six questions, the size, strength, frequency, density and similarity of an individual's personal network were calculated. The details and definition of data collected from the questionnaire and the five network variables are summarized in Table 2. Full screenshots of the questionnaire are presented in Appendix B.



Q1: Please name 5-10 people in your university with whom you spend most of your time with.

Q2. How close is your relationship with each of these persons?
 Drag the circles with the names of each person into the box below that indicates how close your relationship is.

Extremely close Very close Moderately close A little close Not at all close

Next

Q3: How close is your relationship with each of these friends?

Which of these people know each other?
 To indicate that two persons know each other, click on the name of the first person and then on the name of the second person. This will create a line between the two.
 Please create lines between all persons who know each other. Click "Next" when you are done.

Next

Q6: Which of these people know each other?

Figure 4 Some Screenshots of the Personal Network Questionnaire

Table 2

The Personal Network Questionnaire Data Type

Network data from the personal network questionnaire						Network variables				
Variables	Questions	Data type	Labels	Coded values	Variables	Definitions	Data type	Data range	Data source	
Ego-alter ties	Q1. Please name 5-10 people in your university with whom you spend most of your time.	Relational	NA	NA	Size	The number of ego-alter ties	Numeric	5-10	Ego-alter ties	
Strength	Q.2 How close is your relationship with each of these friends?	Interval	<ul style="list-style-type: none"> • Not at all close • A little close • Moderately close • Very close • Extremely close 	<ul style="list-style-type: none"> • 1 • 2 • 3 • 4 • 5 	Strength	The average tie strength for each ego	Interval	1-5	Ego-alter ties & strength	
Frequency	Q.3 How frequently do you spend time with each of these friends?	Interval	<ul style="list-style-type: none"> • Rarely • Sometimes • Often • Very often • Extremely often 	<ul style="list-style-type: none"> • 1 • 2 • 3 • 4 • 5 	Frequency	The average tie frequency for each ego	Interval	1-5	Ego-alter ties & frequency	
Alter attribute: language	Q.4 What language do you speak when talking to each of these friends?	Categorical	<ul style="list-style-type: none"> • Chinese (Mandarin, Cantonese, etc) • English • Other languages 	<ul style="list-style-type: none"> • 1 • 2 • 3 	Density	The number of ties in a network expressed as a proportion of the total number of ties that are possible. Formula : no. existent ties/no. possible ties	Ratio	0-1	Ego-alter ties & alter-alter ties	
Alter attribute: country	Q.5 Where is each of these friends from?	Categorical	<ul style="list-style-type: none"> • China • UK • Other countries or regions 	<ul style="list-style-type: none"> • 1 • 2 • 3 	Similarity	To what extent the ego is similar to the linguistic background of alters. Formula: (C-E)/(C+E)*	Ratio	-1-1	Ego-alter ties & language	
Alter-alter ties	Q.6 Which of these people know each other?	Relational	NA	NA						

Note. E stands for the number of ties which rely on speaking English and C stands for the number of ties which rely on speaking Chinese. It should be noted that a third choice of ‘other languages’ was provided for participants. However, there were only two cases and were accounted in the group of E.

The can-do statements questionnaire is a retrospective (then-now) self-assessment incorporated with NCSSFL-ACTFL (National Council of State Supervisors of Languages – American Council on the Teaching of Foreign Languages) can-do statements (see Appendix C). The questionnaire contains performance-related descriptors for language learners to report what they ‘can do’ with their modes of communication (ACTFL, 2012, 2015). Participants retrospectively evaluated their abilities prior to the period of study abroad (labelled ‘then’), and provided an additional rating of their abilities when taking the survey (labelled ‘now’) (Brown et al., 2014, p. 264). The difference between the ‘then’ and ‘now’ ratings indicated oral proficiency gains.

Participants were asked in the questionnaire to rate their proficiency levels in relation to 14 descriptors from the interpersonal (person-to-person) communication category extracted from NCSSFL-ACTFL-based can-do statements (ACTFL, 2015). The interpersonal communication mode of communication was chosen because it was the most relevant to the social interactions embedded in social network formation. This mode emphasized the learners’ abilities to engage in active negotiation of meaning (ACTFL, 2012). It also emphasized how participants observed and monitored one another to see how their meanings and intentions were being communicated, and how adjustments and clarifications were made accordingly (ACTFL, 2012). The 14 descriptions cover ‘advanced’, ‘superior’ and ‘distinguished’ levels (ACTFL, 2015, p. 5). As mentioned above, students enrolled at this university already had high levels of English proficiency, and they already had experienced at least six months of study abroad when taking the survey. Therefore the advanced, superior and distinguished levels were more relevant to their English oral proficiency gains in the study abroad context. Figure 5 shows the ACTFL proficiency guidelines for speaking at these three levels. The accuracy of the self-assessment was increased, as the participants had high levels of proficiency, and adequate study abroad experience (Engelhardt & Pflingsthor, 2013). In addition, the scale in this study showed a high level of internal consistency for both ‘then’ and ‘now’ items, as determined by a Cronbach’s alpha of 0.96 and 0.96, respectively.

Levels	Proficiency guidelines
Advanced	Speakers at the Advanced level engage in conversation in a clearly participatory manner in order to communicate information on autobiographical topics, as well as topics of community, national, or international interest. The topics are handled concretely by means of narration and description in the major time frames of past, present, and future.
Superior	Speakers at the Superior level are able to communicate with accuracy and fluency in order to participate fully and effectively in conversations on a variety of topics in formal and informal settings from both concrete and abstract perspectives.
Distinguished	Speakers at the distinguished level are able to use language skilfully, and with accuracy, efficiency, and effectiveness. They can reflect on a wide range of global issues and highly abstract concepts in a culturally appropriate manner.

Figure 5 ACTFL Proficiency Guidelines – Speaking

(ACTFL, 2012)

Participants were asked to report their proficiency level twice for the same 14 descriptors. They were firstly asked to assess themselves in ‘then’ scenarios, and then employ the same descriptors in ‘now’ scenarios, using ratings on a five-point Likert scale from (1) *I cannot do this at all* to (5) *I can do this very easily*. All the descriptors were carefully translated, and a pilot helped to refine the wording of these descriptors. Details of the data collected from this questionnaire are summarized in Table 3.

Table 3

The Can-do Statements Questionnaire Data Type

Levels	Questionnaire items	Ratings	Coding value
Advanced	Q1. I can participate in conversations about familiar topics that go beyond my everyday life.	• <i>I cannot do this at all</i>	• 0
	Q2. I can talk in an organized way and with some detail about events and experiences in various time frames.		
	Q3. I can describe people, places, and things in an organized way and with some detail.	• <i>I can do this with great difficulty</i>	• 1
	Q4. I can handle a familiar situation with an unexpected complication.		
	Q5. I can express myself fully not only on familiar topics but also on some concrete social, academic, and professional topics.	• <i>I can do this with some difficulty</i>	• 2
	Q6. I can talk in detail and in an organized way about events and experiences in various time frames.		
	Q7. I can confidently handle routine situations with an unexpected complication.		
	Q8. I can share my point of view in discussions on some complex issues.		
	Q9. I can express myself freely and spontaneously, and for the most part accurately, on concrete topics and on most complex issues.	• <i>I can do this easily</i>	• 3
	Q10. I can usually support my opinion and develop hypotheses on topics of particular interest or personal expertise.		
Q11. I can communicate with ease, accuracy, and fluency.			
Superior	Q12. I can participate fully and effectively in discussions on a variety of topics in formal and informal settings.		

	Q13. I can discuss at length complex issues by structuring arguments and developing hypotheses.	• <i>I can do this very easily</i>	• 4
Distinguished	Q14. I can communicate reflectively on a wide range of global issues and highly abstract concepts in a culturally sophisticated manner.		

Data analysis: descriptive analysis and regression analysis

Quantitative data collected from the questionnaires first underwent statistical analysis using SPSS (SPSS Inc., 2013), in order to understand the network structure and proficiency pattern. Then regression analysis was carried out to test the relationship between network variables and oral proficiency gains.

Firstly, *the personal network questionnaire* gathered network data and five network variables (size, strength, frequency, density and similarity) were computed (see Table 2). To answer **RQ1**, descriptive analysis of these five variables was conducted to generate an overall picture of the participants' network structures.

Secondly, *the can-do statements questionnaire* gathered oral proficiency data for both 'then' and 'now' scenarios. A paired-samples *t*-test was conducted to compare the means of 'then' and 'now' scores, in order to justify the computation of oral proficiency gains by subtracting 'then' scores from 'now' scores. To answer **RQ2**, descriptive analysis of the sum of scores for gains, for descriptors at different proficiency levels and for all 14 descriptors levels, was conducted to generate an overall picture of the students' gains in oral proficiency.

Thirdly, having obtained results for network variables and oral proficiency gains, stepwise regression analysis was conducted to answer **RQ3**, with the aim of developing an exploratory model that could build and assess the relationship between one dependent variable (oral proficiency gains) and several independent network variables (size, strength, frequency, density and similarity). Stepwise regression decides the order in which independent variables are entered into the model, based on purely mathematical criteria (Tabachnick & Fidell, 2013). The software searches for independent variables that best predict the dependent variable. It does so by selecting the predictor that has the highest simple correlation with the outcome

(Field, 2013). Evaluation of the assumptions, and details of the regression model, are presented in the Findings chapter, below.

3.2.2 Phase two: qualitative approach

Phase two aimed to address **RQ4**, providing qualitative data to explain the quantitative findings, and to elaborate on the ways in which the five network variables contribute to the learners' oral proficiency gains. This phase involved four semi-structured follow-up interviews. The following presents details of the case selection, data collection and data analysis.

Case selection

Purposive sampling of selected participants was used in phase two to collect qualitative data, on the basis of the quantitative findings, namely, the sources for oral proficiency gains and their network structure from phase one. All participants were grouped into low, moderate and high levels, on the basis of their scores for oral proficiency gains. Voluntary participants who demonstrated representative network structure in each oral proficiency gains category were invited to undertake the follow-up questioning. Although the purposive sampling method does not permit statistical generalisations to be made, it does allow the selection of a representative sample of participants with different oral proficiency gains scores and network structures. Four Chinese international students were selected from the phase one sample, one from the low oral proficiency gains level, one from the moderate level and two from the high level.

Data collection: semi-structured interviews

Phase two data collection involved four semi-structured interviews, conducted in the Chinese language because the participants were more comfortable with speaking and expressing themselves in Chinese. The same Chinese students who took part in the phase one pilot study joined the phase two pilot and helped to refine the contents, wording and length of interview questions. Minor changes were made to the interview protocol. All four interviews lasted around 30 minutes and were conducted in quiet places from mid- to late April. The interviews were recorded. Informed consent was obtained from all participants and British Education Research Association ethical guidelines were followed (BERA, 2011).

The key to the follow-up data collection lay in the decision regarding which quantitative results needed to be further explored through qualitative data collection (Creswell & Clarke, 2011). The phase one results showed that size, strength, frequency and density collectively predicted oral proficiency gains, while similarity was excluded from the regression model (more details are presented in the next chapter). The interview protocol was developed to further elaborate on how the size, strength, frequency, density and similarity of students' social networks individually and collectively contributed to oral proficiency gains (see Appendix E for interview protocol).

The interview protocol involved two parts. Firstly, the warm-up session asked participants to report on their general network structure in relation to the size, strength, frequency, density and similarity of their networks, and to generalize their oral proficiency gains since they had started their programme at the university. The participants were then presented with a visualized representation of their network, based on their responses to the phase one survey, to help them recall their previous social network responses (see Xing's network representations in Figure 6; see the others' visualized networks in Appendix F). Questions emphasizing how the five network variables contributed to oral proficiency gains were asked.

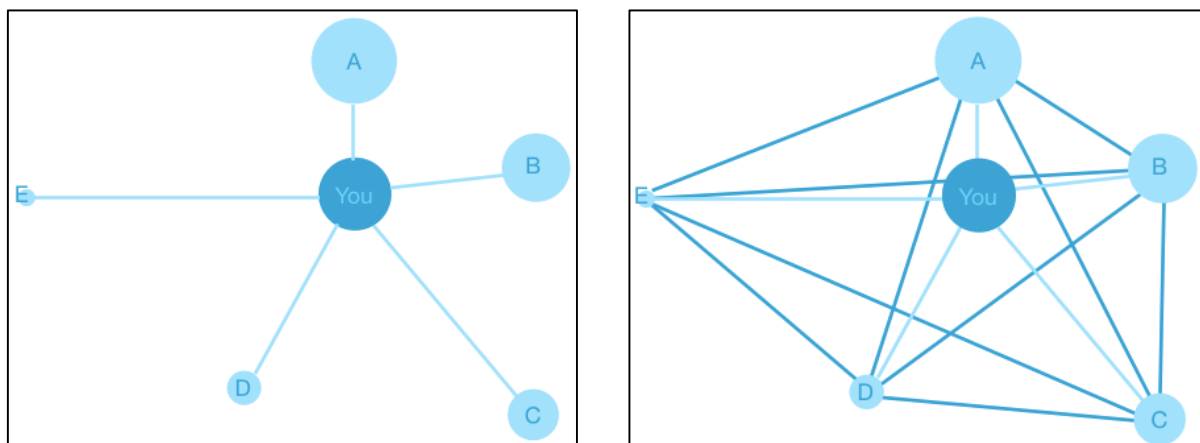


Figure 6 Visualized Network Representation of Xing's Social Network

Note. (A, B, C, D and E were used here to ensure confidentiality. The light blue lines in the right picture are treated as binary, either present or absent.

Data analysis

All four interviews were transcribed, verbatim, and the participants received the transcribed materials, with a request to verify their accuracy. Thematic analysis was used to identify, analyse and report patterns or themes in the data, to reveal how different network variables

(size, strength, frequency, density and similarity) contributed to oral proficiency gains (Braun & Clarke, 2006).

Several issues were considered before the analysis. Firstly, theoretical thematic analysis was adopted, since quantitative findings had already provided a framework for further investigation of some aspects of the data. Secondly, due to the limited number of cases in phase two, what counted as a theme in this phase did not depend on quantifiable measures, but rather on whether it captured something important in relation to elaborating the relationship between network variables and oral proficiency gains (Braun & Clarke, 2006). Thirdly, the analysis focused on providing more detailed and nuanced accounts of the pre-determined framework, rather than a rich description of the data. This approach allowed more depth and complexity to be produced and to explain the quantitative findings (Braun & Clarke, 2006, p. 87). The thematic analysis was guided by the procedures presented in Figure 7.

Phase	Description of the process
1. Familiarizing with data	Reading and re-reading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
5. Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating the analysis back to the research question and literature, producing a scholarly report of the analysis.

Figure 7 Phases of Qualitative Analysis

(Braun & Clarke, 2006, p. 87)

3.3 Validity, reliability and ethics

Previous sections have addressed the validity or reliability issues related to the different phases of the research design. This section summarizes and highlights a few issues regarding validity and reliability, concluding with ethics.

3.3.1 Validity and reliability

The first step involved strategies to ensure the validity and reliability of the quantitative data and results (Ivankova, 2014). The personal network questionnaire and the can-do statements

questionnaire were carefully designed, translated and piloted, in order to refine the content, wording and length. In addition, the can-do statements questionnaire had a high level of internal consistency for both 'then' and 'now' items, as determined by a Cronbach's alpha of 0.96 and 0.96, respectively (Cohen, Manion, & Morrison, 2011).

Secondly, strategies to ensure the credibility and trustworthiness of the qualitative data were implemented (Ivankova, 2014). Interview protocols were developed on the basis of the quantitative findings, and were carefully worded and piloted to ensure that questions were open-ended, neutral and clear (Cohen et al., 2011). Case selection for follow-up interviews was based on the representativeness of the network structure of the three groups, with different oral proficiency gains generated from the quantitative data, which helped enhance the quality of data integration (Ivankova et al., 2006). Another issue was that participants might have experienced perspective shifts between the survey and the interview (Cohen et al., 2011). In order to ensure that the qualitative data more accurately reflected the quantitative data, interviewed participants were presented with their visualized personal networks before the interview, to help them recall their previous experiences.

3.3.2 Ethics

Educational researchers are required to keep a balance between the demands of the pursuit of truth and knowledge and the protection of participants' rights and values that are potentially threatened by the research (Cohen et al., 2011). There were potential risks that subjects participating in this research might become aware of being marginalised, and conscious of their lack of intercultural and linguistic competence, which might cause them discomfort or other types of psychological harm. On the other hand, stereotypes about Chinese students' social experience and language skills are prevalent (Ruble & Zhang, 2013), which also poses risks to the wellbeing of Chinese students. Stereotypes may cause counter-stereotypical information to be overlooked, preventing the understanding of why such challenges are happening. Linking subjects' personal networks with their oral proficiency gains allowed probing of these issues and listening to their personal narratives, which could not be achieved through simple daily observation. In summary, the importance of knowledge gained, and the sum of expected benefits to the subjects, outweighed the possible risks to the subjects, and thus warranted the decision to carry out the study (Kvale, 2007).

Some careful strategies were used to reduce such risks, while maximizing benefits. The research followed the BERA guidelines for all ethical considerations (BERA, 2011). Informed consent was obtained from all questionnaire and interview participants (see Appendices A and D). During interviews, participants were informed of the potential risks of answering personal or sensitive questions relating to social ties and English oral proficiency. They were assured they could withdraw at any time, for any reason. Confidentiality and anonymity were considered throughout the research. As many participants expressed interest in the research findings, a brief report will be sent to them after completion of the project.

Chapter 4: Findings

This chapter presents the findings in relation to the four research questions. The chapter first addresses phase one, presenting quantitative findings associated with network structure, oral proficiency gains and the regression model combining these two constructs. Then, the qualitative findings are presented, in order to explain the reality, meaning, dynamics and idiosyncrasies of the regression model.

4.1 Phase one: quantitative data

Descriptive and inferential statistics were used to analyse quantitative data. This section presents the findings that answer the first three research questions.

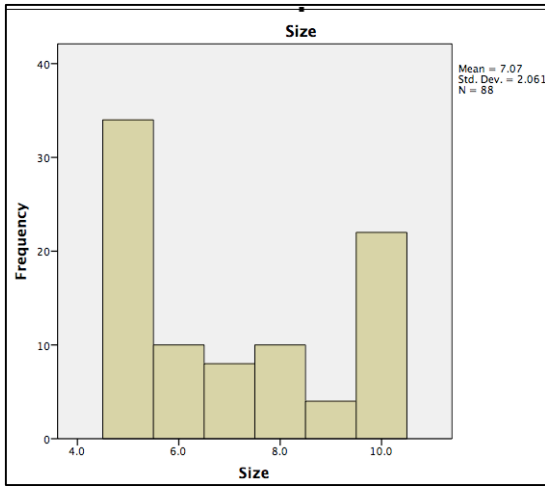
4.1.1 Social network structure

A total of 88 participants generated 622 friends. Descriptive statistics of the five network variables (size, strength, frequency, density and similarity) were conducted to generate an overall picture of the participants' network structures (see Table 4). Figure 8 presents the frequencies of network variables, and Table 5 shows the correlations between network variables. The details of each variable are discussed.

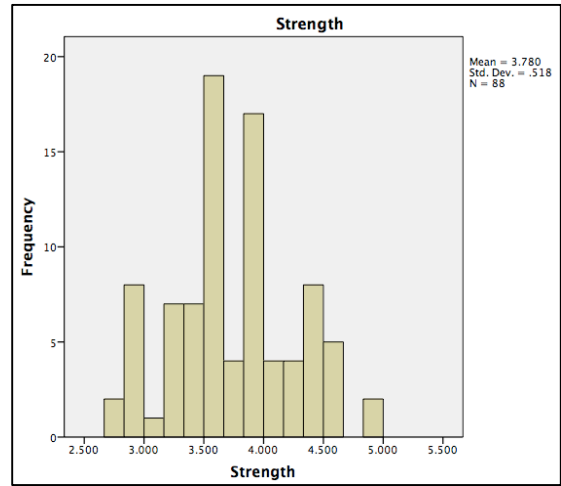
Table 4

Descriptive Statistics of Network Variables

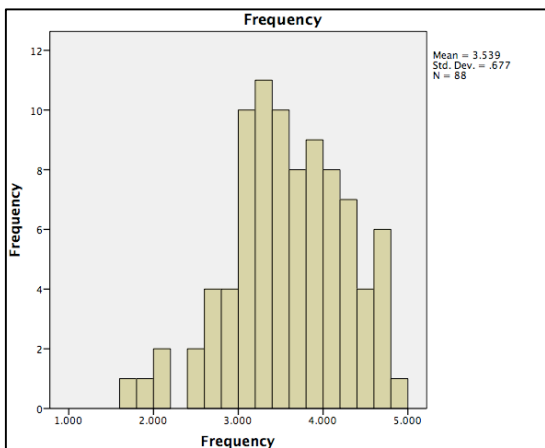
	Minimum	Maximum	Mean	SE	SD	Variance	Skewness	Kurtosis
Size	5.0	10.0	7.068	.220	2.061	4.248	.374	-1.521
Strength	2.667	5.000	3.780	.055	.518	.269	.123	-.391
Frequency	1.714	4.800	3.540	.072	.677	.458	-.368	-.031
Density	.000	1.000	.485	.026	.244	.059	.266	-.311
Similarity	-.667	1.000	.527	.053	.500	.250	-.784	-.599



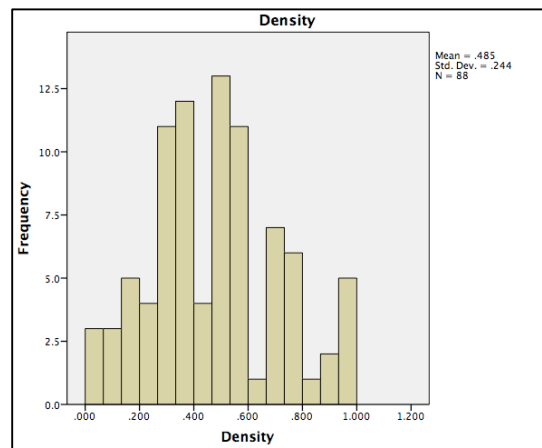
Variable 1: size



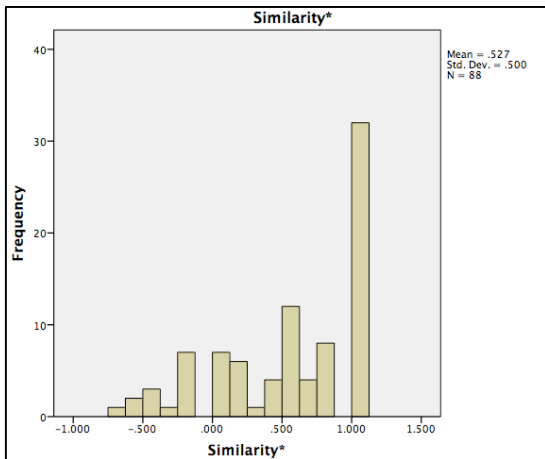
Variable 2: strength



Variable 3: frequency



Variable 4: density



Variable 5: similarity

Figure 8 Frequencies of Network Variables

Table 5

Correlation between Network Variables

	M	SD	Size	Strength	Frequency	Density
Size	7.06	2.06				
Strength	3.78	.52	-.04			
Frequency	3.54	.68	.05	.62**		
Density	.49	.24	-.17	.11	.15	
Similarity	.53	.50	-.17	-.01	-.01	.32*

Size was calculated by adding up the number of friends listed by a participant in the questionnaire. These friends were the ones with whom a participant usually spent most of their time at the chosen university. The average size was around seven friends (M=7.07, SD=2.06).

Strength was measured by the average tie strength with all alters for each participant. The average tie strength of the sample was 3.78, which is more than halfway between ‘close’ and ‘very close’. None of the participants reported a weak network, with the minimum strength average of 2.67 indicating more than halfway between ‘a little close’ and ‘close’. Most of the participants (85, 96.6%) reported their average tie strength at or above ‘close’, indicating the network presented was covering their immediate or important social relationships. Those reporting that their average social ties were at or beyond ‘very close’ amounted to 60.9% (53).

Frequency was measured by the average tie frequency with all alters for each participant. The average tie frequency of the sample was 3.54, that is, nearly midway between ‘often’ and ‘very often’. The majority of the sample (84.1%) reported an average frequency level of ‘often’ or above ‘often’.

Density was calculated by expressing the number of existent alter-alter ties as a proportion of the total number of possible alter-alter ties to show whether alters in an individual’s network knew each other:

$$density = \frac{\text{the number of extent ties}}{\text{the number of possible ties}}$$

The density results ranged from 0 (no one in a person’s network knew any another member in the network) to 1 (all the alters in the network knew each other), with a mean of 0.49. Density was statistically significantly correlated with similarity ($r=.32$, $p<0.01$), indicating that a network with higher density was likely to be a network in which the alters were similar to the ego, in terms of linguistic background.

Similarity was measured by looking at the extent to which a participant was similar to their friends (Crossley et al., 2015), with regard to linguistic background:

$$\text{similarity} = (C - E)/(C + E)$$

In this equation, C = the number of ties which relied on speaking Chinese, and E = the number of ties which relied on speaking English.

The value for similarity varied from -1 to +1. A score of -1 indicated that the ego had English-speaking ties only, showing perfect heterophily; a score of +1 meant that the ego had Chinese-speaking ties only, showing perfect homophily, and a score of 0 meant that the ego had an equal number of Chinese-speaking and English-speaking ties. The results showed similarity score ranges from -.67 to +1, with a mean score of .53, indicating participants had more Chinese-speaking ties than English-speaking ties in their networks. Of the total participants, 32 (36.4%) had a similarity value of 1, showing perfect homophily, with only Chinese-speaking ties in their networks. Nineteen (21.5%) participants had a similarity score of at least 0, indicating the number of English-speaking ties was equal to, or more than, that of Chinese-speaking ties.

Results showed perfect homophily in some participants and diversity in the rest. Networks were categorized into monocultural networks (N=32) in which there were only Chinese-speaking alters, and diverse networks (N=56) in which there was at least one English-speaking alter. There was not much difference between monocultural and diverse networks in terms of size, strength, frequency and density (see Table 6). In monocultural networks, there were only intracultural ties. In diverse networks, cross-cultural and intracultural ties were identified on the basis of whether the participant spoke English or Chinese with each alter. The size, strength and frequency of these two types of social tie were compared within the diverse networks (see Table 6). Within diverse networks, participants reported more intracultural ties (M=4.71, SD=2.19) than cross-cultural ties (M=2.75, SD=1.80). For strength and frequency, there was not much difference between intracultural and cross-cultural ties.

Table 6

Comparison between Monocultural and Diverse Networks

Network variables	Monocultural networks (N=32)		Diverse networks (N=56)		
	M	SD		M	SD
Size	6.31	1.89	Intra+cross	7.50	0.27
			Intracultural	4.71	2.19
			Cross-cultural	2.79	1.81
Strength	3.79	0.09	Intra+cross	3.77	0.07
			Intracultural	3.92	0.56
			Cross-cultural	3.50	0.78
Frequency	3.58	0.12	Intra+cross	3.52	0.09
			Intracultural	3.56	0.73
Density	0.59	0.04	Cross-cultural	3.40	1.06
			Intra+cross	0.42	0.23

4.1.2 Oral proficiency gains

Factor analysis was conducted to test whether there was a need to assign different weighting to different items. A principle component analysis was conducted on the 14 items for both the ‘then’ and ‘now’ tests. The Kaiser-Meyer-Olkin measure verified that the sampling adequacy for the analysis was $KMO=.92$ and $.93$, which is well above the acceptable limit of 0.5 (Field, 2013). Bartlett’s test of sphericity approximate chi-square (91) was 962.29 , $p<0.001$ (‘then’), and 1016.55 , $p<0.001$ (‘now’), indicating that correlation between the items was sufficiently large for the analysis. An initial analysis was run to obtain eigenvalues for each component in the data. One component had eigenvalues above Kaiser’s criterion of 1 in both tests and, in combination, explained 62.8% of the ‘then’ test and 64.2% of the ‘now’ test of the variance. Only one component was retained in this study. The factor loading for the 14 items in both tests ranged from 0.66 to 0.87 , indicating small variance. Therefore the total scores for the ‘then’ and ‘now’ tests were simply added up, without assigning different weightings to different items.

Descriptive statistics for the 14 items in both the ‘then’ and ‘now’ test scores were conducted, and are presented in Table 7. In the ‘then’ test, Q4 (‘I can handle a familiar situation with an unexpected complication’) was rated the easiest ($M=3.05$, $SD=.77$), and Q14 (‘I can

communicate reflectively on a wide range of global issues and highly abstract concepts in a culturally sophisticated manner’) was rated the most difficult ($M=2.18$, $SD=1.02$). For the ‘now’ test, the easiest statement was Q10 (‘I can usually support my opinion and develop hypotheses on topics of particular interest or personal expertise’), with a mean score of 3.36 ($SD=0.66$), and the most difficult was Q14 again ($M=2.67$, $SD=1.01$). Having added all 14 questions up for the ‘then’ and ‘now’ tests, respectively, there was a difference between the sum of the ‘then’ scores ($M=37.88$, $SD=9.29$) and ‘now’ scores ($M=43.34$, $SD=8.22$).

Table 7

Descriptive Statistics of Can-do Statements Items

N=88	Levels	Then							Now						
Item Q1-Q14		Min	Max	Mean	SD	SE	Skewness	Kurtosis	Min	Max	Mean	SD	SE	Skewness	Kurtosis
Q1. I can participate in conversations about familiar topics that go beyond my everyday life.	Advanced	0.0	4.0	2.55	.86	.09	-.09	-.03	0.0	4.0	3.05	.74	.08	-.94	2.49
Q2. I can talk in an organized way and with some detail about events and experiences in various time frames.		1.0	4.0	2.80	.89	.10	-.29	-.62	1.0	4.0	3.18	.70	.08	-.68	.71
Q3. I can describe people, places, and things in an organized way and with some detail.		1.0	4.0	2.81	.83	.09	-.24	-.48	2.0	4.0	3.14	.65	.07	-.14	-.60
Q4. I can handle a familiar situation with an unexpected complication.		1.0	4.0	3.05	.77	.08	-.39	-.40	2.0	4.0	3.34	.66	.07	-.50	-.69
Q5. I can express myself fully not only on familiar topics but also on some concrete social, academic, and professional topics.		1.0	4.0	2.74	.78	.08	-.10	-.42	1.0	4.0	3.10	.79	.08	-.47	-.44
Q6. I can talk in detail and in an organized way about events and experiences in various time frames.		1.0	4.0	2.85	.82	.09	-.22	-.57	1.0	4.0	3.14	.66	.07	-.40	.26
Q7. I can confidently handle routine situations with an unexpected complication.		1.0	4.0	2.96	.79	.08	-.06	-1.02	1.0	4.0	3.28	.71	.08	-.67	.01
Q8. I can share my point of view in discussions on some complex issues.		0.0	4.0	2.46	.92	.10	-.13	-.42	0.0	4.0	2.88	.77	.08	-.55	1.14
Q9. I can express myself freely and spontaneously, and for the most part accurately, on concrete topics and on most complex issues.		0.0	4.0	2.51	.86	.09	-.09	.51	0.0	4.0	2.94	.81	.09	-.70	1.09
Q10. I can usually support my opinion and develop hypotheses on topics of particular interest or personal expertise.		1.0	4.0	3.00	.77	.08	-.46	-.07	1.0	4.0	3.36	.66	.07	-.81	.65
Q11. I can communicate with ease, accuracy, and fluency.	Superior	1.0	4.0	2.83	.79	.08	-.11	-.58	1.0	4.0	3.27	.71	.08	-.84	.93
Q12. I can participate fully and effectively in discussions on a variety of topics in formal and informal settings.		1.0	4.0	2.67	.77	.08	-.13	-.29	1.0	4.0	3.10	.70	.07	-.35	-.14
Q13. I can discuss at length complex issues by structuring arguments and developing hypotheses.		1.0	4.0	2.49	.88	.09	.09	-.67	1.0	4.0	2.98	.71	.08	-.36	.12
Q14. I can communicate reflectively on a wide range of global issues and highly abstract concepts in a culturally sophisticated manner.	Distin guishe	0.0	4.0	2.18	1.02	.11	.02	-.11	0.0	4.0	2.67	1.01	.11	-.58	.06
SUM of scores for 14 descriptors		14.0	56.0	37.88	9.29	.99	.08	-0.00	15.0	56.0	43.34	8.22	.88	-.461	.61

To test the hypothesis that the mean of the ‘then’ and ‘now’ English oral proficiency sum scores was equal, a paired-samples *t*-test was performed (see Table 8). Prior to conducting the analysis, the assumption of normally distributed difference scores was examined. The assumption was considered to be correct, as the skew and kurtosis levels were estimated at .08 and .00 for the ‘then’ scores and -.46 and .61 for the ‘now’ scores, which were less than the maximum allowable values for a *t*-test (skewness < |2.0| and kurtosis < |9.0|) (Field, 2013). The correlation between the two conditions was estimated at $r=.70, p<.001$, suggesting that the paired-samples *t*-test was appropriate in this case, which meant that a student who was more proficient in the ‘then’ test also tended to be more proficient in the ‘now’ test. There was a significant difference in the sum of the ‘then’ test scores ($M=37.88, SD=9.29$) and that of the ‘now’ test ($M=43.34, SD=8.22$); $t(87) = -7.63, p<0.001$.

Table 8

Paired-samples T-test Results for 'Then' and Now' Tests Scores

Then-now	Paired Differences				t	df	Sig. (2-tailed)
	Mean	SD	SE	95% Confidence Interval of the Difference			
				Lower			
5.56	6.831	0.73	-7.00	-4.11	-7.63	87	0.000

Thus, based on the statistically significant difference between the ‘then’ and ‘now’ scores, oral proficiency gains were calculated by subtracting the ‘then’ scores from the ‘now’ scores. Descriptive statistics regarding oral proficiency gains were then produced (see Table 9). For individual descriptors, the descriptive statistics showed that participants obtained the most oral proficiency gains for Q1 (‘I can participate in conversations about familiar topics that go beyond my everyday life’), with a mean of 0.50 ($SD=0.74$), and the least for Q4 (‘I can handle a familiar situation with an unexpected complication’) ($M=0.30, SD=0.70$). In terms of the three proficiency levels, the mean item response increased from advanced level to distinguished level. It indicated participants perceived the most gains in tasks associated with distinguished levels (mean item response=0.49), the next greatest in tasks associated with superior levels (mean item response=0.46), and the least in tasks associated with advanced levels (mean item response=.37). In terms of the overall oral proficiency gains, it can be seen that the sum of gains ranged widely, from -12 to 30 ($SD=6.83$), with a mean score of 5.56 (mean item response=0.40), indicating that, on average, students achieved gains in oral proficiency. Of the participants, 23 (26.1%) indicated no gains, or a decrease, in their self-

reported oral proficiency, while 65 (73.9%) participants reported oral proficiency gains. Figure 9 shows that the proficiency gains results were distributed approximately normally.

Table 9

Descriptive Statistics of Oral Proficiency Gains (OPG)

	Min	Max	Mean	SD	SE	Skewness	Kurtosis
OPG_Q1	-1.0	2.0	.50	.74	.08	.43	-.25
OPG_Q2	-2.0	3.0	.39	.78	.08	.54	1.54
OPG_Q3	-2.0	3.0	.33	.74	.08	-.09	2.57
OPG_Q4	-1.0	3.0	.30	.70	.07	1.19	2.45
OPG_Q5	-2.0	3.0	.36	.79	.08	.11	1.15
OPG_Q6	-1.0	2.0	.28	.64	.07	.46	.46
OPG_Q7	-2.0	2.0	.33	.71	.08	.03	.97
OPG_Q8	-1.0	2.0	.42	.74	.08	.19	-.17
OPG_Q9	-1.0	3.0	.43	.83	.09	.53	.30
OPG_Q10	-1.0	3.0	.36	.73	.08	.76	1.36
OPG_Q11	-1.0	3.0	.44	.71	.08	.90	1.28
OPG_Q12	-1.0	2.0	.43	.62	.07	.56	.01
OPG_Q13	-1.0	2.0	.49	.68	.07	.38	-.14
OPG_Q14	-1.0	3.0	.49	.70	.07	.88	1.16
Advanced*	-1.2	2.3	.37	.53	.06	.61	2.01
Superior*	-.67	2.0	.46	.51	.05	.81	.49
Distinguished*	-1.0	3.0	.49	.70	.07	.88	1.16
Sum	-12	30	5.56	6.83	.73	.84	1.56

Note. Results for advanced, superior and distinguished levels are mean item response.

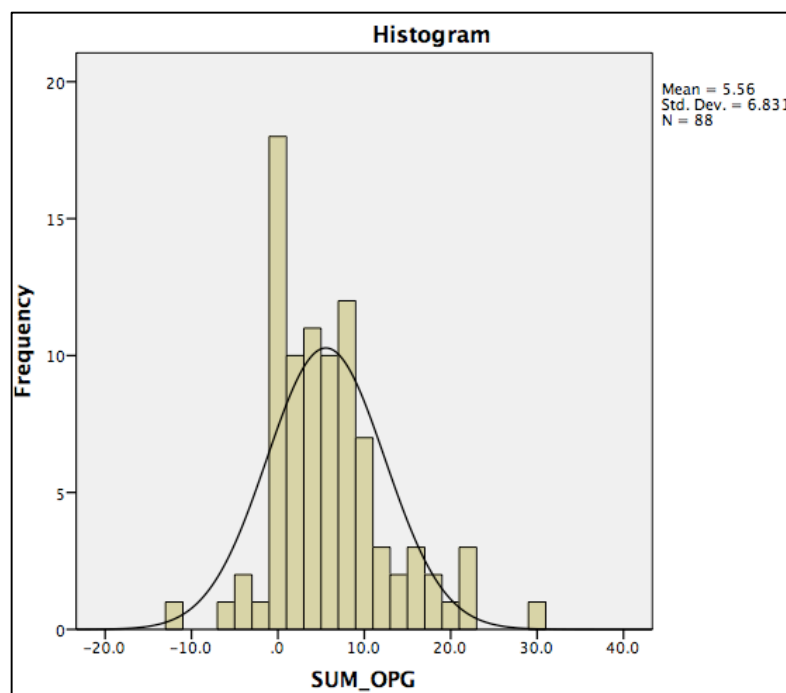


Figure 9 Frequency of Oral Proficiency Gains

4.1.3 The relationship between network structure and oral proficiency gains

Stepwise regression searches for the predictor that best predicts the dependent variable (Field, 2013). This study was interested in which network variables best contributed to the prediction of gains in oral proficiency so stepwise regression was chosen. This section firstly presents the testing of assumptions to relate how the quantitative data fitted the regression model. It then presents and interprets the regression model.

Assumption evaluations: ratio of cases to independent variables was checked. With 88 responses and five independent variables (IVs), the number of cases was above the requirement of 10 cases of data per IV. There were no missing data (Field, 2013). *Independence of observation* was checked by using the Durbin-Watson statistic to test first-order autocorrelation, which meant that adjacent observations were correlated. There was independence of residuals, as assessed by a Durbin-Watson statistic of 2.15, which was very close to 2, so it can be accepted that there was independence of residuals. *Multicollinearity* was checked by correlation coefficients and Tolerance/VIF values. There were no correlations larger than 0.7 between IVs (see Table 10). Besides, all the Tolerance values were greater than 0.1, thus it was possible to confirm that there was no problem with multicollinearity with the data set (see Table 11).

Table 10

Correlations between Network Variable and Oral Proficiency Gains

	M	SD	Size	Strength	Frequency	Density	Similarity
Size	7.06	2.06					
Strength	3.78	.52	-.04				
Frequency	3.54	.68	.05	.62**			
Density	.49	.24	-.17	.11	.15		
Similarity	.53	.50	-.17	-.01	-.01	.32*	
Oral proficiency gains	5.56	6.83	0.21	.20	-.07	-.29**	.07

Table 11

Coefficients of Network Variables

Coefficients ^a													
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	9.461	1.570		6.028	.000	6.341	12.581					
	Density	-8.055	2.897	-.287	-2.781	.007	-13.814	-2.297	-.287	-.287	-.287	1.000	1.000
2	(Constant)	-1.579	5.143		-.307	.760	-11.805	8.647					
	Density	-8.734	2.847	-.311	-3.068	.003	-14.394	-3.074	-.287	-.316	-.310	.989	1.011
	Strength	3.008	1.337	.228	2.249	.027	.349	5.667	.195	.237	.227	.989	1.011
3	(Constant)	-.473	5.070		-.093	.926	-10.556	9.609					
	Density	-8.137	2.806	-.290	-2.900	.005	-13.716	-2.558	-.287	-.302	-.287	.979	1.022
	Strength	5.160	1.664	.392	3.101	.003	1.851	8.469	.195	.321	.307	.614	1.628
	Frequency	-2.692	1.281	-.267	-2.101	.039	-5.241	-.144	-.066	-.223	-.208	.608	1.644
4	(Constant)	-5.704	5.631		-1.013	.314	-16.904	5.497					
	Density	-7.146	2.802	-.255	-2.551	.013	-12.719	-1.574	-.287	-.270	-.248	.948	1.055
	Strength	5.456	1.642	.414	3.323	.001	2.190	8.722	.195	.343	.323	.609	1.642
	Frequency	-2.978	1.267	-.295	-2.349	.021	-5.498	-.457	-.066	-.250	-.229	.600	1.666
	Size	.656	.329	.198	1.993	.049	.001	1.311	.210	.214	.194	.958	1.044

a. Dependent Variable: SUM_OPG

Homoscedasticity was checked by means of a scatterplot. The residuals in the plot appeared randomly scattered. On this basis, there was homoscedasticity, as assessed by the visual inspection of a plot of studentized residuals versus unstandardized predicted values (see Figure 10).

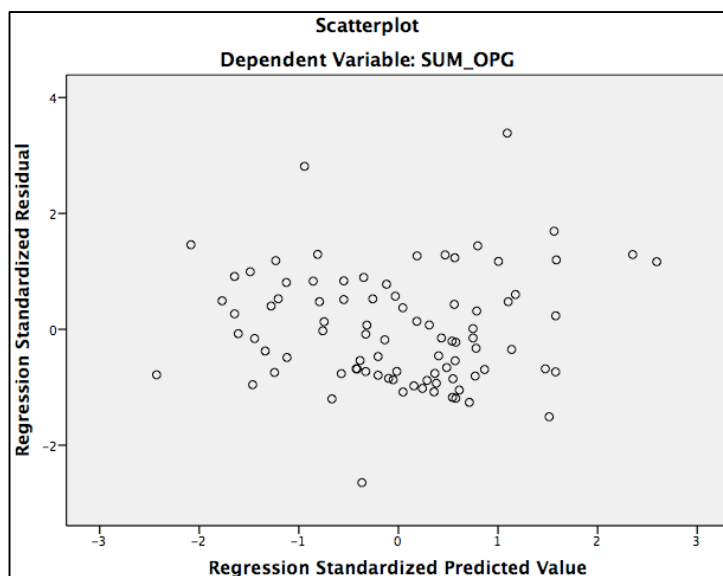


Figure 10 Scatterplot of Regression Standardized Residual and Oral Proficiency Gains

Normality of residuals was checked by looking at the histogram and normal probability plot (see Figure 11 & 12). It can be seen from the histogram that the standardized residuals appeared to be approximately normally distributed. The P-P Plot showed the points were aligned along the diagonal line, indicating approximately normal distribution of the residuals.

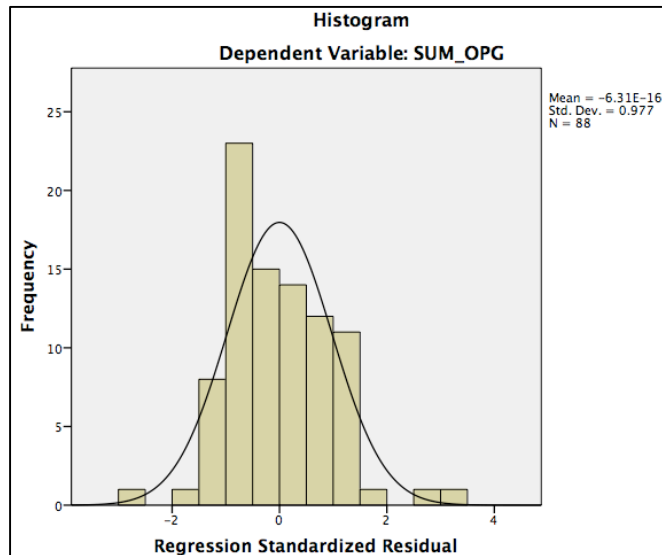


Figure 11 Histogram of Regression Standardized Residual and Oral Proficiency Gains

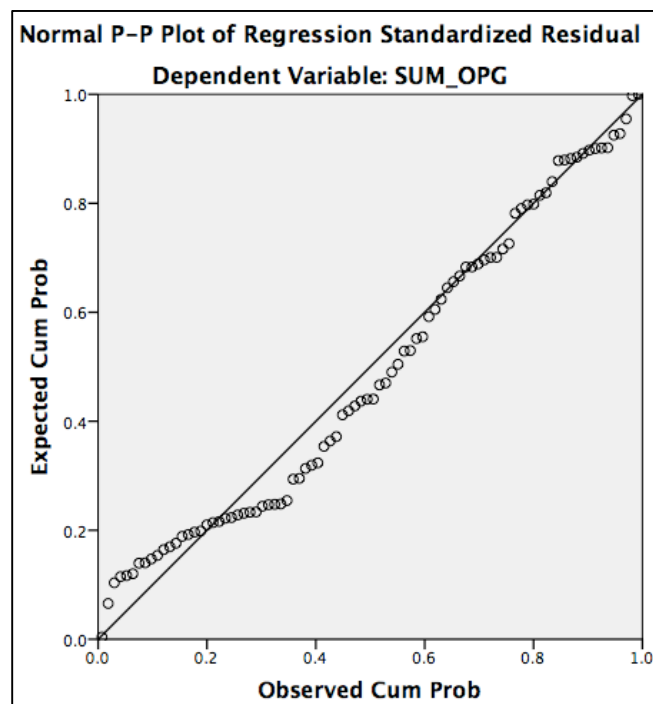


Figure 12 Normal Probability Plot

Case diagnostics were checked to examine extreme cases. The sample was 88 and it was reasonable to expect about 4 cases (5%) to have standard residuals outside the limit of ± 3 . There was only one case which had standard residuals of 3.39 and required further investigation. The Cook's distance of this case was .29, which was below 1, and so this case did not have an undue influence on the model. This case (LEV=0.09) was within the boundary of two times the average leverage 0.11. This set of diagnostics provided evidence that the model had not been unduly influenced by this case. *Excluded variable* only involves similarity and was not

entered into the model during the initial stepwise regression as its *t*-statistics had a significant value more than 0.05.

Interpreting the model: a stepwise regression was calculated using SPSS to predict oral proficiency gains based on four network variables. Density, strength, frequency and size were entered into the model in order. A significant regression was found ($F(4,83)=5.68, p<0.001$), with adjusted R^2 of .177. Participants' predicted oral proficiency gains were equal to $-5.63 - 7.15$ (density) $+ 5.46$ (strength) $- 2.98$ (frequency) $+ 0.66$ (size), with density ranging from 0-1, frequency and strength ranging from 1-5, and size ranging from 5-10. Density and frequency were negative predictors, while strength and size were positive predictors. The participants' oral proficiency gains decreased by 7.15 for an extremely dense network, increased by 5.46 when they had one higher level of tie strength, decreased by 2.98 when shown to have one higher level of tie frequency, and increased by 0.66 when they had one more friend in the network. Density, strength, frequency and size were all significant predictors of oral proficiency gains. A summary of the regression model is presented in Table 12.

Table 12

Summary of Regression Analysis for Sample Networks (N=88)

Variable	<i>B</i>	SE _{<i>B</i>}	$\hat{\beta}$
Intercept	-5.70	5.63	
Density	-7.15	2.80	-.26*
Strength	5.46	1.64	.41*
Frequency	-2.98	1.27	-.30*
Size	.66	.33	.20*
R^2	.22***		
ΔR^2	.177***		
F	5.68***		

Note. * $p<.05$, ** $p<0.01$; *B*=unstandardized regression coefficient; SE_{*B*}=standard error of the coefficient; $\hat{\beta}$ =standardized coefficient

Since similarity was excluded from the model, in order to discover whether similarity could contribute to the prediction of oral proficiency gains, the same process was run to study the 56 diverse networks. The same assumptions were evaluated, and met all the standards of the regression model. A stepwise regression was calculated to predict oral proficiency gains, based on the participants' network variables. Density, size, strength and frequency were entered into the model, in order. A significant regression was found: $F(4,51)=7.02, p<.001$, with adjusted R^2 of .305. The participants' predicted oral proficiency gains were equal to $-12.03 - 8.29$

(density) + 1.10 (size) + 7.60 (strength) - 4.34 (frequency). All four variables were significant predictors of oral proficiency gains. It was noticeable that the regression model applied to diverse networks had stronger predictive power than that applied to the whole sample. A summary of the regression model is presented in Table 13.

Table 13

Summary of Regression Analysis for Diverse Networks (N=56)

Variable	B	SE _B	β
Intercept	-12.03	6.51	
Density	-8.29	3.48	-.28*
Size	1.10	.38	.33*
Strength	7.60	2.14	.57*
Frequency	-4.34	1.66	-.43*
R ²	.36***		
Δ R ²	.305***		
F	7.02***		

Note. * $p < .05$, ** $p < 0.01$, *** $p < 0.001$; B=unstandardized regression coefficient; SE_B=standard error of the coefficient; β=standardized coefficient

In summary, the regression analysis conducted on the whole sample (N=88) showed that density, strength, frequency and size contributed to 17.7% of the predicted oral proficiency gains. In diverse networks (N=56), density, size, strength and frequency contributed to 30.5% of the predicted oral proficiency gains. Diverse networks had stronger predictive power with respect to oral proficiency gains, as compared to the networks of the whole sample. In both models, density and frequency were negative predictors, while strength and size were positive predictors.

4.2 Phase two: qualitative data

Density, strength, frequency and size collectively contributed to 17.7% of the prediction of gains in oral proficiency for the whole sample. Qualitative data collected from four follow-up interviews went through thematic analysis with a pre-determined framework to help elaborate on the ways in which size, strength, frequency, density and similarity contributed to gains in oral proficiency. Even though similarity was excluded from the regression model, the qualitative data, provided by the voices of the interviewees, explains how it may influence English oral proficiency development. For each network variable, the main themes were

summarized and then excerpts were provided to preserve the students' voices for the purpose of elaborating on the themes. The demographics of the interview participants are shown in Table 14.

Table 14

Demographics of Follow-up Interview Participants

Name	OPG	Size	Strength	Frequency	Density	Similarity	Degree	Gender	Length of stay
<i>Hua*</i>	17 (22-39, H)	10	3.00	2.70	0.16	0.00	MA, social science	Female	0.5 year
<i>Yi*</i>	18 (38-56, H)	7	3.86	2.57	0.24	0.14	PhD, Science	Female	4 years
<i>Ming*</i>	-1 (43-42, M)	7	4.14	4.14	1.00	1.00	PhD, Engineering	Male	0.5 year
<i>Xing*</i>	-7 (49-42, L)	5	3.00	3.00	1.00	1.00	PhD, Engineering	Male	2 years

Note. These are pseudonyms to ensure confidentiality and anonymity.

Density indicates whether alters in a person's network know each other. This had the greatest predictive power in the regression model, and was highly negatively correlated with oral proficiency gains. Density was significantly correlated with similarity, which meant a dense network was likely to have domestic peers. Hua's and Yi's networks were of low density, while Ming and Xing had extremely dense networks, with perfect homophily. Hua mentioned her engagement with a group of friends from mixed backgrounds, and how such a dense and diverse network helped her to observe and learn. Hua, Yi, Ming and Xing gave accounts on how high density in the Chinese community could potentially limit access to cross-cultural ties, which could be alternative sources of language support.

Hua referred to observing and learning when spending time with a group of people from mixed backgrounds. At first it was difficult for her to contribute to the conversation, but she tried to observe and pick up pragmatic and etiquette tips, in terms of how to use English properly. By the time of the interview, after a few months of observation and making efforts to integrate the learning she had observed into her practice, she was able to contribute to conversations.

Hua, Yi, Ming and Xing elaborated on the dense network in the Chinese community. They all mentioned that such a dense network could imply redundancy and constrain network resources, as high density in the domestic community blocked the opportunity to reach out to other people. They indicated that when a dense network is formed, high frequency and high strength are likely to follow, constituting a great deal of a person's social interactions. In such cases an individual can spare little time engaging in social interactions beyond the dense network.

It is natural (for Chinese students) to cluster with other Chinese when abroad. I think this is a common psychological need for sojourners. But don't be tied by the cluster [of Chinese students]. I think some students are very loyal to such a cluster, and they are tied to a cluster and hang out with friends within the cluster every week. I'm not saying it is not good to hangout every week. It's just, if you spend all your spare time with this cluster of friends, it then becomes some form of an exclusive cluster. And you won't have time to develop other social ties. (Interview with Yi)

The Chinese Students and Scholars Association organizes a lot of events. There's lot of clustering in the association. I think there are too many events that only target Chinese students. Then people would not feel like reaching out and socializing with non-Chinese students. (Interview with Ming)

Strength was measured in terms of the average tie strength with alters for each participant. It had the second strongest predictive power in the regression model, and was highly positively correlated with oral proficiency gains. Four interviewees found it easy to establish strong ties with domestic peers. Hua and Yi found it easy to form meaningful cross-cultural ties, while Ming and Xing found it less easy to do so. The four participants did not refer very much to how strong ties with co-nationals helped with gains in oral proficiency gains. Hua and Yi mentioned that strong cross-cultural ties helped them to create an anxiety-free and supportive environment for speaking English, and helped them to engage in in-depth conversations, covering a wide range of topics. Although Ming and Xing did not specifically agree that strong cross-cultural ties could contribute to their oral proficiency, they referred to how weak cross-cultural ties did not.

Both Hua and Yi mentioned that intimate and meaningful cross-cultural relationships helped to create a more relaxing, comfortable and supportive environment for them to express themselves in, with their needs known and supported.

I got close to them and sometimes when I spoke with broken sentences [in English], I could tell they understood. Then, I just didn't care about [how accurate my English was] and I just said what was in my head ... sometimes she/he would give me a hint when I got stuck. ...

I find out the tone in which they talk to me is quite different when we get close. (Interview with Hua)

I have a lot of heart-to-heart chats with X. We sometimes get stuck during the conversation. But it is okay. We carry on and we will always find a way. Because you have the need to talk and express. (Interview with Yi)

Hua and Yi also mentioned that they frequently engaged in in-depth conversations with their non-Chinese friends covering a wide variety of topics.

I am very close to a friend. We have the same supervisor ... Our conversations go very deep and we cover personal issues, and I learn a lot. (Interview with Hua)

If she/he is my close friend and I want to express my emotion, and things from the bottom of my heart, I will be thinking about how to express myself and to get the message across. If I get stuck at one point, I will look up words and work on how to express and articulate my deeper feelings. (Interview with Yi)

There was an absence of strong cross-cultural ties in both Ming's and Xing's networks, and they reported that their social interactions with non-domestic students were often limited to superficial exchanges on a limited range of topics, which was not perceived to be of much help in terms of improving oral proficiency.

When first talking to a foreigner, we talked about our degree and where we come from. Then she/he would say, 'Ahh, you have one-child policy in China'. They were very curious about such things, but the conversation did not go deeper. Then I talked to another person and we went through the same topics. When I talk to foreigners, sometimes it seems like we are picking topics from an item pool and we address these questions briefly, without in-depth discussions. (Interview with Xing)

Frequency was measured by the average tie frequency with all alters for each participant. It had the third strongest predictive power in the regression model and was highly negatively

correlated with gains in oral proficiency. Frequent, but not particularly strong, cross-cultural ties were perceived as helpful for maintaining oral proficiency. Frequent and dense social interactions in the Chinese group might potentially limit language learning resources.

Daily interaction is very important. Other Chinese students may have experienced this: after two or three weeks of holiday back in China, when I come back and I sometimes get stuck. I know what I want to say, but just feel my tongue cannot move properly and it takes me a few days to pick up my normal English proficiency. So daily interaction is very important for maintaining the language proficiency. (Interview with Yi)

For Ming and Xing, frequent cross-cultural interactions were associated with improving work-/research-related oral proficiency because the workplace was the place in which most of their interactions with non-domestic students happened; however, this aspect of oral proficiency gains was not the focus of the can-do statements questionnaire.

I spend most of my time in the lab, and there's not many opportunities to have fun. I spend most of my time with colleagues and my supervisor in the lab, and we talk about our research and work. So I think my English has improved from the workplace. (Interview with Ming)

My personal network is full of Chinese friends. I'm doing my PhD now. Apart from speaking English at workplace with my colleagues and supervisor, 99% of my time I speak Chinese. So apart from improving my speaking for academic English, for example some of the vocabulary, there is not much progress in daily communication. (Interview with Xing)

All of them agreed that very frequent social interactions in the Chinese group could be problematic because it limited the time and opportunity to reach out and have social interaction with people outside the group. The same excerpt can be found in the density sub-section.

Size was calculated by adding up the number of friends listed by a participant in the questionnaire. It had the least predictive power in the regression model, and had low positive correlation with gains in oral proficiency. Hua and Yi agreed that having at least one close

friend with whom the medium of communication was English would be beneficial for gains in oral proficiency. Ming and Xing reported that they had a large number of Chinese friends in their network, which, to some extent, limited their opportunities to practice English.

For Hua and Yi, having developed at least one cross-cultural tie helped with gains in oral proficiency. The formation of cross-cultural ties also indicates high strength and frequency.

I have two English friends. One is my neighbor and another is a friend from my course. They've been a great help to my oral English development. (Interview with Hua)

X is English and I am sure that X helps with improving my English ... On the one hand, X helps correct my mistakes. On the other, X is also the person I turn to when I do not understand [the language]. Another thing is that, when we are having conversations, I can pick up something. (Interview with Yi)

As for Ming and Xing, they had focused networks of Chinese friends, and there was an absence of cross-cultural ties in their networks. Such focused networks, with perfect homophily, were perceived by the interviewees themselves as a limitation in terms of improving oral language skills.

I think my network shows a common network pattern of many Chinese international students – a focused and small clique. Once a clique is formed in which everyone speaks Chinese, it constrains one's opportunities and time to speak English. (Interview with Xing)

Similarity was measured by looking at the extent to which a participant is similar to their friends, with regard to linguistic background. It was excluded from the regression model, but in the above qualitative findings, it was noticeable that similarity intertwined with density, strength, frequency and size. Interviewees referred to how intracultural and cross-cultural ties could potentially affect gains in oral proficiency.

Socializing with Chinese students was perceived as having an indirect positive effect on gains in oral proficiency, as it helped to familiarize students with the sociocultural study abroad

context through the mediation of the first language. Socializing with co-nationals was also perceived as having negative effects on oral proficiency gains when dense and exclusive networks were formed, which has been already discussed.

A and B are both Chinese and they are very, very close friends ... They may not contribute directly to oral proficiency development. But they came to this country earlier than I did, and they have lots of sociocultural experience living in this country [which was passed onto me and helped me better adapt to the environment]. (Interview with Yi)

When it came to the impact of the cross-cultural ties in an individual's network, all four of them agreed that having friends from different linguistic and cultural backgrounds helped develop oral proficiency; for example, they had the opportunity to practice English, and were exposed to different forms of English; however, such diversity or difference was perceived differently by the four participants. Both Hua and Yi appreciated such differences, and were curious about what was behind them. The diversity in their networks benefited their gains in oral proficiency.

Do not keep these things [linguistic/cultural backgrounds] in your brain all the time. Because if you label someone and you never take that off, and whenever you see this person, for example, an Italian colleague, your first reaction is that 'he's Italian', and then 'he's a colleague', which is not helpful. It all depends on which defining feature you prioritize. When you define a person, if you put language and nationality a bit further down in your list, that helps you see the different side of a person. There is a saying, 'the benefit of doubt'. For those you find very stereotypical, there is a need for more efforts to get to know this person, rather than judge this person from the cultural background they comes from. [It is not helpful at all] thinking, 'they are all the same, I don't want to get to know them and talk to them'. (Interview with Yi)

Hua and Yi benefited from socializing with people from diverse backgrounds, in the sense that their communication in English had become more 'creative' (see the quote from Yi, below). In other words, they developed new communicative skills that helped them to achieve communicative purposes, even without knowledge of specific linguistic features.

My friends are from Korea, Hong Kong, Poland, China and Russia. They give me a sense of confidence. No matter whether they can say something in English accurately, they articulate with great confidence. It also happens to them when they do not know a certain word they would use non-verbal communication and some simple vocabulary to explain ... I learned a lot from their approach to communication and I imitate such an approach. (Interview with Hua)

Language is only a tool. When you have learned basic things, you can become creative. If you don't know certain things, it is okay. Use other words and try different ways to describe it. I have seen a lot of similar examples from Europeans. Some Europeans I know may not necessarily speak English as fluently as I do. But maybe because their languages have similar roots and have similar thinking and logic patterns, when they do not know how to say something in English, they would use different words to describe it. After their description, I would understand what they were trying to say; however, sometime, I noticed some Chinese or Asian students, when they do not know how to say certain things in English, they just get stuck and say, 'I don't know that word'. I think they only see the success of communication lies in whether they know certain vocabulary or not. But language is just a tool. If you do not know [certain linguistic knowledge], you can try different ways [and get to the point] and then you would manage to explain. (Interview with Yi)

Ming and Xing acknowledged the benefits of having a diverse network, with regard to oral proficiency gains, but at times they tended to see such differences as barriers, when it came to further, more intimate and in-depth social interactions. They believed these differences were not only restricted to linguistic and cultural backgrounds, but were also reflected in values, interests, thinking patterns, ways of commenting on things, educational background, etc. These differences were perceived as being amplified by inefficient communication, due to lack of linguistic competence and loss in translation.

There is a difference between the activities I engage in with Chinese and those with foreigners. I think [on the one hand] there's linguistic differences. On the other, we like different things. Foreigners like going to bars and they are fond of drinking. They are sporty and they like, for example, cycling or kayaking, these kinds of intense physical activities.

But Chinese people would not normally like these sports. So I think it is because we like different things. (Interview with Ming)

There are cultural differences. I can talk to my close Chinese friends and family about some concerns from my inner world, even those very personal issues. If I trust this person, I would talk them, and there are no linguistic constraints. And they understand. But with foreigners, they would think this is private and would not want to talk about it. From my personal experience, they normally would not talk to other people, or acquaintances [about personal issues]. Even if we get familiar with each other and I want to talk to them about something very serious, they may not even care because we have different cultural backgrounds... There was one time when I performed quite badly in an exam... I was very upset and complained to my roommates (all English) ... but they couldn't understand why I was so upset. I was not able to explain why I felt so upset with words, like the result might affect my postgraduate degree application. They didn't really care. (Interview with Xing)

Overall, participants were asked to picture a network structure that could be potentially beneficial for gains in oral proficiency. Hua and Yi agreed that it would be helpful to have, if not many, at least one close and frequent cross-cultural tie. Ming and Xing also agreed on the potential benefit of frequently spending time with non-domestic friends frequently, but they did not agree that strong social relationships could significantly help with gains in oral proficiency. All of them were concerned with how dense networks, with perfect homophily, of Chinese students could potentially limit their access to English learning resources.

In summary, this chapter presents the findings related to social network structure, oral proficiency gains, and the relationship between these two constructs. Findings relating to **RQ1** showed that the major source of networks in the sample came from domestic peers, but the majority of the participants developed intracultural and cross-cultural ties with similar levels of tie strength and frequency. Findings relating to **RQ 2** showed that, on average, participants demonstrated gains in oral proficiency, and such gains increased from lower levels to higher levels of proficiency. Findings relating to **RQ3** and **RQ4** showed that five network variables contributed to oral proficiency gains. Density and frequency were negative predictors, while strength and size were positive predictors. Although similarity was excluded from the regression model, the qualitative data helped to explain its significant role in affecting gains in oral proficiency.

Chapter 5: Discussion

This chapter brings the findings and the literature together, and highlights issues related to the understanding of social network structures, oral proficiency gains, and the relationship between these two constructs.

5.1 Social network structure

What is the social network structure of Chinese international students during study abroad in the UK? The social network structure presented in this study generally aligned with Bochner's functional model in which co-nationals were the primary source of a student's social network during study abroad (Bochner et al., 1985, 1977); however, the majority of the participants established significant and meaningful relationships with non-domestic students. Findings showed there was high density and similarity in the students' networks, but stereotypical views about 'Chinese enclaves' were problematic.

Bochner's functional model emphasizes the significant and primary role of co-nationals in an individual's network during study abroad for rehearsing home cultures and values (Bochner, 2006; Bochner et al., 1977). Findings demonstrated that 32 of the sample only listed intracultural ties in their networks, while for the rest of the sample, intracultural ties largely outnumbered cross-cultural ties. Density and similarity were positively correlated, which meant Chinese friends in an individual's network tended to know each other. In other words, intracultural ties constituted the primary source of the Chinese students' networks, which is consistent with the common network pattern of sojourner students, and how ethnicity plays a major role in structuring the networks in ethnically diverse society (Bochner et al., 1977; McPherson et al., 2001; Rienties & Nolan, 2014)

Although the number of cross-cultural ties and intracultural ties varied greatly, when looking at the 56 diverse networks (63.6%), a striking finding was that there was no significant difference between the strength and frequency of intracultural ties and those of cross-cultural ties. In other words, those who listed cross-cultural ties in their networks developed similar degrees of strength and frequency of intracultural and cross-cultural relationships. For example, the personal narratives of Hua and Yi showed they had developed close, meaningful and

significant social relationships with friends from different linguistic and cultural backgrounds, and that they actively engaged in cross-cultural communication. This finding was not consistent with those of previous studies, namely, that Chinese international students have been found to be ‘socially awkward’ and indifferent engagers (Bodycott, 2012; Ruble & Zhang, 2013, p. 207; Spencer-Oatey & Xiong, 2006). One possible explanation for this could be that most of the participants in this study had previous study abroad experience, prior to their programme at the chosen university, and their linguistic competence was already advanced, which facilitated their cross-cultural communication.

One stereotypical view about Chinese students – that they ‘always stick together’ – is often based on their high visibility, and the mere fact of seeing them together in a white dominated context. Such views often lack the understanding of the common sociopsychological needs of students abroad to practice home culture and identity. Stereotypical views may be reinforced by the lack of awareness of the disjuncture between the values and understanding of social relations commonly practiced in China, and Chinese students’ monocultural background, and what is assumed to be ‘normal’ in the study abroad context. High strength, interdependence and durability in in-group relations are common in collectivist cultures (Blau, Ruan, & Ardel, 1991; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988); this aspect aligns with the findings in this study. On the other hand, despite its geographical vastness and regional diversity, China as a whole remains a more homogenous society, compared to many other Western countries, where cross-cultural interactions are more common (Dreyer, 1999). Thus, in order to understand students’ social network structures, and push for more engagement with other ethnic groups, the understanding of their collectivist values within in-group relationships, and their previous social experience in a monocultural environment, should certainly be taken into account.

Thus, the findings of this study are consistent with the common social network structure of students studying abroad, but show some different patterns in terms of tie strength and frequency of intracultural and cross-cultural ties. This study has helped to problematize prevalent stereotypes.

5.2 Oral proficiency gains

What are the oral proficiency gains of Chinese international students during study abroad in the UK? The present findings, in relation to gains in oral proficiency, generally align with previous results that determined that study abroad is a productive environment for language development, although this study generated unique findings in terms of how such gains were interpreted. This study also demonstrated the strengths of using retrospective NCSSFL-ACTFL can-do statements to measure students' language development during study abroad.

Based on the results generated by the NCSSFL-ACTFL can-do statements, on average, the Chinese students in this study demonstrated gains in speaking abilities related to modes of social interactive communication, which generally aligned with the effectiveness of the study abroad programme (Brown et al., 2014; Dewey et al., 2014; Kinginger, 2009; Mitchell, 2015). Previous studies have suggested that students show greater gains in lower-level tasks, but fewer in higher-level tasks (Dewey et al., 2012; Dewey et al., 2013); however, this study produced quite the opposite findings. The Chinese students in this study reported the greatest gains in tasks related to the distinguished level tasks, the second greatest to superior-level tasks, and the least in advanced-level tasks. In other words, students perceived that they made the greatest gains in areas related to skilful language use, with accuracy, effectiveness, and discussions on a wide range of global issues and highly abstract concepts in a culturally appropriate manner. The students also perceived greater gains in dealing with abstract and unfamiliar linguistic situations, speculating, hypothesizing and engaging in conversations beyond the superficial. Uniquely, students reported the least gains on tasks related to narration, description and using language to satisfy basic needs. One possible explanation for their greater gains in certain higher-level tasks is that the students had more opportunities and exposure to exchanges beyond the superficial. For their least amount of gains, in lower-level tasks, one explanation could be that the participants in this study had already achieved high levels of oral proficiency, prior to taking part in their current study abroad programmes, and the ceiling effect hindered their progress.

The findings from this study further support the usefulness of NCSSFL-ACTFL can-do statements in a then-now retrospective self-assessment to measure students' oral proficiency gains during study abroad. Firstly, previous studies have argued that study abroad brings about changes in dispositions toward language learning, causing them to rework their approach to communication-oriented strategies, resulting in awareness of linguistic and cultural features (Dewey et al., 2012; Kinginger, 2009). Retrospective self-assessment provides an approach to

assessing these changes, by asking students to self-report their abilities towards relevant descriptors (Brown et al., 2014). Secondly, Kinginger (2009) problematizes the prevalent standard definitions of language proficiency, as operationalized in widely used tests, as reflections of academic norms, but natural language use and learning, particularly speaking abilities, may fall outside these norms. ‘Proficiency’ may be composed of unique, individual and dynamic repertoires, as language learners situated in the study abroad context might have appropriated styles of speech that are not recognised as grammatically correct, with respect to academic written language. The NCSSFL-ACTFL can-do statements offered an approach to self-assessment of the learners’ individual repertoires, by providing a wide variety of contextualized descriptors, thus enabling students to report and gauge their language ability.

5.3 The relationship between network structure and oral proficiency gains

Dewey et al. (2012) suggested that networks are a key contributory factor to gains in oral proficiency. This study showed how five network variables (size, strength, frequency, density and similarity) could contribute to gains in oral proficiency from both quantitative and qualitative approaches, suggesting a connection between the nature of the study abroad context and language development.

In this study, density was found to be highly negatively correlated with language development, which is consistent with Burt (2000) and Maundeni (2001), who reported that a network with high density may imply redundancy. Qualitative data further supported the notion that high density in the Chinese group could limit access to the creation of cross-cultural ties and bridges that could potentially provide language learning resources and support. Density was positively correlated with similarity, which meant that high density tended to occur in networks with more intracultural ties. This study did not reveal how high density in cross-cultural ties could potentially affect language development. As argued by Walker et al. (1993), high network density is often related to greater social support. Therefore, high density among cross-cultural ties could potentially provide more language resources and facilitate support, thereby helping to gain language development.

In line with previous studies, findings from this study showed that strength played a significant role, especially in the formation of strong cross-cultural ties, and in facilitating gains in oral

proficiency (Dewey et al., 2012; Dewey et al., 2013). The ways in which strong cross-cultural ties contribute to language development are largely consistent with the characteristics of strong ties (Hendrickson et al., 2011; Wellman, 1998). The interview participants reported that intimate and special relationships created mutual understanding and respect, and a relaxing and comfortable language environment in which to articulate their views about various topics in English, with the student's needs known and supported. Stronger relationships also lead to conversations that required higher levels of proficiency, as feelings, opinions and abstract topics, etc. could be discussed (Dewey et al., 2013).

Another significant finding is that frequency was highly negatively correlated with gains in oral proficiency, which is not consistent with the prevalent assumption that frequent language practice is productive when it comes to language learning (Krashen, 1985; Long, 1996). There are two possible explanations. Firstly, as these networks demonstrated high density and similarity, frequent social interactions may be strongly associated with intracultural ties. High frequency within intracultural ties might potentially limit access and opportunities to build cross-cultural ties in order to generate language resources. Another possible explanation may be that, for those who had already achieved a high proficiency level, social interactions in English that only entailed quantity, but not quality, did not significantly facilitate breaking the ceiling effect, and taking their proficiency level one step forward (Dewey et al., 2013). Similar accounts can be used to explain why size did not have strong predictive power in the regression model, which was not consistent with the findings of previous studies in terms of how the size of a person's network could facilitate their language development (Isabelli-García, 2006). The qualitative findings indicated further support for the greater importance of having strong cross-cultural connections, rather than the mere number of social interactions undertaken, or the number of friends an individual made. Similarity was excluded from the regression model, but the qualitative findings suggested how intracultural and cross-cultural ties could potentially have impacts on language development.

The discussions above summarize and highlight the ways in which each network variable contributes to gains in language learning. It should be noted that these variables are not isolated, and no single variable can entirely explain the impact of social networks on language learning. The examination of a holistic network structure, by tapping into five network variables, provided further support for the benefit of studying both the quantity and quality of social interactions, as proposed by Ward et al. (2001).

Chapter 6: Conclusions

This chapter starts with a summary of the research project. A discussion of the contributions from this study to the relevant field then follows. Finally, the limitations of this research and implications for future study are discussed. It concludes with my personal and academic reflections.

6.1 Summary

This explanatory sequential QUAN→QUAL mixed-methods research study looked at Chinese international students' social networks and their oral proficiency gains during study abroad, and how these two constructs relate to each other. A total of 88 Chinese international students at a chosen UK university participated in the phase one survey, and four participants were involved in follow-up interviews.

The major source of the students' networks comprised co-nationals, but the majority of students developed high frequency and strong social ties with non-domestic peers. High density and similarity was found in the students' networks. The results from retrospective self-assessment showed that studying abroad created a productive environment for language learning. Students reported greater gains with respect to tasks associated with higher-level proficiency, while reporting smaller gains for tasks associated with lower-level proficiency. Networks with only domestic peers with high frequency and density were perceived as a limitation to accessing language learning resources. Diversity, along with high strength, was perceived as beneficial for gains in oral proficiency.

6.2 Contributions

This section summarizes and highlights the contributions of the study, with regard to the contextual, conceptual, methodological and practical perspectives.

Understanding Chinese international students and problematizing stereotypical views

Stereotypical views about Chinese students' oral proficiency and social experience have been problematized in this study. Chinese students have been perceived as those who “never speak English” and are “bad at English” from the point of view of outsiders (Ruble & Zhang, 2013, p. 207); however, participants in this study demonstrated gains in oral proficiency, especially gains linked to descriptors associated with higher-level proficiency. In terms of social experience, Chinese students have been perceived as “socially awkward” (Ruble & Zhang, 2013, p. 207), people who were “always sticking together” and are “indifferent engagers” (Ross & Chen, 2015). Questioning this, the majority of the sample demonstrated social competence in dealing with cross-cultural interactions, and developed intracultural and cross-cultural ties with similar strength and frequency levels.

Previous studies on Chinese international students' study abroad experiences have been generative and enlightening, as long as it is kept in mind that any generalizations about culture are problematic, as they often ignore the individuality, idiosyncrasies and dynamics of independent human beings. Findings from this research problematize some of the stereotypes about Chinese international students, but, again, generalizations from this study should be treated with caution.

Conceptual contributions: linking study abroad context with language development

As Kinginger (2009) argued, many second language studies, in the study abroad context, show little appreciation and depiction of the learning and nature of the context, since it is assumed that the context of learning has little appreciative effect on the language learning. This study aimed to enhance the understanding of language development in the study abroad context by looking at students' social interactions from a social network perspective. The exploration of language resources and support encapsulated in networks during study abroad created an opportunity to link the merit of the context with language learning.

In addition, the exploratory nature of this study means that it is one of the first attempts to link social network variables with language development, permitting an examination of the impact of social experience on language development from a comprehensive and holistic point of view. The five network variables each enabled a certain aspect of the network feature and structure, and its impact on language learning, to be explored.

Methodological contributions: mixed methods research and a novel instrument

The explanatory sequential QUAN→QUAL mixed-methods design has contributed to the understanding of how social network structure is related to oral proficiency gains during study abroad. Phase one quantitative data generated a generic picture of students' network structures, oral proficiency gains, and how network structure predicts oral proficiency gains. Based on the regression model generated in phase one, follow-up interviews were conducted to further explain and elaborate on how social network structure contributes to gains in oral proficiency. Qualitative data provided idiosyncratic and in-depth personal narratives about the experience of real-life study abroad. In other words, the mixed-methods design has enabled me to explore the breadth and depth of the subject matter, and allowed the study to capture the dynamic and complex nature of the subject matter.

Another highlight regarding methodological issues was the innovative personal network questionnaire (Stark & Krosnick, 2017). The web-based graphical interface provided the participants with visualized network representations, facilitated survey engagement, helped to reduce the cognitive burden involved in network data input, and enhanced the validity of the network data. This questionnaire design may allow future researchers to build on this interface development, and introduce interactive, playful and novel research instruments into their research.

Practical contributions: messages and implications to stakeholders

Based on the findings and discussion of the study, engaging Chinese students with a wider campus community is not solely their responsibility, but requires collaborative effort from multiple stakeholders. There are several messages and implications I hope to convey to Chinese international students, non-Chinese students, and the higher education institutions.

Chinese students are advised to develop both frequent and strong intracultural and cross-cultural relationships during study abroad. The practice, rehearsal and preservation of home culture can, as presented in this study, potentially coexist with meaningful, significant and frequent interactions with the wider international community. Such a harmonious integration of both intracultural and cross-cultural social interactions is conducive to language development. In addition, popular language assessments have included advertising fluency,

accuracy, pronunciation and grammar, based on so-called norms, as the sole standard for being proficient; however, speaking a second language during study abroad relies a great deal on communicative skills, and the ability to rework approaches to communication, in order to get the message across. Therefore, as English has become a global language, the notion of being proficient may need to shift from fine-tuning an individual's language towards the so-called norms to an emphasis on general communicative skills and communicative purposes.

It would be helpful for non-Chinese students to be conscious that Chinese students experience linguistic and cultural challenges during study abroad. Understanding such challenges, and being supportive, can potentially lead to more effective and meaningful social interaction. Higher education institutions are advised to understand the disjuncture between what is valued and practiced by Chinese students, and how the higher education institution conducts itself. It would be useful for institutions to take initiatives, and provide adequate and student-centered support for facilitating students' integration into the broader community. English language courses, focusing on communicative skills, would be conducive to cross-cultural social interactions.

6.3 Limitations

Two major limitations and implications for future studies are highlighted in this section. Firstly, it should be noted that the sample and context of the study are not necessarily representative of the target population of Chinese international students in the UK, as the sample consists of high-achieving students from a single prestigious university in the UK. Participants in this study had already demonstrated high English oral proficiency levels at the beginning of their study abroad experience, and many of them had already had study abroad experience, prior to starting their program at the chosen university. The chosen university spreads out across the entire city, and the institution is strongly international, in terms of both student and staff populations. Future research could disseminate the research to other institutions and contexts, with different characteristics.

Secondly, social network and oral proficiency are two dynamic and complex constructs that may change and develop on a regular basis. This study only captured students' network and language development through one survey and one interview, which therefore could not

present many of the dynamics and changes in these two constructs. Future studies could adopt a longitudinal approach, and track the dynamics of students' network structure and language development.

6.4 Personal and academic reflections

Learning at the faculty, and the entire process of conducting my research, have been among the most valuable and transformative experiences of my study abroad experience in the UK. I have taken on board great learning, insights, enlightenment and wisdom from readings, lectures, my supervisor, peers and my research, and I have applied them to my personal and academic development.

Being a Chinese international student myself, I have been inspired by the findings of my research, especially by the enlightening and profound insights from the voices of my interview participants. I have taken on board many of the insights provided by them, and have made great efforts to maximize my study abroad experience and learning, aiming to practice and facilitate cross-cultural exchange, collaborative work and global citizenship.

As an educational researcher, I have developed a habit of constantly reflecting on being ethical, critical and rigorous, and contemplating the purposes and details of my research. One of the highlights during my research has been in the efforts made to prioritize the participants' research experience, and to ensure that they enjoyed the research as much as I did. I have received great interest from the participants about the research findings, and have had very positive feedback about their research engagement during the survey and interviews. I greatly enjoyed both the informal and formal conversations with them about their study abroad experiences, and appreciated their openness and longing to share their stories, and their desire to speak up and make their voices heard.

To conclude this thesis, nothing is more valuable to me, as an educational researcher, than to strive for a better understanding of an educational phenomenon, while at the same time engaging with, and educating, people, moving them towards more open, welcoming, understanding and culturally inclusive social interaction.

References

- ACTFL. (2012). ACTFL proficiency guidelines - speaking. Retrieved May 23, 2017, from <https://www.actfl.org/publications/guidelines-and-manuals/actfl-proficiency-guidelines-2012/english/speaking>
- ACTFL. (2015). NCSSFL-ACTFL Can-Do Statements: Performance Indicators for Language Learners. Retrieved May 23, 2017, from https://www.actfl.org/sites/default/files/pdfs/Can-Do_Statements_2015.pdf
- Aristotle. (1934). *Rhetoric* (Vol. 23). Cambridge: Harvard University Press.
- Battaglia, M. (2008). Convenience Sampling. In P. Lavrakas (Ed.), *Encyclopedia of Survey Research Methods* (p. 149). Sage Publications, Inc. <https://doi.org/10.4135/9781412963947.n105>
- BERA. (2011). Ethical Guidelines for Educational Research. British Education Research Association. Retrieved from <https://www.bera.ac.uk/researchers-resources/publications/ethical-guidelines-for-educational-research-2011>
- Blau, P. M., Ruan, D., & Ardel, M. (1991). Interpersonal Choice and Networks in China. *Social Forces*, 69(4), 1037–1062. <https://doi.org/10.2307/2579301>
- Bochner, S. (2006). Sojourners. In D. Sam & J. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 181–197). Cambridge: Cambridge University Press. Retrieved from /core/books/the-cambridge-handbook-of-acculturation-psychology/sojourners/E43490A2EB8D4996714484C3CBDB7ABF
- Bochner, S., Hutnik, N., & Furnham, A. (1985). The Friendship Patterns of Overseas and Host Students in an Oxford Student Residence. *The Journal of Social Psychology*, 125(6), 689–694. <https://doi.org/10.1080/00224545.1985.9713540>
- Bochner, S., McLeod, B. M., & Lin, A. (1977). Friendship patterns of overseas students: A functional model. *International Journal of Psychology*, 12(4), 277–294. <https://doi.org/10.1080/00207597708247396>
- Bodycott, P. (2012). Embedded culture and intercultural adaptation: implications for managing the needs of Chinese Students. *Journal of Higher Education Policy and Management*, 34(4), 355–364. <https://doi.org/10.1080/1360080X.2012.689199>
- Borgatti, S. P., Everett, M., & Johnson, J. (2013). *Analyzing Social Networks*. London: SAGE Publications Ltd.
- Borgatti, S. P., & Ofem, B. (2010). Overview: Social Network Theory and Analysis. In A. J. Daly (Ed.), *Social Network Theory and Educational Change* (pp. 17–29). Cambridge: Harvard Education Press.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Brown, L., Dewey, D., & Cox, T. (2014). Assessing the Validity of Can-Do Statements in Retrospective (Then-Now) Self-Assessment. *Foreign Language Annals*, 47(2), 261–285. <https://doi.org/10.1111/flan.12082>
- Brumann, C. (1999). Writing for Culture: Why a Successful Concept Should Not Be Discarded. *Current Anthropology*, 40(S1), S1–S27. <https://doi.org/10.1086/200058>
- Burt, R. S. (2000). The Network Structure Of Social Capital. *Research in Organizational Behavior*, 22, 345–423. [https://doi.org/10.1016/S0191-3085\(00\)22009-1](https://doi.org/10.1016/S0191-3085(00)22009-1)
- Chen, Y., & Ross, H. (2015). “Creating a Home away from Home”: Chinese Undergraduate Student Enclaves in US Higher Education. *Journal of Current Chinese Affairs*, 44(3), 155–181.
- Cheng, R., & Erben, A. (2012). Language Anxiety: Experiences of Chinese Graduate Students at U.S. Higher Institutions. *Journal of Studies in International Education*, 16(5), 477–497. <https://doi.org/10.1177/1028315311421841>

- Chua, V., Madej, J., & Wellman, B. (2014). Personal Communities: The World According to Me. In J. Scott & P. Carrington (Eds.), *The SAGE Handbook of Social Network Analysis* (pp. 101–115). London: SAGE Publications Ltd.
<https://doi.org/10.4135/9781446294413.n8>
- Church, A. T. (1982). Sojourner adjustment. *Psychological Bulletin*, *91*(3), 540–572.
<https://doi.org/10.1037/0033-2909.91.3.540>
- Cohen, L., Manion, L., & Morrison, K. (2011). *Research Methods in Education* (7th ed.). London, New York: Routledge.
- Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed methods approaches* (Fourth edition, international student edition). Los Angeles, Calif: SAGE.
- Creswell, J. W., & Clarke, V. L. P. (2011). *Designing and Conducting Mixed Methods Research* (2nd ed.). London: SAGE Publications Inc.
- Crossley, N., Bellotti, E., Edwards, G., Everett, M. G., Koskinen, J., & Tranmer, M. (2015). *Social Network Analysis for Ego-Nets: Social Network Analysis for Actor-Centred Networks*. London: SAGE.
- Davidson, F., & Henning, G. (1985). A self-rating scale of English difficulty: Rasch scalar analysis of items and rating categories. *Language Testing*, *2*(2), 164–179.
<https://doi.org/10.1177/026553228500200205>
- Dewey, D., Belnap, R. K., & Hillstorm, R. (2013). Social Network Development, Language Use, and Language Acquisition during Study Abroad: Arabic Language Learners' Perspectives. *Frontiers: The Interdisciplinary Journal of Study Abroad*, *22*, 84–110.
- Dewey, D., Bown, J., Baker, W., Martinsen, R., Gold, C., & Eggett, D. (2014). Language Use in Six Study Abroad Programs: An Exploratory Analysis of Possible Predictors. *Language Learning*, *64*(1), 36–71. <https://doi.org/10.1111/lang.12031>
- Dewey, D., Bown, J., & Eggett, D. (2012). Japanese Language Proficiency, Social Networking, and Language Use during Study Abroad: Learners' Perspectives. *Canadian Modern Language Review*, *68*(2), 111–137.
<https://doi.org/10.3138/cmlr.68.2.111>
- Dreyer, J. T. (1999). China, the monocultural paradigm. *Orbis*, *43*(4), 581–597.
[https://doi.org/10.1016/S0030-4387\(99\)80006-4](https://doi.org/10.1016/S0030-4387(99)80006-4)
- Edele, A., Seuring, J., Kristen, C., & Stanat, P. (2015). Why bother with testing? The validity of immigrants' self-assessed language proficiency. *Social Science Research*, *52*, 99–123. <https://doi.org/10.1016/j.ssresearch.2014.12.017>
- Engelhardt, M., & Pflingsthor, J. (2013). Self-assessment and placement tests – a worthwhile combination? *Language Learning in Higher Education*, *2*(1), 75–89.
<https://doi.org/10.1515/cercles-2012-0005>
- Field, A. P. (2013). *Discovering statistics using IBM SPSS statistics: and sex and drugs and rock "n" roll* (4th ed). London: SAGE.
- Gareis, E. (2012). Intercultural Friendship: Effects of Home and Host Region. *Journal of International and Intercultural Communication*, *5*(4), 309–328.
<https://doi.org/10.1080/17513057.2012.691525>
- Hail, H. C. (2015). Patriotism Abroad: Overseas Chinese Students' Encounters With Criticisms of China. *Journal of Studies in International Education*, *19*(4), 311–326.
<https://doi.org/10.1177/1028315314567175>
- Hendrickson, B., Rosen, D., & Aune, R. K. (2011). An analysis of friendship networks, social connectedness, homesickness, and satisfaction levels of international students. *International Journal of Intercultural Relations*, *35*(3), 281–295.
<https://doi.org/10.1016/j.ijintrel.2010.08.001>
- Hogan, B., Melville, J. R., Philips, G. L., Janulis, P., Contractor, N., Mustanski, B. S., & Birkett, M. (2016). Evaluating the Paper-to-Screen Translation of Participant-Aided

- Sociograms with High-Risk Participants. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems . CHI Conference, 2016*, 5360–5371.
<https://doi.org/10.1145/2858036.2858368>
- Hollstein, B. (2014). Qualitative Approaches. In *The SAGE Handbook of Social Network Analysis* (pp. 404–416). London: SAGE Publications Ltd.
<https://doi.org/10.4135/9781446294413>
- Isabelli-García, C. (2006). Study Abroad Social Networks: Motivation and Attitudes: Implications for Second Language Acquisition. In M. A. Dufon & E. Churchill (Eds.), *Language Learners in Study Abroad Contexts* (pp. 231–258). Clevedon: Multilingual Matters.
- Ivankova, N. V. (2014). Implementing Quality Criteria in Designing and Conducting a Sequential QUAN → QUAL Mixed Methods Study of Student Engagement With Learning Applied Research Methods Online. *Journal of Mixed Methods Research*, 8(1), 25–51. <https://doi.org/10.1177/1558689813487945>
- Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using Mixed-Methods Sequential Explanatory Design: From Theory to Practice. *Field Methods*, 18(1), 3–20.
<https://doi.org/10.1177/1525822X05282260>
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher*, 33(7), 14–26.
<https://doi.org/10.3102/0013189X033007014>
- Kinginger, C. (2009). *Language Learning and Study Abroad - A Critical Reading of Research*. London: Palgrave Macmillan.
- Krashen, S. D. (1985). *The Input Hypothesis: Issues and Implications*. London: Longman.
- Kurata, N. (2007). Language choice and second language learning opportunities in learners' social networks: A case study of an Australian Learner of Japanese. *Australian Review of Applied Linguistics*, 30(1), 5.1-5.18. <https://doi.org/10.2104/ara10705>
- Kurata, N. (2010). Opportunities for Foreign Language Learning and Use within a Learner's Informal Social Networks. *Mind, Culture, and Activity*, 17(4), 382–396.
<https://doi.org/10.1080/10749030903402032>
- Kvale, S. (2007). *Qualitative research kit: doing interviews*. London: SAGE Publications, Ltd. <https://doi.org/10.4135/9781849208963>
- Liu, C. (2013). From language learners to language users: A Study of Chinese Students in the UK. *International Journal of Applied Linguistics*, 23(2), 123–143.
<https://doi.org/10.1111/j.1473-4192.2012.00322.x>
- Liu, J. (2002). Negotiating Silence in American Classrooms: Three Chinese Cases. *Language and Intercultural Communication*, 2(1), 37–54.
<https://doi.org/10.1080/14708470208668074>
- Llanes, À., & Muñoz, C. (2009). A short stay abroad: Does it make a difference? *System*, 37(3), 353–365. <https://doi.org/10.1016/j.system.2009.03.001>
- Long, M. H. (1996). The role of the linguistic environment in second language acquisition. In W. Ritchie & T. Bhatia (Eds.), *Handbook of Second Language Acquisition* (pp. 413–468). Retrieved from <https://www.scribd.com/doc/13866088/Handbook-of-SLA-Ritchie-Bhatia>
- Magnan, S. S., & Back, M. (2007). Social Interaction and Linguistic Gain During Study Abroad. *Foreign Language Annals*, 40(1), 43–61. <https://doi.org/10.1111/j.1944-9720.2007.tb02853.x>
- Maudeni, T. (2001). The Role of Social Networks in the Adjustment of African Students to British Society: Students' perceptions. *Race Ethnicity and Education*, 4(3), 253–276.
<https://doi.org/10.1080/13613320120073576>

- McManus, K., Mitchell, R., & Tracy-Ventura, N. (2014). Understanding insertion and integration in a study abroad context: The case of English-speaking sojourners in France. *Revue Française de Linguistique Appliquée*, *XIX*(2), 97–116.
- McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a Feather: Homophily in Social Networks. *Annual Review of Sociology*, *27*(1), 415–444.
<https://doi.org/10.1146/annurev.soc.27.1.415>
- Ministry of Education. (2016). Report on Chinese students study abroad in 2015. Retrieved from
http://www.moe.edu.cn/jyb_xwfb/gzdt_gzdt/s5987/201603/t20160316_233837.html
- Mitchell, R. (2015). The development of social relations during residence abroad. *Innovation in Language Learning and Teaching*, *9*(1), 22–33.
<https://doi.org/10.1080/17501229.2014.995762>
- Neri, F., & Ville, S. (2008). Social capital renewal and the academic performance of international students in Australia. *The Journal of Socio-Economics*, *37*(4), 1515–1538. <https://doi.org/10.1016/j.socec.2007.03.010>
- OECD. (2013). *Education Indicators in Focus*. Retrieved from
[https://www.oecd.org/education/skills-beyond-school/EDIF%202013--N°14%20\(eng\)-Final.pdf](https://www.oecd.org/education/skills-beyond-school/EDIF%202013--N%14%20(eng)-Final.pdf)
- Pena-López, J. A., & Sánchez-Santos, J. M. (2017). Individual social capital: Accessibility and mobilization of resources embedded in social networks. *Social Networks*, *49*, 1–11. <https://doi.org/10.1016/j.socnet.2016.11.003>
- Rienties, B., & Nolan, E.-M. (2014). Understanding friendship and learning networks of international and host students using longitudinal Social Network Analysis. *International Journal of Intercultural Relations*, *41*, 165–180.
<https://doi.org/10.1016/j.ijintrel.2013.12.003>
- Rohs, F. R., & Langone, C. A. (1997). Increased Accuracy in Measuring Leadership Impacts. *Journal of Leadership Studies*, *4*(1), 150–158.
<https://doi.org/10.1177/107179199700400113>
- Ross, H., & Chen, Y. (2015). Engaging Chinese International Undergraduate Students in the American University. *Learning and Teaching: The International Journal of Higher Education in the Social Sciences*, *8*(3), 13–36.
<https://doi.org/10.3167/latiss.2015.080302>
- Ross, S. (1998). Self-assessment in second language testing: a meta-analysis and analysis of experiential factors. *Language Testing*, *15*(1), 1–20.
<https://doi.org/10.1177/026553229801500101>
- Ruble, R. A., & Zhang, Y. B. (2013). Stereotypes of Chinese international students held by Americans. *International Journal of Intercultural Relations*, *37*(2), 202–211.
<https://doi.org/10.1016/j.ijintrel.2012.12.004>
- Scott, J. (2012). *What is Social Network Analysis?* Bloomsbury Academic.
<https://doi.org/10.5040/9781849668187>
- Searle, W., & Ward, C. (1990). The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations*, *14*(4), 449–464. [https://doi.org/10.1016/0147-1767\(90\)90030-Z](https://doi.org/10.1016/0147-1767(90)90030-Z)
- Spencer-Oatey, H., & Xiong, Z. (2006). Chinese Students' Psychological and Sociocultural Adjustments to Britain: An Empirical Study. *Language, Culture and Curriculum*, *19*(1), 37–53.
- SPSS Inc. (2013). *IBM SPSS Statistics for Mac, Version 22*. Chicago: IBM Corp.
- Stark, T. H., & Krosnick, J. A. (2017). GENSI: A new graphical tool to collect ego-centered network data. *Social Networks*, *48*, 36–45.
<https://doi.org/10.1016/j.socnet.2016.07.007>

- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston, MA ; London: Pearson.
- Tanaka, T., Takai, J., Kohyama, T., Fujihara, T., & Minami, H. (1997). Effects of social networks on cross-cultural adjustment. *Japanese Psychological Research*, 39(1), 12–24. <https://doi.org/10.1111/1468-5884.00032>
- Teddlie, C., & Tashakkori, A. (2010). Overview of Contemporary Issues in Mixed Methods Research. In A. Tashakkori & C. Teddlie (Eds.), *SAGE Handbook of Mixed Methods in Social & Behavioral Research* (pp. 1–42). Thousand Oaks, California: SAGE Publications, Inc. <https://doi.org/10.4135/9781506335193.n1>
- Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, 54(2), 323–338. <https://doi.org/10.1037/0022-3514.54.2.323>
- Tubaro, P., Casilli, A. A., & Mounier, L. (2014). Eliciting Personal Network Data in Web Surveys through Participant-generated Sociograms. *Field Methods*, 26(2), 107–125. <https://doi.org/10.1177/1525822X13491861>
- UKCISA. (2017). UKCISA - International students in UK HE - International student statistics: UK higher education. Retrieved May 26, 2017, from <https://institutions.ukcisa.org.uk/Info-for-universities-colleges--schools/Policy-research--statistics/Research--statistics/International-students-in-UK-HE/>
- Walker, M. E., Wasserman, S., & Wellman, B. (1993). Statistical Models for Social Support Networks. *Sociological Methods & Research*, 22(1), 71–98. <https://doi.org/10.1177/0049124193022001004>
- Ward, C., Bochner, S., Furnham, A., & Furnham, A. (2001). *The psychology of culture shock* (2nd ed). Hove: Routledge.
- Ward, C., & Kennedy, A. (1993). Where’s the “Culture” in Cross-Cultural Transition?: Comparative Studies of Sojourner Adjustment. *Journal of Cross-Cultural Psychology*, 24(2), 221–249. <https://doi.org/10.1177/0022022193242006>
- Ward, C., & Searle, W. (1991). The impact of value discrepancies and cultural identity on psychological and sociocultural adjustment of sojourners. *International Journal of Intercultural Relations*, 15(2), 209–224. [https://doi.org/10.1016/0147-1767\(91\)90030-K](https://doi.org/10.1016/0147-1767(91)90030-K)
- Wellman, B. (1998). *Networks in the global village: life in contemporary communities*. Boulder, Colo: Westview Press. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=200492>
- Zhou, Y., & Todman, J. (2009). Patterns of Adaptation of Chinese Postgraduate Students in the United Kingdom. *Journal of Studies in International Education*, 13(4), 467–486. <https://doi.org/10.1177/1028315308317937>

Appendices

Appendix A: consent form for questionnaire survey (English & Chinese versions)

Letter of Consent for Questionnaires (English version)

Dear Participants,

You are invited to take part in a second language research conducted by XXXX, a master student at the faculty of education, XXXX university. Please read this letter carefully and ask any questions you may have before taking part in the study.

The purpose of this study is to investigate Chinese students' social networks and their English language learning during study abroad at the university of XXXX. If you agree to participate in this study, you will be asked to answer questions in a survey. The survey consists of two parts: the personal network questionnaire and the can-do statements questionnaire. The former investigates the make-up of your social network during study abroad at XXXX university and the latter measures your oral proficiency gains during your study abroad at XXXX university. The survey will take about 10-15 minutes of your time. This is not a test so there are no "right" or "wrong" answers. The responses of the interview will be used for research purpose only so please give your answer sincerely according to your own study abroad experience at your university. Some participants will be invited to take part in a follow-up interview for further information on this research.

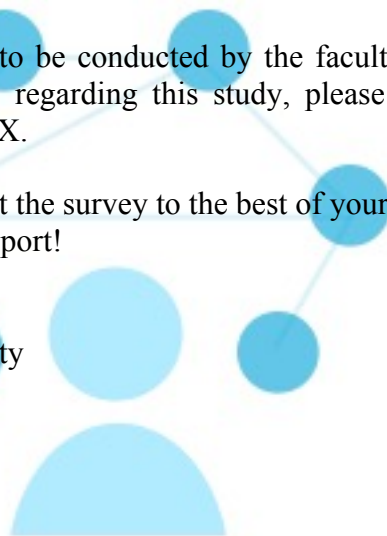
Five participants will be randomly selected and will receive a Sainsbury gift card for taking part. You are welcome to discuss personal network development and second language learning issues with the researcher. All the information that is collected from this research will be kept anonymous and confidential and will not be disclosed under any circumstances. Taking part in this study is completely voluntary. If you decide to take part, you are free to withdraw at any time. If you are interested in the findings of this study, please leave your email address at the end of the interview.

This study has been given permission to be conducted by the faculty of education, XXXX University. If you have any questions regarding this study, please feel free to email the researcher at XXXX or call her at XXXX.

If you agree to participate, please fill out the survey to the best of your knowledge. Thank you very much indeed for your time and support!

XXXX
Faculty of Education, XXXX University

Signature of participant:
Date:



问卷调查同意书 (Chinese version)

同学，你好

诚挚邀请你参与一项关于中国留学生第二语言学习的研究。我是 XXXX，是 XXXX 大学教育学院的研究生，这项研究是我的毕业论文课题。在你决定参与本研究之前，请仔细阅读同意书，如有任何问题，请与我联系。

本次研究的目的在于调查 XXXX 大学中国留学生的人际关系网以及英语学习的情况。如果你同意参加本研究，你需要完成一份调查问卷。调查问卷分为两个部分，第一部分调查你在 XXXX 大学留学期间的人际关系网，第二个部分调查你在 XXXX 大学留学期间的英语口语水平的提高程度。完成调查问卷需要 10-15 分钟。本调查问卷并不是测试，没有“正确”或“错误”答案。你的回答将用于研究目的，所以请你依据你个人在留学的实际情况作答。本研究还会邀请一些参与者进行后期访谈。

本研究将会随机抽取五名参与者，赠与 Sainsbury 礼物卡。我也十分乐意与你讨论人家关系网络发展与二语学习的各种问题。你所提供的任何信息都将受到严格保密且只用于本人的研究中，并且在研究报告中绝对不会提及你的姓名。参与本次研究完全基于自愿，如果你决定参加，你仍可随时退出。如果你希望得到本次研究的结果，请在问卷最后留下你的邮箱地址。

本研究已得到 XXXX 大学教育学院的批准。如果你有任何对本研究有任何问题，请发送邮件至 XXXX 或拨打 XXXX.

XXXX
教育学院，XXXX 大学

参与者签名：

日期：



Appendix B: screenshots of the personal network questionnaire (English & Chinese versions)

English version (Beta)

Q1: Please name up to 10 people in [redacted] with whom you spend most of your time during studying at the [redacted]. You can use pseudonyms or initials but please make sure you can identify the names you provide when answering the following questions. Please click "Next" when you are done.

Is there another person with whom you spend most of your time?

Q1: Please name up to 10 friends at XXXX university with whom you spend most of your time during studying at XXXX university. You can use pseudonyms or initials but please make sure you can identify the names you provide when answering with following questions. Please click 'Next' when you are done.

Q2. How close is your relationship with each of these persons?
 Drag the circles with the names of each person into the box below that indicates how close your relationship is.

Q2: How close is your relationship with each of these persons? Drag the circles with the names of each person into the box below that indicates how close your relationship is.

Q3. How often do you spend time with each of these persons?
 Drag the circles with the names of each person into the box below that indicates how often you spend time with him/her.

Q3: How often do you spend time with each of these persons? Drag the circles with the names of each person into the box that indicates how often you spend time with her/him.

Q4. What language do you speak when talking to each of these persons, Chinese (mandarin, cantonese, etc.), English or other languages?
 Please drag the circles with the names of each person into the box below.

Q4: What language do you speak when talking to each of these persons, Chinese (mandarin, Cantonese, etc.), English or other languages? Please drag the circles with the names of each person into the box below.

Q5. Where is each of these persons from, China, UK, or other countries or regions?

Please drag the circles with the names of each person into the box below.

Q5: Where is each of these persons from, China, UK, or other countries or regions? Please drag the circles with the names of each person into the box below.

Which of these people know each other?

To indicate that two persons know each other, click on the name of the first person and then on the name of the second person. This will create a line between the two.

Please create lines between all persons who know each other. Click "Next" when you are done.

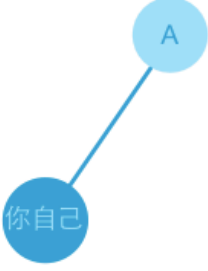
Q6: Which of these people know each other? To indicate that two persons know each other, click on the name of the first person and then on the name of the second person. This will create a line between the two. Please create lines between all persons who know each other. Click 'next' when you are done.

Chinese version

1. 请列举出5-10个你在 [] 留学期间最常在一起的朋友，在下面的方框中输入你朋友的名字并点击“添加”。你可以使用朋友的首字母或者小名，但是请确保你在后面的问题中，可以辨认你使用的名字。例如，朋友的名字叫李小鹏和Sam Williams，则可以在下面“姓名”框中输入“鹏”和“S.J”，并点击“添加”。完成后请点击“下一题”。

姓名

添加

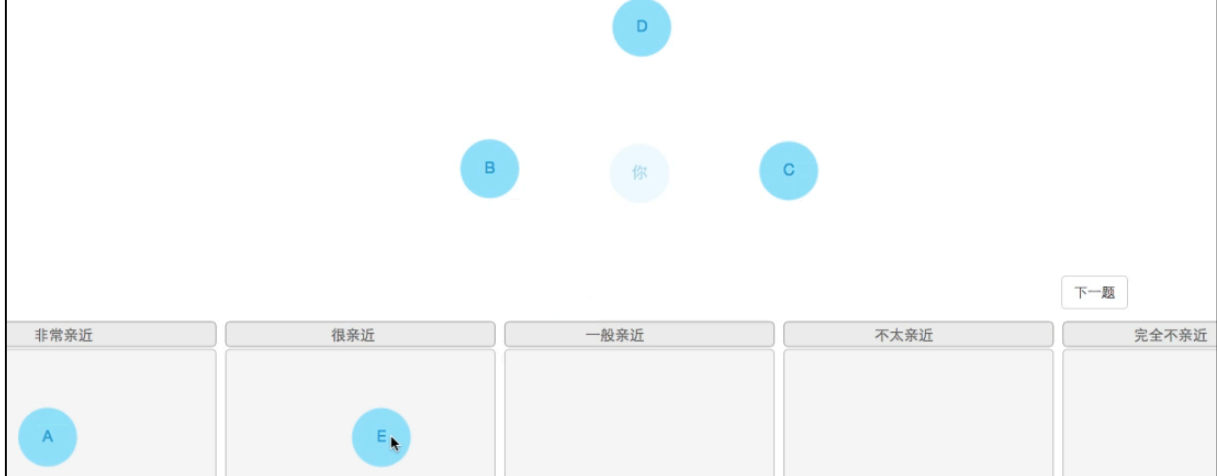


下一题

Q1: 请列举出 5-10 个你在 XXXX 大学留学期间最常在一起的朋友，在下面的方框中输入你朋友的名字并点击“添加”。你可以使用朋友的首字母或者小名，但是请确保你在后面的问题中，可以辨认你使用的名字。例如，朋友的名字叫李小鹏和 Sam Williams，则可以在下面“姓名”框中输入“鹏”和“S.J”，并点击“添加”。完成后请点击“下一题”。

2. 你与每一个朋友的关系有多亲近？

下面有五个表示关系亲近度的灰色方框，请把代表你朋友的圆圈用鼠标拖拽到相应的方框中，以表示你们的关系亲近度。（请准确地将圆圈放入框中，避免放在方框边缘或间隙处。）



下一题

非常亲近	很亲近	一般亲近	不太亲近	完全不亲近
A	E			

Q2: 你与每一个朋友的关系有多亲近？下面有五个表示关系亲近度的灰色方框，请把代表你朋友的圆圈用鼠标拖拽到相应的方框中，以表示你们的关系亲近度。（请准确地将圆圈放入框中，避免放在方框边缘或间隙处。）

3. 你与每一个朋友见面有多频繁?

下面有五个表示见面频率的灰色方框，请把代表你的朋友用鼠标拖拽到相应的方框中，以表示你们见面的频率。（请准确地将圆圈放入框内，避免放在方框边缘或间隙处。）

Q3: 你与每一个朋友见面有多频繁？下面有五个表示见面频率的灰色方框，请把代表你的朋友用鼠标拖拽到相应的方框中，以表示你们见面的频率。（请准确地将圆圈放入框内，避免放在方框边缘或间隙处。）

4. 你和每一个朋友交流的时候，你们使用哪种语言：中文（包括普通话，广东话等），英文或其他语言？

下面有三个表示语言种类的灰色方框，请把代表你朋友的圆圈用鼠标拖拽到相应的方框中，以表示你们交流时所使用的语言。（请准确地将圆圈放入框中，避免放在方框边缘或间隙处。）

Q4: 你和每一个朋友交流的时候，你们使用哪种语言：中文（包括普通话，广东话等），英文或者其他语言。下面有三个表示语言种类的灰色方框，请把代表你朋友的圆圈用鼠标拖拽到相应的方框中，以表示你们交流时所使用的语言。（请准确地将圆圈放入框中，避免放在方框边缘或间隙处）

5. 你的每一个朋友来自哪个国家？中国、英国还是其他国家？

下面有三个表示国家或地区的灰色方框，请把代表你的朋友用鼠标拖拽到相应的方框中，以表示其来自哪里。（请准确地将圆圈放入框内，避免放在方框边缘或间隙处。）

Q5: 你的每一个朋友来自哪个国家？中国、英国还是其他国家？下面有三个表示国家或地区的灰色方框，请把代表你的朋友用鼠标拖拽到相应的方框中，以表示其来自哪里。（请准确地将圆圈放入框中，避免放在方框边缘或间隙处）

6. 你的每一个朋友都相互认识吗？

你可以通过左键单击一个朋友的圆圈，然后再用左键单击另外一个朋友的圆圈，这样就可以在两个圆圈之间产生一条连线，代表他们相互认识。请将所有相互认识的朋友之间进行连线。如果你不小心连错了线，可以右键单击取消连线。确认完成之后，请点击“继续”。

Q6: 你的每一个朋友都相互认识吗？你可以通过左键单击一个朋友的圆圈，然后再用左键单击另外一个朋友的圆圈，这样就可以在两个圆圈之间产生一条连线，代表他们相互认识。请将所有相互认识的朋友之间进行连线。如果你不小心聊错了线，可以右键单击取消连线，确认完成之后，请点击“继续”。

Appendix C: the can-do statements questionnaire (English & Chinese versions)

Part II: English Oral Proficiency Self-assessment (English version)

Please read the following the instructions before taking the survey.

There are 27 statements, each creating a scenario asking you to rate your ability according to two different time periods. ‘Then’ indicates your ability when you first moved to your university and started your study abroad programme. ‘Now’ indicates your ability when you are taking this questionnaire. Please rate your abilities from five scales: ‘I can do this very easily’, ‘I can do this easily’, ‘I can do this with some difficulty’, ‘I can do this with great difficulty’, ‘I cannot do this at all’.

For example : I CAN hold a decent formal hall conversation.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

If you found the above scenario very difficult for you when you first came to XXXX university, you choose “I can do this with great difficulty”. If you find it easy now, you choose “I can do this easily”.

This is not a test and there are no 'right' or 'wrong' answers, so please give your responses sincerely. Thank you very much for your time and support!

1. I can participate in conversations about familiar topics that go beyond my everyday life.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. I can talk in an organized way and with some detail about events and experiences in various time frames.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. I can describe people, places, and things in an organized way and with some detail.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. I can handle a familiar situation with an unexpected complication.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. I can express myself fully not only on familiar topics but also on some concrete social, academic, and professional topics.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. I can talk in detail and in an organized way about events and experiences in various time frames.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. I can confidently handle routine situations with an unexpected complication.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. I can share my point of view in discussions on some complex issues.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. I can express myself freely and spontaneously, and for the most part accurately, on concrete topics and on most complex issues.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. I can usually support my opinion and develop hypotheses on topics of particular interest or personal expertise.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. I can communicate with ease, accuracy, and fluency.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. I can participate fully and effectively in discussions on a variety of topics in formal and informal settings.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. I can discuss at length complex issues by structuring arguments and developing hypotheses.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. I can communicate reflectively on a wide range of global issues and highly abstract concepts in a culturally sophisticated manner.

	I can do this very easily	I can do this easily	I can do this with some difficulty	I can do this with great difficulty	I cannot do this at all
Then	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Now	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please provide some information about your study at XXX University.

1. Your programme : Undergraduate Masters Doctorate Postdoc
2. How long have you been doing your degree : _____
3. The research is going to conduct follow-interviews for further investigates. If you would love to participate in the interview, please kindly leave your email address: _____ (your contact detail won't be disclosed under any circumstances).
4. If you would like to know about the research findings, please kindly leave your email address : _____ (your contact detail won't be disclosed under any circumstances)

Thank you very much for your support and help. All the best wishes for your work and study

第二部分：英语口语能力自我评价 (Chinese version)

以下有 14 个以“我能够”为主体的句子，请你根据每个句子中的场景来评价自己在两个不同时期的英语口语水平。“当时”代表你刚来到 XXXX 大学开始你的留学生活时，对自己英语口语水平的评价；“现在”代表你填问卷的此刻，对自己英语口语水平的评价。请用以下五个等级来评价你两个时期的英语口语水平：“很容易”，“容易”，“有一点困难”，“很困难”以及“完全无法做到”。该部分没有“正确”或“错误”的答案，请根据你的实际情况作答。非常感谢你的支持。

例子：我能够在吃正餐时，谈吐得体。

	很容易	容易	有一点困难	很困难	完全无法做到
当时	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
现在	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

如果刚来到 XXXX 大学时，你认为以上情景对你来说很困难，请在“当时”一栏选择“很困难”；如果现在你认为以上情景对你来说很容易，请在“现在”一栏选择“很容易”。

15. 我能够谈论个人日常生活以外的熟悉话题（例如国内外时政新闻等）。

	很容易	容易	有一点困难	很困难	完全无法做到
当时	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
现在	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. 我能够运用各种时态谈论事件或经历，在谈论中有条理性，并带有一定细节。

	很容易	容易	有一点困难	很困难	完全无法做到
当时	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
现在	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. 我能够有条理地描述人物、地点和事物，并在描述过程中带有一定细节。

	很容易	容易	有一点困难	很困难	完全无法做到
当时	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
现在	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. 我能够在熟悉的场景下，对意料之外的复杂情况做出应对。（例如更改旅途行程，解释上课迟到原因等）

	很容易	容易	有一点困难	很困难	完全无法做到
当时	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
现在	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. 除了熟悉的话题外，对一些具体的社交、学术和专业相关的话题，我也能充分表达自己的观点。

	很容易	容易	有一点困难	很困难	完全无法做到
当时	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
现在	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. 我能够运用各种时态，详细并且有条理地谈论事件或经历。

	很容易	容易	有一点困难	很困难	完全无法做到
当时	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
现在	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. 我能够自信地应对日常生活中意料之外的复杂情况（例如退还购买商品，人际交往中的误会，解释病状等）。

	很容易	容易	有一点困难	很困难	完全无法做到
22. 我当时能够参与一些复杂问题的讨论，并分享我的观点。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. 我现在能够参与一些复杂问题的讨论，并分享我的观点。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. 在讨论具体话题和大部分复杂的问题时，我能够自如地表达自己的观点，并且保证大部分语言内容的准确。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. 我现在在讨论具体话题和大部分复杂的问题时，我能够自如地表达自己的观点，并且保证大部分语言内容的准确。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. 我能够在讨论个人感兴趣或包含专业知识的话题时，支撑自己的观点并提出假设。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. 我现在能够在讨论个人感兴趣或包含专业知识的话题时，支撑自己的观点并提出假设。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. 我能够轻松、准确并且流畅地和他人交流。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. 我现在能够轻松、准确并且流畅地和他人交流。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. 我能够充分且有效地讨论一系列正式和非正式的话题。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. 我现在能够充分且有效地讨论一系列正式和非正式的话题。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. 我能够通过构建论点和提出假设来详细讨论复杂问题。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. 我现在能够通过构建论点和提出假设来详细讨论复杂问题。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. 我能够带着深刻的文化意识，对各种各样的全球性问题和高度抽象的概念进行思辨交流。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. 我现在能够带着深刻的文化意识，对各种各样的全球性问题和高度抽象的概念进行思辨交流。	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

最后，请你再补充一些留学相关信息，以便研究人员更好地进行调研。

5. 在 XXXX 大学留学期间的项目：本科生 硕士 博士生 博士后

6. 在 XXXX 大学留学时长：_____（请直接填写）

7. 本研究还将进行后期访谈，如若你愿意成为访谈者，谈一谈你的个人关系网络以及英语口语能力方面的问题，请留下你的邮箱地址，以便后期联系：

_____。

8. 如若你愿意获取本研究的结果，请留下你的邮箱地址：

_____。

注：你的联系方式仅会用于研究目的，不会以任何方式被泄露。

最后，由衷感谢你对本研究的支持与帮助，祝你生活愉快，学业顺利！

Appendix D: consent form for semi-structured interview (English & Chinese versions)

Letter of Consent for Interview

Dear Participants,

You are invited to take part in a second language research conducted by XXXX, an MPhil student at the faculty of education. Please read this letter carefully and ask any questions you may have before taking part in the study.

The purpose of this study is to investigate Chinese students' social networks and their English language learning during study abroad at XXXX university. If you agree to participate in this study, you will be presented with a visualized of your personal network generated from your responses from the previous online survey and you will be asked to answer questions in an interview regarding your network and English oral proficiency gains. The interview will take about 20-30 minutes of your time. This is not a test so there are no "right" or "wrong" answers. The responses of the interview will be used for research purpose only so please give your answer sincerely according to your own study abroad experience at XXXX university.

Five participants will be drawn and will receive a Sainsbury gift card for taking part. And you are welcome to discuss network development and second language learning issues with the researcher. All the information that is collected from this research will be kept anonymous and confidential and will not be disclosed under any circumstances. Taking part in this study is completely voluntary. If you decide to take part, you are free to withdraw at any time. If you are interested in the findings of this study, please leave your email address at the end of the interview.

This study has been given permission to be conducted by the faculty of education, XXXX university. If you have any questions regarding this study, please feel free to email the researcher at XXXX or call her at XXXX.

If you agree to participate, please sign you name and the data and take part in the interview. Thank you very much for your time and support!

XXXX

Faculty of Education, XXXX university

Signature of participant:

Signature of the researcher:

Date:

Date:

访谈同意书 (Chinese version)

同学，你好

诚挚邀请你参与一项关于中国留学生第二语言学习的研究。我是 XXX，是 XXXX 大学教育学院的研究生，这项研究是我的毕业论文课题。在你决定参与本研究之前，请仔细阅读同意书，如有任何问题，请与我联系。

本次研究的目的在于调查 XXXX 大学中国留学生的人际关系网以及英语学习情况。如果你同意参加本研究，我会给予你在之前的网络调查问卷上的回答给你呈现你的视觉化的个人关系网，然后你需要在这个网络图的基础上在访谈中回答一系列关于个人关系网与英语口语提高的问题。访谈大概需要 20-30 分钟。本次访谈并不是测试，没有“正确”或“错误”答案。你的回答将用于研究目的，所以请你依据你个人在 XXXX 大学留学期间的实际情况作答。

本研究将会随机抽取五名参与者，赠与 Sainsbury 礼物卡。并且，我也很乐意与你讨论二语学习的各种问题。你所提供的任何信息都将受到严格保密且只用于研究用途，并且在研究报告中绝对不会提及你的姓名。参与本次研究完全基于自愿，如果你决定参加，你仍可随时退出。如果你希望得到本次研究的结果，请在访谈最后留下你的邮箱地址。

本研究已得到 XXXX 大学教育学院的批准。如果你有任何对本研究有任何问题，请发送邮件至 XXXX 或拨打 XXXX.

XXXX
教育学院，XXXX 大学

参与者签名：

研究者签名：

日期：

日期：

Appendix E: semi-structured interview protocol (English & Chinese versions)

Semi-structured Interview Questions (Beta)

I. Briefing about myself, the research and the potential risks of taking part in the interview.

II. Warm-up session:

1. Please talk about your personal network during study abroad at your university. Who do you spend most of your time with?
 - How strong are your relationships with your friends?
 - How frequently do you meet your friends?
 - What languages do you speak with your friends and which country(ies) do your friends come from?
 - Do your friends know each other?
2. Have you developed your oral proficiency since you started your study abroad programme at this university? How much do you think you have developed your English oral skills since you started your programme at this university? In what ways?

(Present visualized representation of personal network)

III. Questions regarding the relationship between network and oral proficiency gains (OPG):

1. Does your personal network affect your OPG? If yes, in what ways?
2. Does the size of your personal network affect your OPG? If yes, in what ways?
3. Does the frequency of your personal network affect your OPG? If yes, in what ways?
4. Does the strength of your personal network affect your OPG? If yes, in what ways?
5. Does the density of your personal network affect your OPG? If yes, in what ways?
6. Does the similarity of your personal network affect your OPG? If yes, in what ways?
7. What kind of network structure could be potentially beneficial for OPG? You can discuss from the size, strength, frequency, density and similarity of your network.
8. In order to develop such a network, is there anything that Chinese students, non-Chinese students and the institution could do to help facilitate such network structure development?
9. Do you have anything to add or comment on?

半开放性访谈问题 (Chinese version)

一、自我介绍, 访谈介绍以及研究风险阐述

二、热身活动

1. 请谈谈你在留学阶段的人际关系网。你一般和谁相处？
 - 你和朋友的关系亲密度如何？
 - 你和朋友见面的频率有多高？
 - 你和朋友交流时用什么语言, 你的朋友来自哪个国家？
 - 你的朋友们相互认识吗？
2. 请谈谈你在留学期间的口语能力提高程度。你认为你在留学期间口语能力有提高吗？提高了多少？体现在哪些方面？

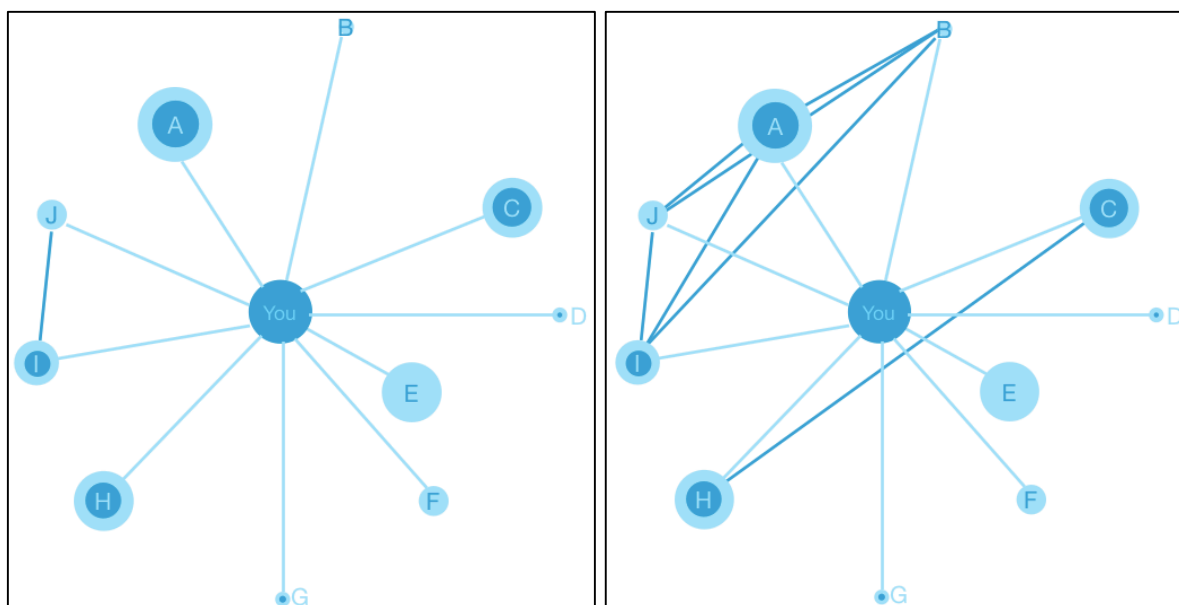
(展示之前的人际关系网络图)

三、关于人际关系网以及口语能力提升关系的问题：

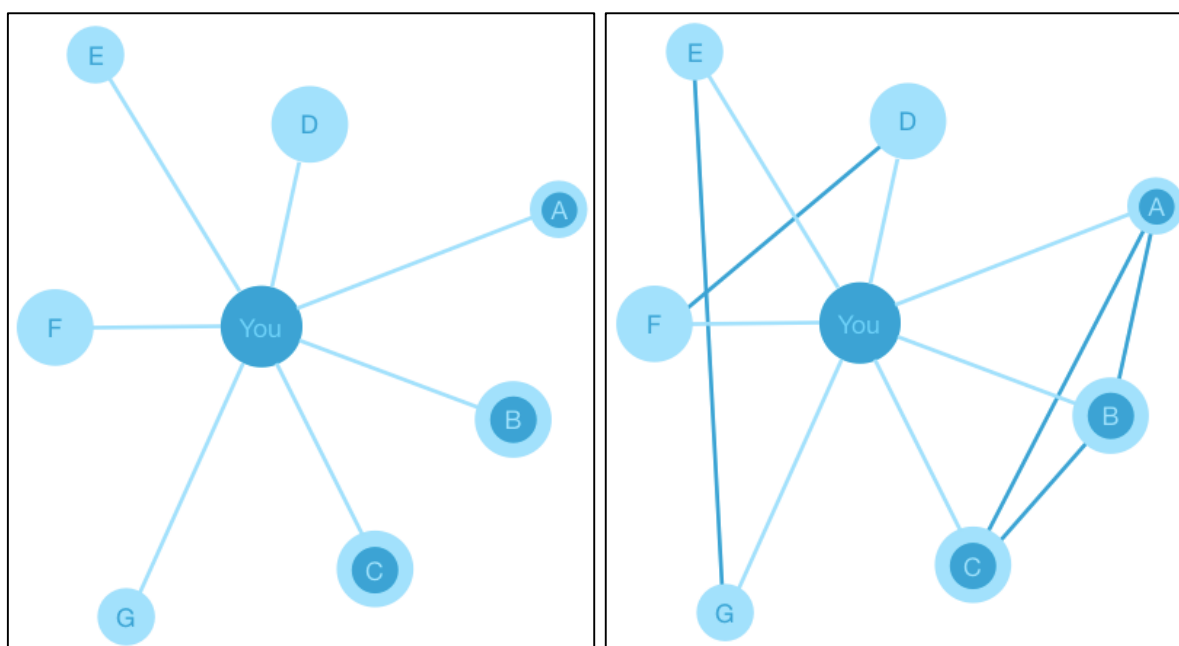
1. 请谈谈你的人际关系网是否有影响到你在留学期间英语口语能力的提升？是如何影响的？他们之间是一种什么样的关系？这种影响体现在哪些方面呢？
2. 你的人际关系网的大小是否影响你的口语能力提升？如果是，体现在哪些方面？
3. 你的人际关系网的频率是否影响你的口语能力提升？如果是，体现在哪些方面？
4. 你的人际关系网的亲密度是否影响你的口语能力提升？如果是，体现在哪些方面？
5. 你的人际关系网的密度是否影响你的口语能力提升？如果是，体现在哪些方面？
6. 你的人际关系网的相似度是否影响你的口语能力提升？如果是，体现在哪些方面？
7. 你认为什么样的人际关系网络对于英语口语能力的提高会有比较有帮助你？可以从朋友的人数、亲密度、见面频率、使用的语言和国别来谈。
8. 就刚刚你提及的人认为对于 OPG 可能会有较好影响的人际关系网络，你认为有没有可以从中国学生、非中国人学生群体以及学校的角度来帮助中国留学生，来发展这样的人际关系网络呢？
9. 有没有其他任何问题？有没有想要补充的东

Appendix F: visualized network representations of interview participants

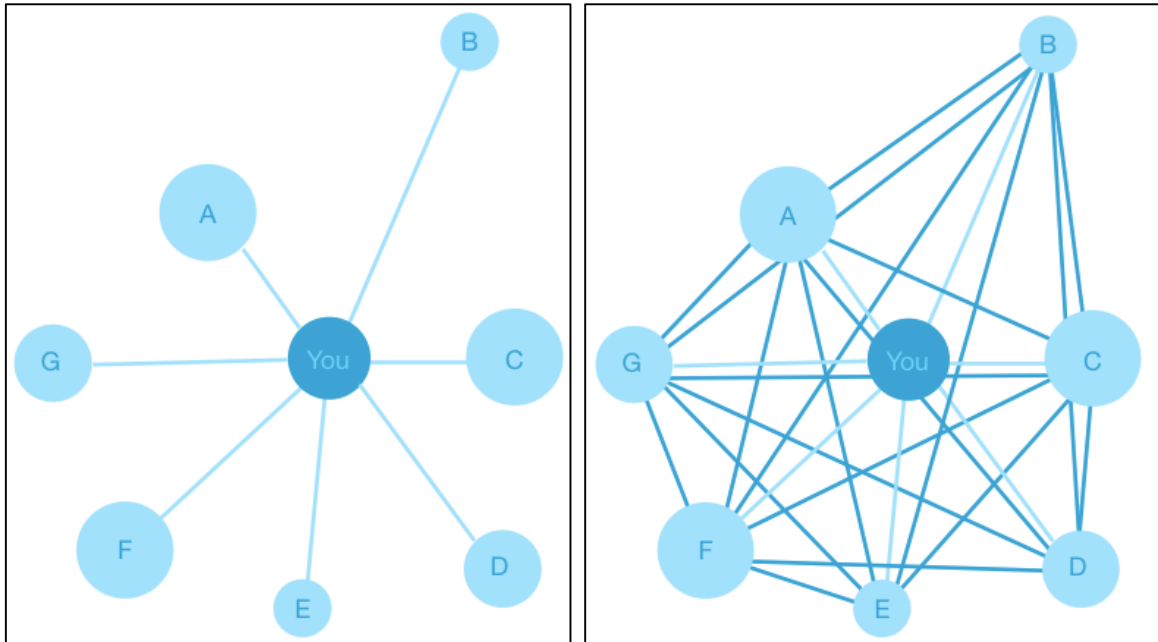
Hua's visualized network:



Yi's visualized network:



Ming's visualized network:



Xing's visualized network:

