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Internationalization at Home and Undergraduate Students' International Competence: A Case Study in China

Thesis submitted in partial fulfilment of the requirements for the Degree of
Master of Science (M.Sc.) in Education, with a special emphasis on Higher
Education.

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Abstract

As the participation of higher education and international mobility has been increasing during the recent 20 years, it is important for China, a developing country that has the largest population and the world's second-largest economy, to reform the higher education system to train more talents. International Competence (IC) is the ability of talents to learn, work with people effectively in an international and multicultural environment, which has been developing as a hot field for the higher education system, especially in student training. Internationalization at Home (IaH) is a reformation that scholars have argued as having many advantages, and there have been several practices and research about the topic. However, there is a lack of research aiming to explore the experiences of IaH in a Chinese higher education context, and investigate the impacts of internationalized training on students' IC.

This study explores the IaH and undergraduate students' IC training in two schools at a Chinese university. This exploratory study collected and examined the experiences and views based on both qualitative and quantitative methods. In total, 345 questionnaires were collected and five interviews were held, supplemented by secondary data analysis of two schools at a case university in China. While two schools are in the same discipline, one school implemented internationalization at home strategies (the "internationalized school") and the other follows the traditional education pathway (the "traditional school").

Findings of the research revealed that students in the internationalized school demonstrate a generally higher level of IC than those in the traditional school. Besides, English is considered as an important part of IC and international courses, activities, internationalized teachers influence IC training.

Building on findings and discussions, this research contributes to the conceptual discussions on students' IC, and has practical implications regarding the influence of COVID on IaH and the training of students' IC.

Table of Contents

Abstract	2
Table of Contents	3
List of Tables	5
List of Terms	6
Chapter 1. Introduction	7
1.1 The expansion and internationalization of Chinese higher education	8
1.2 Student training as a policy focus in Chinese higher education.....	9
Chapter 2. Literature Review	15
2.1 Internationalization of higher education	15
2.3 Students' IC	20
2.4 The training of students in Chinese higher education	24
2.5 Gaps in the existing literature	27
Chapter 3. Methodology	28
3.1 Research questions	28
3.2 Research design.....	28
3.3 Data collection.....	33
3.5 Reflection on researcher's positionality	35
3.6 Methodological limitation.....	36
3.7 Ethical considerations	36
Chapter 4 Findings	38
4.1 Findings from the questionnaires about students' IC	38
4.2 Findings from qualitative interviews about students' IC	52
Chapter 5 Discussions	57
5.1 Training of students' IC: comparisons and influential factors	57
5.2 The Relationship of IC and English competence	60
5.3 The practice of IaH and IC training, and the influence of COVID on the two processes	62
Chapter 6 Conclusion	64
6.1 Summary of findings	64
6.2 Limitations of the study	66
6.3 Suggestions for further research.....	67
References	68
Appendixes	83

List of Tables

Table 1: Coding of questionnaires	38
Table 2: The dimensions, factors, and meaning of international competence	40
Table 3: Scale option assignment	41
Table 4: Survey sample distribution	41
Table 5: Scale reliability	41
Table 6: The composition matrix after rotation	42
Table 7: The scores of the international competence and its 7 factors	43
Table 8: The differences in the international competence and its 7 factors of international competence between the different years of study	44
Table 9: The differences in the international competence and its 7 factors of international competence between different schools	45
Table 10: The differences in the international competence and its 7 factors between different grades and schools	46
Table 11: The deleted questions	48
Table 12: The relation of the questions and the factors	49
Table 13: The information of variables in the regression model	50
Table 14: Coefficients	50

List of Terms

Abbreviations	Full Terms
COVID	Corona Virus Disease
ERASMUS	European Community Action Scheme for the Mobility of University Students
EU	European Union
GDP	Gross Domestic Product
IaH	Internationalization at Home
IC	International Competence
MOE	Ministry of Education of the People's Republic of China
MOST	Ministry of Science and Technology of the People's Republic of China
OECD	Organization for Economic Co-operation and Development
Ph.D.	Doctor of Philosophy
UNESCO	United Nations Educational, Scientific and Cultural Organization
WTO	World Trade Organization

Chapter 1. Introduction

The world has witnessed a huge expansion of higher education in the past 20-30 years. According to World Bank (2020), the higher education enrollment rates are beyond 15 percent in more than 112 countries (regions) in the world. Marginson and colleagues noted that:

"More than a third of the world's tertiary education systems enroll more than 50 percent of young people after they leave secondary school, with roughly a third or so of the age cohort entering degree-level programs. The number of these 50 percent plus systems is growing" (Cantwell, Marginson & Smolentseva, 2018, p.2).

One main reason for this phenomenon is that the investment in human capital has been proved to have a positive influence on innovation and economy (Becker, 1962) and that academic credentials have been seen as the signals of graduates' productivity (Spence, 1973). Scholars also suggested that higher education could contribute to the world's economic, social, and cultural development (Arbo & Benneworth, 2007) and that universities have a traditional function of talent training and the capability to create substantial positive impacts on economic development (Armstrong & Taylor, 2000). Consequently, many countries have been investing large amounts of resources and implement policies to facilitate the development of higher education. For example, in 2015, the USA pays 30,003 US dollars for every citizen pursuing tertiary education, which accounts for 2.58 percent of its GDP (OECD, 2020).

Globalization in economic, technical, and social dimensions has also been accelerating the expansion of higher education. Researchers claimed that "the post-war shift to a liberal, rationalist, and developmental model of society" is evident, "a great deal of isomorphism around the world" is functioning (Schofer & Meyer, 2005, p. 903), and that many global authorities, such as OECD, are making effort to support students to participate in higher education (Marginson, 2016). As noted by Cantwell, Marginson,

and Smolentseva (2018), the combination of massification, marketization, and globalization all contribute to the expansion:

As a result, the interactions across borders and the mobility of academics and students have been growing along with the expansion of higher education. Take Europe as an example, projects such as ERASMUS and Bologna Process have been implemented to improve the cooperation and interaction in training and youth careers (Pépin, 2006) as well as introduce system-level changes (Papatsiba, 2006). According to UNESCO (2018), the mobility of international students enjoyed fast growth in recent years. The total number of mobile students was around 5.57 million in 2018, while the figure was only about 4.50 million in 2014.

1.1 The expansion and internationalization of Chinese higher education

China has also joined the expansion of higher education, as a country with the world's largest population and the world's second-largest economy. Policies such as “Implementation Plan for the Accelerating Promotion of Education Modernization (2018-2022)” (GOV, 2019), and “Modernization of Chinese Education 2035” (EDU, 2019) have been formulated aiming to advance the higher education system in China in the coming years. These policies have led to almost the greatest growth in the participation of higher education in the world. According to the Chinese Ministry of Education, China is training the largest number of students in higher education, and the figure is growing fast. In 2020, around 9 million students graduated from universities or institutions, which is about 10 times the figure in 1995 (MOE, 2020).

Against the backdrop of globalization, China is also interacting and facilitating international mobility in recent years, through both importing and exporting academics and students on a global level.

Based on the annual summary of 2019 organized by the Department of Foreign Expert Services in the Chinese Ministry of Science and Technology, about 260,000 academics, including Noble Prize winners, professors, lecturers who visited China in 2018 and

2019 found opportunities to collaborate with Chinese universities or institutions in teaching and research. The academics were mainly from developed countries such as the United States, the United Kingdom, France, Germany, Japan, and so on. In terms of students, in 2017, 489,200 foreign students were studying in Chinese universities or institutions, 64.85 percent of them came from One Belt and One Road countries (Mo and Liu, 2020). The Belt and Road Initiative is first introduced by President Xi in 2013, aiming to cooperate with One Belt and One Road countries in politics, economy, and culture (PEOPLE, 2018). China is the most favored country for study in Asia (MOE, 2019).

China has also made efforts to export Chinese knowledge, as represented by the Confucius Institutes. According to the data from Confucius Institute Headquarters (Hanban, 2020), 541 Confucius Institutes and 1,170 Confucius classrooms have been set up in 162 countries and regions. It is committed to meet the needs of people from all the countries (regions) to learn Chinese languages, to improve the understanding of Chinese languages and culture, and to develop more chances to set up cooperation between China and other countries. Now, over 25 million people outside China are learning Chinese and over 70 countries have adopted Chinese into their national educational system (MOE, 2020). When it comes to students going abroad, the first Chinese student went abroad to the USA in 1847, among the first group of Chinese students sent by the Qing government and aged 10 to 16 years old (Liu, 2007). Since then, the number of Chinese students abroad has grown drastically, especially in recent years. Each year, around 600,000 Chinese students are applying for studies abroad (including state support and self-funded application) this is according to Vice Foreign Minister Ma Zhaoxu (MOE, 2020). Chinese Ministry of Education reported that the total number of Chinese students studying abroad is about 1.6 million in 2020, but the number was only 544,500 in 2016; this shows an increase of 193 percent (MOE, 2020).

1.2 Student training as a policy focus in Chinese higher education

The expansion of higher education and the growth of interconnection across borders,

especially the increase of international student mobility have also led to a concern that how could the higher education system function well, especially for student training in China. There are two major problems related to student training patterns in China.

Firstly, it is the aim of student training which claimed by scholars that have lost the concern of human beings. For example, the quality of virtue, intelligence, body, and mind is divided in the process of teaching and training (Pan, 2009). Secondly, the standard of evaluation is not reasonable. There are lots of indexes and the standard is very similar to the criterion of industry, which only care about profits (Pan, 2009).

Under the context of globalization and internationalization, China has already found the challenges and has been reforming its higher education system with an emphasis on students' training. In 2016, the Ministry of Education implemented "One Belt and One Road Education Action" to facilitate the "One Belt and One Road" strategy. The Education Action pointed out the aim to strengthen the training of international talents, to achieve the mutual integration of trade, policy, capital, and facilities among the countries along the routes (MOE, 2016). Su (2018) mentioned that the cultivation of international talents is the important content and support of the talent power strategy. In 2019, the central government formulated the "Implementation Plan for the Accelerating Promotion of Education Modernization (2018-2022)" (GOV, 2019), in which the government set "accelerating the training of high-level international talents" as the primary goal of the task of construction of "One Belt and One Road Education Action". Furthermore, in the same year, the central government published "Modernization of Chinese Education 2035" (EDU, 2019) to set the vision that in 2035, China could enhance the quality of student training, especially the students needing an internationalized horizon. In sum, the government has made a great effort to improve the quality of student training and to foster students' internationalized skills.

1.3 Internationalization at home in Chinese higher education

In recent years, the internationalization of higher education has been under debate and has been seen as a novel way to develop the main function of universities such as

knowledge innovation and student training. The mobility of international students is one pivotal component of the internationalization of higher education.

There is a large body of literature on the four waves of internationalization: definition of the field, management of internationalization, student needs and support structures, and the transnational context of internationalization (Perraton, 2017). However, these discussions mainly focused on the internationalization in the EU and America, based on western culture context, and focused on cross-border movements (Perraton, 2017). Limited research has concentrated on internationalization at home, and even fewer paid attention to the training of students.

Internationalization could be divided into two streams, namely internationalization at home and abroad (Knight, 2004). Scholars have pointed out many pitfalls of the traditional way of internationalization, which mainly focused on "internationalization abroad". Firstly, it pays great attention to the mobility across borders, leading to internationalization becomes an administrative task, rather than an academic activity. Even worse, some institutions put the incidental before the fundamental, specifically, they center internationalization on the mobility of students and teachers across borders and set the number of mobility as the criterion of the level of internationalization (Zhang & Liu, 2017). Secondly, there is a lack of strong evidence to support that mobility could lead to the enhancement of skills. As reported by Soria and Troisi (2013), the "global, international, and intercultural competencies" of students who have studied abroad are not more apparent than the students who have processed internationalization at home. Thirdly, the traditional out-going internationalization only favors the minority of people. As mentioned above, about 600,000 students are going abroad from China every year, but they only account for 6.7 percent of the 9 million students in total. The ratio is similar in the globe, as Nilsson (2003) found, only about 10 percent of students could enjoy education abroad.

The inequality issues caused by a focus on mobility are evident across all levels. At the national level, a large number of academic talents are moving from the developing countries to North America and Europe as a result of mobility caused by

internationalization, resulting in a greater gap in aspects such as innovation and technology between countries (Altbach, 2007). At the institutional level, "new kinds and degrees of mobility are now a significant factor in sustaining unequal access to and experience of higher education for different student groups" (Sellar & Gale, 2011). At the individual level, "the Matthew Effect" is influential: students who can move across borders to a great extent have enjoyed better economic and educational resources, or have a strong intellectual capital. The economically and socially "poor" students suffer from a widened gap with other students, as they lack an international perspective and the cultivation of cross-cultural ability (Zhang & Liu, 2017).

To address these problems, especially to ensure the majority of students have opportunities to get internationalized training to enhance their skills for the future, the concept of "internationalization at home" was introduced. The concept was first introduced by Bengt Nilsson (2003), which evolved and was materialized afterward. "Internationalization at home" is in contrast to the "internationalization abroad" idea (Knight, 2004), and refers to the intercultural and international dimension in the teaching-learning process, the extracurricular activities, and the relationships with local cultural and ethnic community groups. The latest definition is as follows:

“Internationalization at home is the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments” (Beelen and Jones, 2015, p. 69).

China has made five types of attempts to internationalize its higher education at home, including Sino-foreign cooperative education projects, Sino-foreign cooperative education universities, internationalized campus, internationalized colleges, and implementation of internationalization of colleges and universities. The following section summarizes each type of activity:

(1) Sino-foreign cooperative education projects

Some universities adopt 2+2, 3+1, 4+1, and other programs to carry out cooperative teaching and scientific research with well-known foreign universities. In the later stage

of learning, students can be exchanged to cooperative universities for learning after acquiring the language. By June 2020, China has had 2,332 schools and programs cooperating with universities abroad, of which 1,230 are at or above the undergraduate level (MOE, 2020).

(2) Sino-foreign cooperative education universities

It is very similar to the projects mentioned above, the students have the chance to enjoy an internationalized environment at home and the opportunity to go abroad in the schooling period. China now has 12 Sino-foreign cooperative education universities with independent legal person status (Xi'an Jiaotong-Liverpool University) (MOE, 2020).

(3) Internationalized campus

In some provinces such as Zhejiang and Guangdong, the local government and universities are working on internationalized campuses (Zhejiang University and South China University of Technology). It is a branch of a local university but with an internationalized environment, especially in policy (MOE, 2019).

(4) Internationalized colleges

As the representatives of elite universities in China, Peking University and Tsinghua University launched internationalized colleges in their campus in around 2014, which are Yenching Academy of Peking University and Schwarzman Scholars of Tsinghua University respectively (Han, 2017). They both pay attention to the cultivation of leadership of students in an internationalized environment. Recruiting talents who are from world-famous institutions such as Oxford and Cambridge, whose origin is over 40 countries, these two colleges are affording student training center on Chinese studies, which is a remarkable signal of IaH.

(5) Implementation of internationalization of colleges and universities.

In 2014, the Ministry of Education and the Ministry of Science and Technology launched the *Detailed Regulations for the Implementation of Internationalization of*

Colleges and Universities. After 6 years, 16 universities have been reforming their recruitment and management policies, as well as their teaching and research strategies based on this regulation (PKU, 2016). Students at these universities can experience an internationalized environment for study at home.

Since the Sino-foreign projects and universities still need great investment, they are not yet approachable for the majority of students in China. A similar problem lies in the internationalized campus and colleges, which are only at their initial stage. The future of them is blurry. This project thus focuses on the implementation of internationalization of colleges and universities, as it is the most promising direction at the current stage of the internationalization at home approaches in China.

The implementation of such policies has drawn scholarly attention (Liu, 2018). Despite growing research interests on these regulations, few of them focused on the strategies for the training of students, and especially on the international competence of students (Liu & Wu, 2015). A review of the literature revealed only one master's thesis on the topic of IC training of undergraduates under the context of IaH in China (Yang, 2019).

To address the gaps in the existing literature, this dissertation examines the quality of students' IC in the context of internationalization at home, and compares students' IC in a traditional school and an internationalized school at a case study university in China. It draws on both survey results and interviews with students and administrators, to explore and discuss the training of undergraduate students' IC.

The dissertation comprises six chapters. Following the Introduction is the literature review, which discusses the definition of related concepts and the practice and problems of internationalization and internationalization at home. The next chapter presents the methodology, followed by the findings, discussion, and conclusion.

Chapter 2. Literature Review

This chapter reviews relevant literature on internationalization at home and undergraduate students' IC. Since it includes many concepts and practices, and there is a wide range of studies, policies, and websites, the focus will be on the evolution of the four concepts and their practice.

The following four concepts are aligned with the purpose of the study. The first section will introduce the concept of internationalization and its practice, the second section will explore the concept of internationalization at home and its practice, the third and fourth sections will focus on the IC and the training of students in China. The final section will outline the gaps in the existing scholarships.

2.1 Internationalization of higher education

2.1.1 The definition of internationalization

"Globalization" and "internationalization" seem to be very similar at the first sight. Although they are closely related, their meanings differ. On the one hand, globalization refers to the worldwide scale of movement of technology, talents, and knowledge et al. On the other hand, internationalization is centered on the connection or interaction between nations (Knight, 2004).

The definition of internationalization is a continuing argument from different researchers according to their experience and time. Arum and colleagues defined it as "the multiple activities, programs and services that fall within international studies, international educational exchange and technical cooperation" (Arum, Van de Water, & et al., 1992, p. 202). Knight mentioned it as the process of integrating an international dimension into the research, teaching and services function of higher education (Knight 1993), which was once perceived as one of the most commonly recognized and accepted definitions of the concept. Then, a later updated definition was "the process

of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education” (Knight, 2003, p. 2).

As this dissertation is going to discuss the quality of undergraduate training in such a frame, it is important to explain the working definition of internationalization in this project. Based on the existing literature, this dissertation approaches “internationalization” as the process of integrating an international, intercultural dimension into functions of higher education.

2.1.2 The practice of internationalization

Many existing drivers of internationalization, such as social/cultural, political, economic, and academic have already been discussed; Knight (2004) concluded emerging rationales for it, which are national level and institutional level. The former includes human resources development, strategic alliances, commercial trade, nation-building, and social/cultural development. The latter includes international branding and profile, income generation, student and staff development, strategic alliances, knowledge production (Knight, 2004).

The internal and external environments are always impacting internationalization (De Wit, H., & Merckx, 2012). For instance, Choudaha noticed that there are three waves of student mobility from 1999 to 2000, as a result of world situation changes. which was firstly driven by the terrorist attacks of 2001 the students for enhancing research agency, then influenced by the global financial recession and the increase of international student recruitment, finally, it is impacted by the political and economic issues happened in following three regions: China, Europe Union and America (Choudaha, 2017).

2.1.3 Internationalization of Chinese higher education

As mentioned above, the Chinese government is making great efforts to internationalize its higher education and students training, and to train students into suitable constructors

of society. With both importing and exporting talents, teachers, and students, China has been becoming a blooming country in scientific research and technology (Marginson, 2011).

Internationalization is an important process of the reformation of the Chinese higher education system. Firstly, internationalization is the origin of modern higher education in China. For example, Beiyang University, the first modern university set up in 1895 in China was the result of internationalization (Zong & Zhang, 2005). Then, in the early days of the founding of New China, many intercultural and cross-border activities were carried out between the Soviet Union and China (Liu, 2018). After that, Since China entered the World Trade Organization in 2001, and the blooming of rankings of universities, there is a great leap in the cooperation with the world in economy, education, culture, and so on. Mo and Liu (2020, p. 93) concluded that “Chinese higher education internationalization has gone through 4 stages: exploration and development, policy improvement, connotation enhancement, and mode upgrading”. In the future, reformation of higher education in China needs to focus on “identifying the theme of the times, improving relevant policies, creating a high-quality destination for overseas students, developing brand projects and building international cooperation platforms” (Mo & Liu, 2020, p. 93).

2.2 Internationalization at home

2.2.1 The definition of internationalization at home

The debates of the definition of internationalization at home (IaH) started at the end of the 1990s. Bengt Nilsson, as the vice president of Malmö University, introduced the concept in the European Association for International Education (EAIE) held in 1999 (Nilsson, 2003). He pointed out that IaH means that all the issues related to international affairs in the educational field, excluding the movements that happened across borders. The aim is to enhance the capability and qualifications of all students by enabling their international ideas and cross-border cultures during their schooling, to respond to the

needs of an ever-changing globalized world. Then, Bernd Wächter developed the concept as "any internationally related activity except for outbound student and staff mobility" (Crowther, et al., 2000, p. 6). Knight (2006) argued that IaH, as a stream of internationalization, includes activities that develop understanding of global and skills for intercultural communication. Beelen and Leask (2011) stressed that IaH is a set of instruments and activities at home, to develop international and intercultural competences for all students. Recently, the concept was advanced by Jos Beelen and Elspeth Jones as follow:

“Internationalization at home is the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments” (Beelen and Jones, 2015, p. 69).

They also claimed that IaH is related to formal and informal curriculum, aiming at developing "international and intercultural knowledge, skills and attitudes for all students, regardless of whether they also take part in mobility opportunities" (Beelen and Jones, 2015, p. 70). As the concept develops, this dissertation finds out that IaH is more concerned about all students and intercultural abilities, when compared with internationalization abroad.

2.2.2 The practice of internationalization at home

Along with the development of conceptualization, lots of institutions over the world took IaH into practice and have perceived very positive outcomes. Jon (2013) claimed that under a program with interaction with international students, the intercultural competence of the Korean students enhanced and such an experience has created a positive influence on their further educational and positional decision. Soria and Troisi (2013) found out that rather than going abroad, students may gain more positive influence through activities related to IaH, especially in "global, international, and intercultural competencies" (p. 272). Similarly, Custer and Tuominen (2016) researched a virtual activity that connected students in the United States and Japan; they found that

such activity provided students a chance to have a great number of communications related to contemporary societal issues with authenticity. They claimed that:

“(IaH) has the potential to offer important global learning opportunities and intercultural competency development for sociology students who may otherwise lack the means to participate in study abroad” (Custer & Tuominen, 2016, p. 347).

2.2.3 Internationalization at home in the Chinese context

The concept of IaH was introduced to China around 2000 when researchers began to think about the relationship between IaH and internationalization. In a discussion about IaH, Liu (2001) pointed out that when getting access to global higher education, the Chinese higher education system needs to pay attention to protecting its own feature as well as avoiding westernization. Peng (2004) claimed that to some extent, IaH is both the foundation of internationalization. Peng (2004) also believes that IaH can provide the basics of the prosperity of culture, intercultural understanding, and cooperation. Similarly, Liu (2005) argued that by combining IaH and internationalization, Chinese higher education system could make huge progress.

After 2008, the scholarly discussions on the concept transferred to more tangible and practical issues that include student training. Ding (2008) mentioned that IaH focuses on the reformation of curriculum and implementation of extracurricular activities, by doing so and with the help of technology such as the internet, it enables all students to have international experience. Shi and colleagues (2011) claimed that IaH is a novel strategy for cultivating internationally competitive talents. Gu (2011) pointed out that the process of IaH is absorbing the advanced educational concept and changing it into one's own educational tradition. Zhang (2018) held the idea that it is essential and viable for China to internationalize curriculum as a way to IaH. However, there is still a lack of research on empirical cases of IaH in China, and on its impacts on student training.

On the policy level, Chinese government has initiated specific strategies for local Chinese universities to internationalize at home. In total, 16 universities are designated to construct "internationalized colleges" under “*Detailed Regulations for the*

Implementation of Internationalization of Colleges and Universities” (PKU, 2016). Some universities have published reports on the implementation of the regulation, covering internationalization reform as construction of innovation context (research groups and labs), regulation (information system management), recruitment and evaluation of teachers, revolution of curriculum and recruitment of students, and extracurricular activities. For example, Beihang University reported their internationalization reformation and its influence on the IC of students (Fang & Liu, 2020). Tianjin University published their report on the internationalization work on regulation, student training, teacher recruitment, research in recent years (Wu, et al., 2017; Liu, 2018; Yao, et al., 2019), and Zhengzhou University reported their work result on such reformation in 2018 (Liu, 2018).

2.3 Students’ IC

2.3.1 Defining IC

The concept of IC has been evolving since its first introduction. Lambert (1993) worked on the concept of “international competency” from a pedagogical perspective and claimed that this concept includes five elements, which are knowledge, empathy, support, foreign language ability, strength, and work performance. Park (1997) claimed that IC is the ability to analyze the global in dimensions, namely, having globalized consciousness and emotion. In 1998, the United States released the report themed “Teaching for International Competence”, in which the researchers pointed out that international competency is a basic knowledge of internationalization and sensitivity to cultural exchange. In the report, the authors also called for strengthening the training of students’ “global competence” (ACE, 1998). Researchers also mentioned that this concept could be perceived as keeping open-minded while actively understanding the cultural norms and expectations from others, working with others effectively under the intercultural context (Hunter, et al., 2006). Researchers added that IC mainly includes the knowledge, skills, practical ability to understand the world, and the peaceful and respectful attitude towards different cultures (Reimers & Fernando M, 2009). In a report by OECD (2016), the concept includes three competences: an ability to analyze global

problems in multiple dimensions judgmentally, an ability of autognosis and understanding of others, and most importantly, an ability to interact with others under the intercultural context.

Studies related to the concept of IC started late in China. Jiang and Wang (2010) believe that international talents are those who have a strong ability to use foreign languages as well as mother tongue, have a wide range of knowledge of Chinese culture and other countries' cultures, and are able to successfully carry out cross-cultural communication and international cooperation. In a paper published in the same year, Liu (2010) claims that international talents should have a broad international vision, strong innovation consciousness, cross-cultural communication ability, independent international activity ability, ability to use and process information, and psychological quality. Besides, Xie (2012) summed up international talents as high-level talents with international consciousness and mind, world-class knowledge structure, vision and ability to reach international standards, and good at seizing opportunities and striving for the initiative in global competition. Most recently, in the global strategy of Tsinghua University, the concept of IC is defined as the ability to learn, work and relate to people effectively in an international and multicultural environment” and mentioned the importance of training students to equip them with this ability (THU, 2021).

In sum, the existing definitions of IC have all mentioned the knowledge, cognition, practice, attitude, and values when referring to IC.

2.3.2 The mode of IC training

The mode of IC training is evolving since the 1960s. As discussed above, the IC training mainly includes five elements: international training, international curriculum setting, international academic research, overseas study of teachers and students, and support and guarantee for internationalization. Ellingboe and Mestenhauser (1998) further summarized the training model of IC as six elements: university leadership, international participation of scholars, international courses, study abroad programs, participation of foreign scholars, and international extracurricular activities. In the early

1990s, Stephen Arum and Jack Van De Water formally put forward the theory of internationalization of higher education, pointing out that all international exchanges involving education, international academic research, international cooperation activities, and projects in the field of technology are the characteristics of internationalization of higher education (Arum & Van de Water, 1992). At the same time, Knight (1994) redefined the internationalization of higher education based on the theoretical exploration and practical thinking of the internationalization of higher education. She pointed out that two dimensions of transnational and trans-cultural factors should be added into the process of teaching activities: research activities and volunteer service. Later, Van Der Wende (1997) enriched the training objectives of internationalized higher education, and he believed that higher education should bear the systematic efforts of economic globalization, social development globalization, and labor market globalization. At the beginning of the 21st century, he further defined his views as considering the ultimate purpose, practical function, and transmission of higher education at the national and school levels, and integrating trans-national, trans-cultural, and global factors. In China, Jiang and colleagues (2010) summarized that the mode of IC training includes seven elements: establishing professional structure system, international curriculum system, international social practice platform, international teaching management system, international education teachers, vigorously developing the education of international students and strengthening international joint schooling.

The academic world has a different definition of the elements of the IC training mode. Comprehensively, the training mode of IC mainly consists of international courses, overseas study, international scientific research activities, and international teachers.

2.3.3 Practices of IC training

In many developed countries, universities especially research universities have always been pouring much attention to the students' IC. For example, American universities have made many attempts, including "Insertion" and "Infusion" at Harvard Business School in the late 20th century. The University of Michigan has set up its educational goal to "serve the world"; Boston University is aiming at training students as "world

citizens”; one of the University of Washington’s targets for undergraduate student training is “international understanding and communication”. A similar target or aim could be found at the University of Berkeley and other universities in the USA (Chang & Du, 2013). In 1996, Japan began the nationwide implementation of education internationalization in the “Educational Countermeasures in the 21st Century”. The content of education internationalization mainly includes understanding developing countries, participating in open education, foreign cultural education, and peace education. In 2000, the Australian Curriculum Group put forward the concept of “World Class Curriculum” (globalization-oriented curriculum) and emphasized that it is a concept not just for curriculum but also for education.

Compared with other countries, China has a relatively late start in IC training. In July 2010, the Chinese government issued a “National medium and long-term education reform and development plan for 2010-2020”, the outline pointed out that in the future, one of the important content of the development of Chinese education is to strengthen the education of international understanding, to promote the cross-cultural communication, to enhance students’ ability to understand different countries and their culture (MOST, 2010). As a result, several domestic research-oriented universities, such as Tsinghua University and Nanjing University, also regard IC training as a core part of their educational goals in the development process of building world-class universities.

A report on the Internationalization Development of Higher Education in China released in 2015 pointed out that China’s undergraduate institutions have a positive performance on the strategy of internationalization, 95 percent of the institutions set up clear requirements for their international development in their development plans, 93 percent of the institutions have formulated international development strategic goals, 89.7 percent of schools have made medium and long-term plans and implementation plans based on the internationalization development strategy (IERC, 2015). It could be noticed that many Chinese universities pay great attention to the international development and international performance of the school.

However, according to existing research findings, education courses in China are generally the extension of existing basic professional courses or the expansion of specialized courses. They are without a complete curriculum system and a scientific curriculum structure (Lu, 2010). In the comparative study on the IC of undergraduate students in mainland China and Taiwan, undergraduates from the mainland perform poorer than those from Taiwan in terms of knowledge and understanding, skills, values, and attitudes (Zeng, 2017). Based on the research data of top research universities in China, the results show that the IC of postgraduate students is at an average level. Specifically, the “attitude and value” has been at a good level, but the “knowledge and understanding” and the “skills/experience” are at an average levels, which need further improvement (Lu & Guo, 2018).

At present, the widely used questionnaires for measuring IC are set by Oxfam (OCFAM, 1997), which mainly test the knowledge, understanding, skills, values, and attitudes (Ji, 2014). Many researchers have set up questionnaires based on it. As this study aims at comparing the quality of the students’ IC under a different context, it adapted and developed the survey tool used in previous research to evaluate the IC of students (Liu & Wu 2015; Zeng, 2017).

2.4 The training of students in Chinese higher education

2.4.1 The definition of student training in the Chinese context

In China, student or talent training has been a heated debate. Since its first introduction in 1994, the concept of student training is appearing frequently in policy documents and research papers in the field of reformation of higher education. However, scholars still have not achieved a consensus on its definition. Some representatives of this debate are as following: Zhou (1998) claimed that it is a combination of student training aim, scale, and basic method, which represents the idea of a specific institution and determines the feature of graduates. Gong (2003) argued that it is an operation of a training process with an aim and under a particular educational idea or theory. Similarly,

Ji (2012) mentioned that it reflects the relationship between education and society, as well as an adoption of the development of students and society, adjusting itself during the process of implementation. Hai (2008) said that it is an implementation process of training with a specific aim and scale, constant teaching context and curriculum, regulation, and evaluation.

Although there is no agreement on its definition, we could conclude that this concept in the Chinese context is related to training aim, recruitment, the structure of discipline, curriculum, teaching, culture of the campus, and regulation of affairs (Li & Yan, 2000).

2.4.2 The problems of current student training pattern in China

Previous studies have identified several problems related to student training patterns in Chinese higher education. Firstly, scholars argued that the aim of student training has lost the focus on the "human" side. For example, the quality of virtue, intelligence, body, and mind are divided in the process of teaching and training (Pan, 2009). Secondly, the standard of evaluation is not clear and practical. There are lots of indexes and the standard is very similar to the criterion used in the industry, which mainly focused on profits rather than students' personal development (Pan, 2009). Furthermore, researchers have raised that the reformation of the curriculum is not completed and there are still a few unreasonable settings in the teaching process. For instance, lots of institutions are not implementing the credit system authentically, and the majority of courses are compulsory, leading to little room and option for students to choose courses according to their demand (Yu, et al., 2009). Besides, the connection between liberal education and professional education is loose, and the majority of students have difficulties in the transitional period; the governance of teaching also proves to be confusing (Yu, et al., 2009). With the marketization and massification of higher education, these problems are causing further problems such as the inflation of degrees and bad manners (Brynin, 2013).

2.4.3 The attempts to reform student training patterns in China

To enhance the quality of student training, the Chinese government has led the reformation of student training. As concluded by Yang (2014), there are five attempts and three positive outcomes of this reformation so far. The positive outcomes include the updated view about student training, the innovation of teaching and learning patterns, and vigorous support from all sectors of society. The five attempts are as following:

(1) Innovative talents training

It is mainly described as a combination of reformation in aspects such as recruitment, evaluation, regulation, and internationalization. Basically, students have more flexibility in choosing courses, a greater relationship with their tutors, and a better chance for internationalized activities, when compared with other students not involved in the innovative training module.

(2) Applied talents training

It pays great attention to the cooperation of institutions and industry, and students could benefit from the connection of theory from institutions and practice from industry. It is believed that the graduates could gain more employability as a result of this connection and they could apply the skills to a various of industrial areas.

(3) Reformation of postgraduate training

It focuses on the comprehensive reformation of the postgraduate training mechanism, including academic degree and professional degree postgraduate training, training of graduate students based on interdisciplinary and combining production, education, and research.

(4) Construction of the Open University

It centers on the cooperation of government, institutions, and industry, relying on the connection of communication technology and higher education, supporting lifelong learning and non-academic education.

(5) Implementation of internationalization of colleges and universities

Centering on the innovation of talent training system, it is mainly about comprehensive reformation in aspects like recruitment, talent training pattern, teacher evaluation, and internal management structure. Students at these universities could experience an internationalized environment for study at home.

2.5 Gaps in the existing literature

Given the importance of internationalization and IaH in students' IC, it is surprising to know that there has been limited research on the quality of IC training under a Chinese context. Furthermore, there is little research on the comprehensive reformation of IaH in the schools of local universities (Liu, 2018). Some universities have published reports as previously noted; however, existing research may focus on the training quality, but there is a shortage of comparison between traditional context and internationalized context (Fang & Liu, 2020).

The current study intends to address the gaps in the existing literature, and test the IC training under the internationalized context and compare the quality of such training with a traditional context.

Chapter 3. Methodology

This chapter presents the research questions, research design, secondary data analysis, case study, data collection, data analysis, and reflections on the researcher's positionality.

3.1 Research questions

This study focuses on the internationalization at home and the IC training of undergraduates in China. As mentioned in the literature review, there is a limited study on the quality of IC training under a Chinese context, many pieces of literature focus on the implementation of the regulation, covering internationalization reform as construction of innovation context, regulation, recruitment, and evaluation of teachers, revolution of curriculum and recruitment of students, and extracurricular activities. Accordingly, there is a shortage of comparison between traditional context and internationalized context. To address this research gap, this study proposes the following research questions:

1. What are the impacts of internationalized education context on undergraduates' IC training?
2. What are the differences between undergraduate students' IC in traditional and internationalized contexts?
3. How to interpret the differences and what are the implications for the training of students' IC?

3.2 Research design

The research uses a mixed-method approach to study the quality of undergraduates' IC training under the context of IaH and under the traditional context. Firstly, secondary data collection and analysis were used to conclude the differences between the two schools in W university, which may influence the quality of undergraduates' IC training. Then, a case study of W University, and questionnaires and interviews were conducted to study the IC differences between the undergraduate students from the two schools.

The mixed-method approach was chosen because it could lead to an encapsulation of quantitative variables through qualitative data in the whole study (Morse, 2015). Magrath and colleagues (2019) affirm that mixed-method study could yield more solid findings than only using quantitative or qualitative method. Similar claims are made in relevant studies (Fetters & Freshwater, 2015; Creswell & Plano Clark, 2017). IaH and IC are phenomena which contain both quantitative and qualitative data. For example, the number of teachers, courses and activities are easy to measure in numbers, but the understanding, feeling and perception of these aspects need to be dug by qualitative methods. By using the mixed-method, the researcher could incorporate understanding, context and numbers together (Morse, 2015).

3.2.1 Case university and the two schools

W University was chosen for this study for the following reasons. The university is one of the universities participating in Chinese national programs to internationalize its education. The university also has a long tradition of cooperation with foreign countries, with a program that cooperated with an Australian university originated in the 1990s.

The two schools at W University are in the same STEM discipline that is highly relevant to innovation and industry engagements. The internationalized school was divided from the traditional school as an attempt to provide internationalization at home environment for students studying the program. The internationalized school has implemented many activities that have IaH elements, while the traditional school does not offer as many international education opportunities for their students.

The two schools have achieved many outcomes in student training, especially in the internationalized school. For example, several students from the internationalized school have been awarded a national scholarship or have won medals in national and international competitions.

According to the official websites, the traditional school has about 440 teaching staff, 2900 undergraduates, and 2400 post-graduates. Among the tutors, there are many Academicians, Fellows, and those with talent titles, which have made various

innovations and won many national awards in the discipline. In terms of student training, the students have won about 100 national competitions in recent 5 years, which is a remarkable result. Besides, there are 50 per cent of undergraduates would pursue further education at home or go abroad, above 96 per cent of undergraduates could find a job after graduation. Both of the ratios are leading in the W university. However, there is not a clear clue showing it has many international activities.

The internationalized school has a great amount of investment for students' IC training with IaH practices, as evidenced by its official website. There are only about 380 undergraduates and 140 post-graduates, while about 23 tutors and various cooperation with research groups (the students could be guided by tutors in these groups). It is claimed that the student-faculty ratio is lower than 6:1, which is very small in a Chinese context. The school recruited two strategic scientists, three leading talents, six professors, and seventeen teachers with doctoral degrees in recent 5 years, almost everyone has international educational experiences. Besides, the school has reformed the frame of the courses, there are 14 courses delivered by both Chinese and foreign teachers, 7 courses taught in English (five of them are taught alive and two of them are taught by video recorded), one online course. What is more, the school offers students lectures given by foreign researchers, overseas exchange chances, as well as other activities with international elements.

3.2.2 Secondary data analysis

The background information for every specific research relies on secondary data, which could come from a wide range of sources, such as official published documents and mass media outputs (Walliman, 2006). In this dissertation, secondary data is collected to gain an overall view about the background information about W university and the 2 schools. After the collection of these data, secondary data analysis was used to analyze these data. It is a process to analyze data that is not gain by the researchers as primary data (Bryman, 2016).

Secondary analysis has an apparent drawback that the researcher may not be familiar

with the data and could not distinguish the bias and truth (Bryman, 2016), as many documents were written not in the form which researcher require exactly, and some of the documents were to express specific information and selective of the truth (Walliman, 2006). However, this dissertation still would conduct secondary data analysis because it is time-efficient, and is an opportunity for novel interpretations and conclusions. Most importantly, it can maximize the useful sources of data and help form a full picture of the situation (Bryman, 2016).

Nonetheless, the secondary data analysis could lead to an overall view of the W university, the internationalized school context, and the traditional school context, resulting in the assessment of the reformation steps they have taken and the comparison of undergraduates' IC training. By doing this, this dissertation tries to conclude the basic differences between these two schools.

3.2.3 Case study, questionnaires, and interviews

A case study is a research method of comprehensive and in-depth study on a single research object, whose target is basically a typical individual, group, or institution and its task is to seek solutions to similar problems in the field (Punch, 2005). A major strength of a case study is that it provides a good opportunity to gather data from multiple sources. It is a suitable research method for the issues which are emerging at present but its relevant elements could not be controlled (Yin, 2017). Besides, the findings from a case study tend to be more convincing and accurate (Yin, 1994).

Questionnaires are used widely in the field of education. It is because that they can find the aspects of the real facts, characteristics, attitudes/opinions, which help to operationalize a concept (May & Sutton, 2011). Besides, questionnaires are efficient, cost-effective, which could yield lots of data in a short time (May & Sutton, 2011). Another important reason may be that there are various questionnaires created and used by the former researchers, which have high validity and reliability, new research could rely on and save time (De Vaus, 2014).

Questionnaires are widely used in the field of IaH as a method to collect primary data

in research. Ishikura and colleagues (2015) used questionnaires at the beginning and ending stages of their research to examine the impact of taking English-Medium courses. They found out that when a high level of course content is maintained and targeted support is provided appropriately, the student learning could be maximized. In another study, questionnaires were applied to “observe differences in their worldviews concerning intercultural sensitivity, competence, symbolic racism, and dominance” (Prieto-Flores, et al., 2016, p. 441).

Interviews have many advantages in educational research. It is easy to conduct, flexible, and it could find information that written methods could not. Bell (2014, p. 210) claimed that interviews have adaptability. In other words, they could "follow up ideas, probe responses and investigate motives and feelings". Besides, they could discover information not only that written questionnaires ignore, but also in-depth and clarified. Similarly, Denscombe (2014) described interviews could gain depth information and insights, they just need simple equipment and are preferred by interviewees because of having the opportunity to speak out their own ideas. Denscombe also lists the upsides of interviews like they are therapeutic, they have flexibility, high response rate, and high validity. Robson and colleagues (2016, p. 286) held the idea that interviews are "flexible and adaptable way of finding things out", they could discover non-verbal information which is quite important, especially when researchers are investigating underlying motives.

Interviews, as defined by Denscombe (2014, p. 202), are "a method of data collection that uses people's answers to researchers' questions as to their source of data", and have been widely used in this field because it is easy to explore the perception and reflection of individuals, which to some extent are very important in the research for IaH. For example, Robson and colleagues studied the theme that how IaH is understood and operationalized in two universities in the United Kingdom and Portugal through analyzing data collected by semi-structured interviews (Robson, Almeida, & Schartner, 2018). Based on the viewpoints from the interviewees they subsumed five analytical themes which could be applied to assist other universities to conceptualize IaH. Semi-

structured interviews also function as a dominant process of data collection in the research conducted by Nan Jiang and Victoria Carpenter (2011). Mixed with other methods, they found out that essential issues of strategy implementation in the internationalization of higher education, which includes “resource allocation, communication, operational process, cooperation and coordination, organizational culture, resistance to change, student support and external environment”. Almeida and colleagues used a focus group to investigate the understanding of IaH among institutional staff, they pointed out that when enacting an IaH agenda, there are three dimensions: “(1) the institutional or organizational side of internationalization, (2) teaching and learning aspects, and (3) personal experiences of the social actors involved in internationalization processes” (Almeida, et al., 2019, p. 200).

3.3 Data collection

Data for this research project includes documents of regulation and work reports from the W University, the questionnaires with 328 valid responses, and interviews with four students and one administrator at the two schools at W University.

For secondary data, this dissertation analyzes the different factors of IC training in the two schools, such as the number of students and internationalized teachers, the resources for international activities, and so on. By researching the different background information of undergraduate students in the two schools, this dissertation aims to tease out the factors which could be impacting the performance of IC, providing the foundation for the subsequent questionnaires and interviews, as well as the analysis for the findings, discussion, and conclusion.

Questionnaires were based on the research conducted by Liu and Wu (2015), and the paper published by Zeng (2017), which mainly focused on the construction of the internationalized platform, student training, and the IC of students. The author made some adjustments in the questionnaires to fit in the situation in the two schools at W University. The questionnaires were in both English and Chinese. The questionnaires are filled by the students who are pursuing an undergraduate degree in these two schools. The targeted groups of students are those in their first year and fourth (final) years of

studies. Questionnaires were distributed by the researcher, the participants are gathered in the classrooms of W University and all of them get access to the questionnaires by scanning QR code or using the website link to the electronic edition of questionnaires.

This study has collected 345 responses. Among them, 3 questionnaires are showing they were filled by the students who are in their third year. Besides, there are 14 questionnaires were filled by students in less than 80 seconds. All these 17 questionnaires were deleted before the analysis to guarantee the reliability and validity of this study. In total, 328 valid responses to questionnaires were analyzed.

Semi-structured interviews were based on the questionnaires and the answers from the participants. The participants including 4 students and one staff from the internationalized school. The 4 students indicated their willingness to join the interview in their questionnaires and the researcher contacted them by QQ after that. The staff was contacted through the researcher's professional network.

Initially, 12 students indicated their willingness to join the interview when filling in questionnaires. However, when the researcher contacted them for further interviews, most of them were rejected. The dominant reason was that the interviews need to be held after the questionnaires, and after the collection of questionnaires, the students were busy preparing for exams or graduation. Another reason was the COVID, many students did not want to conduct a face-to-face interview, and the regulation for traveling under the COVID is also very strict. So, it is uneasy to find a suitable time and place to hold interviews. However, every participant expressed his or her reflection and experience during the period of the interview, and there are students in 1st year and 4th year, as well as a staff. So, the perspectives are diversified and it is sufficient for the discussion on the research topic.

The data collection process took place from late March to late July 2021. The researcher traveled to the city to conduct questionnaires and one-on-one face-to-face interviews in Chinese with the participants. Both the questionnaires and the interviews were carried out in common areas at W university. Each participant received a "Participant

Information Sheet” that introduced this research before the interview. If willing to take part, he or she was invited to sign a ‘Participant Consent Form’ at the beginning of the interview. The interviews each lasted for about half an hour and were audio-recorded using a mobile phone. Interviews were transcribed for analysis.

3.4 Data analysis

Secondary data collected was analyzed by comparing, classification and synthesizing the information related to different themes. After that, the context of the two schools related to IaH and IC were written based on the synthesis of the secondary data. . . .

The data collected by questionnaires are analyzed by coding of the data, independent sample t-test, and regression analysis. By coding, this dissertation claims 7 factors for IC performance and 4 factors for its influence factors. Then, this dissertation compares the differences in IC and perception of internationalized campus culture between the students in each school. Finally, a regression analysis is used to analyze the impact of internationalized context on IC. All the analysis of data is carried out on SPSS 26.0.

The interview recordings were transferred from mobile to computer and then transcribed in Chinese by using the help of software online and then be checked verbatim before being analyzed in Chinese following a thematic framework for qualitative data analysis (Braun & Clarke, 2006). The process consisted of 6 steps, namely familiarizing yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Based on the literature review and the questionnaires, a provisional list of codes was found before the interviews. By doing the transcription, the researcher created many initial ideas about coding. Then, the researcher coded interesting features of the data before collecting them into themes. After that, themes were reviewed and named. Finally, the findings of interviews and discussion were written based on the thematic analysis of interviews.

3.5 Reflection on researcher's positionality

The researcher has professional links with the case study in the research. Therefore, the

researcher was an insider and could get access to the students and staff. Besides, the researcher shared many commonalities with the research participants in terms of educational background, experiences with international education, and interests in student training.

On the other side, the researcher is conducting a graduate program in Oxford and looking at this topic as a whole. The researcher poured attention to the reflexivity effects mentioned by Berger (2015) and acted like an outsider to conduct the research. By doing so, it is helpful for the participants to answer the questionnaires in a critical, authentic, and reflective way.

3.6 Methodological limitation

The research design has several limitations. Because of the researcher's professional links to the schools and the staff, there is an undoubted impact on the students or staff when they are filling the questionnaires or attending the interviews. The review of the literature, the design of questionnaires, and the analysis of the data are compared with care, which could improve the reliability. Besides, part 2 of the questionnaires is adjusted to suit this study, the validity may need to be discussed in the following sections. What is more, this dissertation only compares the 2 schools in W university, the sample limitation needs to be considered if the findings and conclusion of this study were generalized by further studies.

3.7 Ethical considerations

This study was undertaken according to the ethical guidelines for educational studies by the British Educational Research Association (BERA, 2011). This study has received ethical approval from the Central University Research Ethics Committee (CUREC) from the University of Oxford (see Appendix G).

When conducting the research, protecting the rights of participants and researchers is always the prioritized consideration (CUREC, 2016). The CUREC application discussed the potential ethical concerns, such as the management of the data, the use of

methods, and so on. The participant information sheet (see Appendix D) is provided to let every participant know their right in attending this study.

Chapter 4 Findings

This chapter summarizes findings of both the quantitative and qualitative data analysis, supplemented by the secondary data. It reports that students in the internationalized school demonstrate a generally higher level of IC than those in the traditional school. Besides, English is considered as an important part of IC and international courses, activities, internationalized teachers influence IC training.

4.1 Findings from the questionnaires about students' IC

This study aims at comparing the quality of undergraduate students' IC under a different context. The survey used in this study is based on the questionnaires in the previous studies on students' IC (Liu & Wu 2015; Zeng, 2017), which were mainly focusing on the construction of the internationalized platform, student training, and IC of students. In the research of Liu and Wu (2015), they figured out a structure of IC, which could be divided into three dimensions, namely knowledge, skills, and attitudes (Hunter, 2004; Schechter, 1993; Olson & Kroeger, 2001).

The findings of the current study align with Liu and Wu (2015) about the three dimensions. Data of the questionnaires were coded as shown in Table 1, and the dimensions, factors, and meaning of IC are shown in Table 2.

4.1.1 The coding of the questionnaires

Table1 Coding of questionnaires

Question Number	Factors	Factor Label	Questions
Q1			I know the definition of internationalization and its variation tendency
Q2			I believe there is an interdependency among countries in political, economic, and environmental aspects
Q3	Factor 1	Understanding of Globalization	I have knowledge of the impact of internationalization (e.g. its impact to the development of countries and individual life)
Q4			I have knowledge of current world events and important international issues
Q5			I have knowledge of the history and geography of at least one country except
Q6	Factor 2	Knowledge of the World	I have knowledge of the politics, economy, and legal system of at least one country except China
Q7			I have knowledge of religious faith, cultural norms and expectations of at least one country except China
Q8			I could easily read the English-language literature of my research field
Q9	Factor 3	Skills	I could easily use at least three of the following common software: Excel、PDF、SPss、Amos、Mplus、Stata、HLM、DEA、EViews、Nvivo、AutocAD、Matlab、Ansys、Solid works、Unity3D
Q10			I could easily get knowledge and information from foreign websites
Q11			I could analyze and ponder problems from foreign cultural perspective
Q12	Factor 4	Inter-cultural communication	I have experience of working with foreigners
Q13			I could find cultural difference during the communication with foreigners

Q14			I could quickly find common ground during the communication with foreigners
Q15			I could quickly adjust my tongue and pattern during the communication with foreigners
Q16			I could easily work and live in an intercultural environment
Q17			I hope to have a connection with foreign scholars and students
Q18	Factor 5	International Consciousness	I hope to experience lifestyle in different cultural norms in a foreign country
Q19			I hope to experience academic environment in different cultural norms in a foreign country
Q20			I would try my best to respect others' culture and value during the communication with foreigners
Q21	Factor 6	International Attitudes	I would try my best to understand others' culture and value during the communication with foreigners
Q22			I would try my best to appreciate others' culture and value during the communication with foreigners
Q23			I identify with Chinese culture and values
Q24			I think I am valuable to the nation and society
Q25	Factor 7	Value Recognition	My view to the world is one of the many possible views to the world
Q26			I think I am a Chinese citizen
Q27			I think I am a global citizen

Table 2 the dimensions, factors, and meaning of international competence

Dimensions	Factors	Meaning
Knowledge & Understanding	Factor 1: Understanding of Globalization	Understand the connotation of globalization, and understand the trend and impact of globalization
	Factor 2: Knowledge of the World	Have a basic knowledge of other countries' language, culture, history, geography, etc.
	Factor 3: Skills	Have the ability to use language, technology, and tools effectively, such as computers and the Internet
Skills	Factor 4: Inter-cultural communication	Have the ability to communicate information and emotions smoothly with people from different cultural backgrounds and to achieve mutual understanding and trust
	Factor 5: International Consciousness	Have an open international consciousness, willing to go into different cultures to contact people from different cultural backgrounds, to communicate and establish relationships with them
Attitudes	Factor 6: International Attitudes	In the process of communication, Have the will to respect, understand and appreciate others' culture and values willingly
	Factor 7: Value Recognition	Own the idea that they are significant to the development of their country and identify with their own culture and values

4.1.2 Basic information of the survey data

The questionnaires were targeted at students in their first and fourth year of undergraduate education. In total, there are 328 valid questionnaires, 310 of them are filled in Chinese, and 18 of them are filled in English. The students filled in the questionnaires based on the Likert five-point scale), using completely disagree, somewhat disagree, neutral, somewhat agree, and completely agree, which are assigned by 1-5 orderly. The higher the score, the higher the international competence of the subject. The scale option assignment is shown in Table 3.

The respondents are mainly from the internationalized school and the traditional school of W University, the sample distribution is shown in Table 4.

Table 3 Scale option assignment

Completely disagree	1
Somewhat disagree	2
Neutral	3
Somewhat agree	4
Completely agree	5

Table 4 Survey sample distribution

		Year of Study		
		Fourth year	First year	Sum
Schools	Internationalized school	51	85	136
	Traditional school	72	120	192
	Sum	123	205	328

4.1.3 The analysis of the data

(1) The reliability of the data

The data is analyzed with SPSS 26.0. Firstly, the reliability analysis function is used to measure the reliability of the whole scale and each dimension. Then, Cronbach's coefficient alpha (α) is used to calculate the internal consistency of the scale. The scale reliability is shown in Table 5.

As the data shows, the α of the whole scale is 0.945, and the α of the dimensions (Knowledge & Understanding, Skills, Attitudes) are 0.886, 0.908, and 0.944 respectively. The table shows that the internal consistency of the whole scale and all the three dimensions are approaching or exceeding high-reliability levels. In other words, they have good reliability.

Table 5 Scale reliability

Dimensions	Cronbach's coefficient alpha	Cronbach's coefficient alpha based on standardization project	Number of terms
Knowledge & Understanding	0.886	0.887	7
Skills	0.908	0.910	9
Attitudes	0.944	0.945	11
Total	0.945	0.946	27

Table 6 The composition matrix after rotation

	composition						
	1	2	3	4	5	6	7
Q1	.145	.163	.235	.030	.715	.248	.261
Q2	.375	.022	.046	.275	.750	-.051	.055
Q3	.259	.082	.168	.232	.805	.024	.112
Q4	.247	.106	.367	.059	.703	.187	-.037
Q5	.178	.139	.843	.118	.230	.166	.027
Q6	.128	.242	.829	.026	.169	.242	.120
Q7	.139	.271	.826	.141	.203	.147	.077
Q8	-.005	.343	.276	.048	.072	.652	.075
Q9	.095	.159	.148	.127	.132	.793	.043
Q10	.105	.349	.219	.151	.086	.784	.021
Q11	.137	.441	.545	.173	.094	.332	.002
Q12	-.123	.651	.140	-.036	-.056	.440	.078
Q13	.205	.779	.131	.140	.131	.049	.224
Q14	.081	.828	.203	.188	.073	.222	.028
Q15	.077	.854	.187	.173	.132	.172	.030
Q16	.036	.837	.149	.177	.055	.181	-.016
Q17	.310	.266	.219	.753	.095	.063	.164
Q18	.230	.208	.085	.848	.204	.142	.156
Q19	.274	.192	.072	.854	.197	.147	.127
Q20	.440	.146	.081	.472	.239	.090	.601
Q21	.520	.175	.152	.353	.203	.100	.657
Q22	.519	.143	.129	.363	.202	.094	.620
Q23	.874	.009	.093	.150	.214	.002	.137
Q24	.814	.132	.122	.169	.137	.130	.139
Q25	.804	.057	.226	.186	.128	.118	.083
Q26	.875	.015	.058	.153	.216	-.030	.108
Q27	.806	.066	.058	.121	.162	.015	.057

Principal component analysis and maximal rotation of variance are used to reduce the dimension of primal data. As a result, 7 factors are extracted showing that different questions have a different load on each factor, as shown in Table 6. The result is consistent with the structure of the IC mentioned above, which has 7 factors.

Table 7 The scores of the international competence and its 7 factors

	N	Minimum	Maximum	Skewness	Kurtosis
International Competence	328	-2.72	1.09	-1.801	4.657
Understanding of Globalization	328	-5.40901	2.52818	-1.482	4.891
Knowledge of the World	328	-2.87320	2.44929	-.325	-.121
Skills	328	-2.49098	2.90068	.042	-.139
Inter-cultural communication	328	-3.42924	3.79465	-.218	.691
International Consciousness	328	-3.75886	2.14365	-.814	1.216
International Attitudes	328	-4.62266	3.20835	-.468	2.853
Value Recognition	328	-4.50136	1.81317	-1.566	3.263

The minimum, maximum, skewness, and kurtosis of IC and 7 factors are shown in Table 7. It demonstrates that the curves of factors such as understanding of globalization, knowledge of the world, and understanding of globalization are very sharp. In other words, the centralized tendency of these factors is not very good. Besides, all the skewness of the 7 factors is lower than 3, which means the whole data has good symmetry.

(2) Difference analysis

The differences between the two groups from different years on the 7 factors of IC are shown in Table 8.

Table 1 the differences in the international competence and its 7 factors of international competence between the different years of study

	Grades (Mean \pm Std. Deviation)		t	p
	1 st Year Students (n=205)	4 th Year Students (n=123)		
International Competence	-0.002 \pm 0.556	0.004 \pm 0.606	-0.093	0.926
Understanding of Globalization	-0.214 \pm 0.895	0.357 \pm 1.157	-0.501	0.617
Knowledge of the World	-0.424 \pm 1.022	0.071 \pm 0.962	-0.992	0.322
Skills	-0.361 \pm 0.868	0.602 \pm 0.914	-9.535	0.000**
Inter-cultural communication	0.049 \pm 0.925	-0.081 \pm 1.114	1.140	0.255
International Consciousness	-0.004 \pm 1.015	0.006 \pm 0.979	-0.086	0.931
International Attitudes	0.022 \pm 1.009	-0.036 \pm 0.988	0.504	0.615
Value Recognition	0.019 \pm 1.003	-0.311 \pm 0.999	0.437	0.662

Note: * $p < 0.05$ ** $p < 0.01$

First of all, it shows clearly that the students from different years of study have a significant difference in the factor of skills. Secondly, the students in their fourth year have a better IC than those in their first year. Specifically, the students have a higher level of capability in factors such as understanding of globalization, knowledge of the world, skills, and international consciousness.

Table 2 the differences in the international competence and its 7 factors of international competence between different schools

	Schools(Mean ± Std. Deviation)		t	p
	Traditional School (n=192)	Internationalized School (n=136)		
International Competence	-0.038±0.558	0.054±0.595	-1.424	0.156
Understanding of Globalization	-0.138±1.099	0.194±0.805	-3.008	0.003**
Knowledge of the World	-0.047±0.972	0.067±1.039	-1.017	0.310
Skills	-0.022±0.972	0.031±1.041	-0.471	0.638
Inter-cultural communication	-0.130±1.035	0.183±0.922	-2.820	0.005**
International Consciousness	-0.223±1.049	0.316±0.834	-4.981	0.000**
International Attitudes	0.124±1.070	-0.176±0.895	0.267	0.789
Value Recognition	0.249±1.007	-0.351±0.993	0.536	0.592

Note: * $p < 0.05$ ** $p < 0.01$

The differences between the two schools on the 7 factors of IC are shown in Table 9. Firstly, it shows clearly that students from different schools have a significant difference in the factors such as knowledge of the world, intercultural communication, and international consciousness. Secondly, the IC of the students from internationalized school is much better than those from traditional school. Specifically, the students show a higher level of capability in factors such as understanding of globalization, knowledge of the world, skills, intercultural communication, and international consciousness.

Table 3 The differences in the international competence and its 7 factors between different grades and schools

		Grades (Mean \pm Std. Deviation)		t	p
		1 st Year Students (n=120+85)	4 th Year Students (n=72+51)		
Traditional School (n=120+72)	International Competence	-0.079 \pm 0.591	0.029 \pm 0.497	-2.345	0.020*
	Understanding of Globalization	-0.129 \pm 1.003	-0.154 \pm 1.251	-2.056	0.041*
	Knowledge of the World	-0.123 \pm 0.962	0.789 \pm 0.982	-1.343	0.181
	Skills	-0.320 \pm 0.851	0.474 \pm 0.964	0.812	0.418
	Inter-cultural communication	-0.043 \pm 0.983	-0.275 \pm 1.107	-1.686	0.093
	International Consciousness	-0.320 \pm 1.011	-0.063 \pm 1.096	-5.698	0.000**
	International Attitudes	0.005 \pm 1.119	0.025 \pm 0.990	-0.276	0.783
	Value Recognition	-0.328 \pm 1.097	0.121 \pm 0.834	-0.874	0.383
Internationalized School (n=85+51)	International Competence	0.104 \pm 0.487	-0.032 \pm 0.739	0.545	0.587
	Understanding of Globalization	0.130 \pm 0.694	0.303 \pm 0.960	-2.191	0.030*
	Knowledge of the World	0.071 \pm 1.098	0.059 \pm 0.943	0.112	0.911
	Skills	-0.420 \pm 0.894	0.782 \pm 0.815	-1.857	0.066
	Inter-cultural communication	0.178 \pm 0.824	0.192 \pm 1.074	-2.334	0.021*
	International Consciousness	0.443 \pm 0.841	0.103 \pm 0.785	-0.924	0.357
	International Attitudes	0.045 \pm 0.834	-0.121 \pm 0.989	0.805	0.422
	Value Recognition	0.091 \pm 0.852	-0.246 \pm 1.170	2.035	0.044*

Note: * $p < 0.05$ ** $p < 0.01$

The differences in the IC and its 7 factors between different grades and schools are shown in Table 10. From the vertical perspective, the students from the

internationalized school have a better performance than traditional school in every factor of IC in their first year, but similar in the factor of skills, both of them perform at a low level. However, the IC of the seniors from internationalized school is worse than the ones from traditional schools. In different factors, the performance varies greatly. For instance, the seniors from the internationalized school perform better than the ones from traditional school in the understanding of globalization, skills, intercultural communication, and international consciousness. Among these factors, the factor of intercultural communication has the largest difference, and the international consciousness has a very narrow gap.

Horizontally, the 4th year students demonstrate a higher level of IC than the 1st year students at the traditional school. But the 4th year students in the internationalized school showcase a lower degree of IC than their 1st year peers. The former students perform better in factors such as understanding of globalization, skills, international consciousness, international attitudes, and value recognition, while the latter students show a higher level of understanding of globalization, skills, and inter-cultural communication.

(3) Regression analysis

The survey also collected data about the perceptions of internationalized campus culture from both school students. By collecting the perceptions, the study tries to find out a clue leading to the influence factors of IC training.

When setting the IC as the explained variable, to find out the factors of IC, regression analysis is used in this study.

The explanatory variables are found out by exploratory factor analysis. Before the reduction of dimensionality of questionnaires part 2, 4 questions that are not efficient are deleted to ensure the quality of analysis. The questions are shown below in table 11.

Table 11 the deleted questions

D1	I have many opportunities to attend these activities mentioned above
D2	I have attended international courses(e.g. using international advanced textbooks, of taking English-medium courses et al.)
D3	I think the number of full-time foreign teachers in my school is relatively large
D4	I have many opportunities to communicate with students from other countries in my school

Through coding of part 2 questions and reduction of dimensionality, 4 factors are discovered, which are participating in international activities, attitudes to international communication, value and attention of the school, and internationalized teachers. The relation of the questions and the factors are shown in table 12.

Table 12 the relation of the questions and the factors

C1		I have participated in international discussion, training, or conference(e.g. World University Forum on Materials Science & Engineering, et al.)
C2	participation in international activities	I have participated in international recreational and sports activities (e.g. International Garden Flower Expo, Military World Games, et al.)
C3		I have participated in extra-curricular activities that have international elements (e.g. Global village, M-Day, English Corner, et al.)
C4		I think these activities could broaden my international horizon
C5		I think these activities could enhance my abilities to communicate and cooperate with others
C6	attitudes to international communication	I think international exchange and cooperation could broaden my international horizon
C7		I think international exchange and cooperation could enhance my abilities to communicate and cooperate with others
C8		I think communications with students from other countries in my school are beneficial to improving my international competence
C9	value and attention of school	I think our school attach importance to the international exchange and cooperation of students (e.g. Monash University 2+2, international academic competition, et al.)
C10		I think our school offer sufficient opportunities for students to attend international exchange and cooperation
C11		I think the teachers in our school have rich experiences abroad (e.g. foreign doctoral degree, work experience)
C12	internationalized teachers	I think the teachers in our school could deliver international advanced knowledge, research hotspots to students during courses
C13		I think the teachers in our school could provide international vision and view to students during courses

Based on the data collected, regression analysis is used to find out the relation between the variables and the IC. The types of variables and the code are shown in Table 13. The model is developed based on the aim to find out the extent of the influence from every variable on the IC. 4 explanatory variables are a result of exploratory factor analysis as shown above, 3 control variable is the basic character of the sample.

Table 13 The information of variables in the regression model

Types of Variables	Variable Name	Variable Code
Explained Variable	International competence	Y
	Participation in international activities	X ₁
Explanatory Variable	Attitudes to international communication	X ₂
	Value and Attention of School	X ₃
	Internationalized teachers	X ₄
	Grades	GRADE
Control variable	Schools	SCHOOL
	English Skills	ENGLISH

Regression Model

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 \text{GRADE} + \beta_6 \text{SCHOOL} + \beta_7 \text{ENGLISH} + \varepsilon, \alpha$$

is the intercept, ε is the statistical error.

Table 14 Coefficients

	Standardized Coefficients	t	Significance	Tolerance	VIF
α	$\alpha=0.111$.980	.328		
Participation in international activities	.132	3.079	.002	.890	1.123
Attitudes to international communication	.586	14.301	.000	.973	1.028
Value and Attention of School	.189	4.640	.000	.989	1.011
Internationalized teachers	.307	7.574	.000	.995	1.005
Grades	.009	.100	.920	.189	5.295
Schools	-.059	-1.383	.168	.907	1.102
English Skills	-.028	-.307	.759	.192	5.199

The regression result is shown in Table 14. Four factors have a significant positive effect on IC. To specify, they are participating in international activities, attitudes to international communication, value and attention of the school, and internationalized teachers. Among them, attitudes and teachers have the most significant influence, with

the coefficients as 0.586 and 0.307 respectively.

By the analysis of the difference of part 1 result, it is clear that students from different schools and different grades have shown a different level of IC. In addition, the level of English influences IC. To specify, the higher the English level, the higher the knowledge of the world, understanding of globalization, skills, intercultural communication, which may lead to a higher level of IC.

By the analysis of the difference of part 1 result, it is clear that factors such as participation in international activities influence IC.

4.2 Findings from qualitative interviews about students' IC

There are 5 participants, including four students (named as S1-S4) and one administrative staff member (named as S5) from internationalized school. Among the students, 3 of them are in their first year and 1 in his fourth year. After thematic analysis, several themes are coded and named as follows.

4.2.1 Understandings of students' IC

Findings emerged from the 5 interviews show many important reflections. It demonstrates that all the participants have their own understanding of IC. S1 said that: "Although language is important, IC is not equal to English competence. It also contains communication ability and innovation ability." S2 held the idea that IC should include global thinking, knowledge of global events, culture, and the ability of intercultural communication. It is similar to S3's view, which claims that IC means you need to think about the whole situation. S4 said he believes that IC includes English competence and a thinking method. However, he has not defined such a thinking method. And S5 claimed that IC includes the understanding of other countries' cultures and the ability to communicate with others. English is important because it is an essential skill to have communication. To sum up, although the students and staff hold different understandings of IC, there are similarities. IC is a concept that includes English competence.

4.2.2 Factors influencing students' IC

Overall, all participants believe that the international activities, the opportunities to participate in international courses have positive influences on the enhancement of IC.

International activities include international lectures, research competitions, overseas exchanges, and so on. For instance, S4 described that he has attended many overseas exchanges and he believes that studying abroad could promote many capacities, as a result of more resources, more teachers, fewer students there. S4 is in his 4th year, so he had the chance to go abroad and has had several short-term overseas exchanges before the COVID. After cautious consideration, he still holds the idea that these exchanges are the most helpful experience for his IC training. S4 explained that:

“When studying in China, even in an internationalized context, you still under a Chinese frame of thinking and learning. I mean, you do not need to have communication with tutors in or off class, you are still exam-oriented. However, when you go abroad, there are more direct effects. For example, you need to contact others in English, think and talk differently. Besides, you need to read, write and report a lot, which could enhance your ability in a very short time.”

Although other students have not experienced overseas exchange because of the COVID, in their interviews, they all expressed a desire to have such an experience and seemed to believe that it is very helpful. S1 said that going abroad is the most efficient way to improve skills. S2 mentioned that if she had the chance to go abroad, then it would be easier to understand which part of knowledge is important to learn, and such an experience would broaden her horizon. She also believed that the context is more important for student training, as it dominates the awareness of participation in activities and competition, which leads to the improvement of IC. S5 said that internationalized school offer students many opportunities to improve their IC, such as being volunteers for international conferences, attending international competitions and activities, lectures and courses delivered by foreigners, and so on. It seems that international activities are popular among students and they are very helpful for IC

training.

International courses are courses using English as a language of instruction. Although the selection process and the training in internationalized school pay great attention to English competence, findings suggest that there is still a long way to go for the students to use English frequently and appropriately. For example, in some situations, it is a burden for students to use English textbooks and read English literature. S1 mentioned that it is difficult to understand courses taught in English as there is too much terminology, and similar difficulties emerge when they need to have a foreign lecture, as mentioned by S3. S3 admitted that the environment and the opportunities in school are quite good, but they're still are some problems in mechanism and a shortage of English using context. S4 claims that in the school, the majority of students have difficulties in using English as a language of instruction. Besides, he believed that English is basic, it does not mean you need to be very proficient at it, you just need to master it as a tool to express and acquire information with foreigners. S4 claimed that the research skills and potential are more important in conducting research and applying to universities abroad. In sum, international courses seem not that successful in implement results.

The role of the English language is another widely discussed theme relevant to students' IC. S1 mentioned that English is a global language, so it is important to improve the skills in using it. S1 has the willingness to study abroad since the experience and the platform there could help people gain a lot. Although S2 had confidence in using English well, we confirmed that there are many misunderstandings of questions and some of the answers are opposite to S2's real idea.

“I am not claiming that I am not a Chinese Citizen, I mean that at this age if you wanted to do some academic research, you need to look around the academic world, think globally... The countries are connected as a whole. For example, we are now all suffering from the COVID, although it has been under control in China, if we want to travel or study abroad, we still need to face it. Then, we would not get rid of it until all the countries have controlled it down.”

S3 seemed not that confident in ability, although she has got a high score in courses. S5 pointed out that it is because that English is the dominant language in the academic world, so when we are talking about internationalization, we need to refer to English using. Consequently, if China became the economic and cultural center of the world, Chinese would be a dominant language. However, there still is a long way. To sum up, English is seen by participants as an important factor when discussing IC.

Based on the Recruitment Plan of the official website, the selection process of the students attending internationalized school has two stages. In the first stage, the students need to attend an additional test composed of English and maths tests. Before the second stage, the school would select students by the following standard: the total score of the student's English, maths, and National College Entrance Examination. The top 220 students could then go to the 2nd stage. It is also said that if one student gained 90 in TOFEL, or 6 in IELTS, and the total score is in the top 300, he or she could go to the 2nd stage. In the 2nd stage, the students would be selected by the professors in the school by their performance of written English, spoken English, the understanding of reformation of the higher education system, and humanistic quality. Finally, the top 100 students could go to the internationalized school. As discussed, the English language ability is an important aspect of IC. Therefore, it should be easy to understand that the students from the internationalized school perform better in IC and almost all the factors.

The selection process is rigorous and has been updating since the enrollment of internationalized school. There is a huge possibility that the students who enter the internationalized school already have a higher level of IC.

4.2.3 Institutional differences in students' IC

Participants also believe that the IC of students from internationalized school is at a higher level than these in traditional school. The reflection of the student in his fourth year is an illustrative case. As mentioned above, he attended several times of overseas exchanges and he said that he is going to study in Hong Kong for Ph.D. He says that there are more opportunities for students in internationalized school, more resources,

and much more international. It is very similar to the idea of S5, she mentions that there are many reformations in internationalized school with the aim of train students' IC. For example, there is an activity named M-day, composited by many competitions and activities, and the internationalized school even join an international club of the domain, which is the only branch in China.

4.2.4 The influence of COVID on the process of IaH or the IC training

Almost everyone mentions the influence of COVID, as a result, that it is still affecting our daily lives. There are many hinders to conquer, as S5 points out, now the relation of the school and the cooperators overseas is breaking down, she has contracted them less frequently since the COVID. Besides, almost every student mentions that the lectures, the overseas exchanges, and other international activities are suspended or stopped by COVID.

Chapter 5 Discussions

In this chapter, both the quantitative and qualitative findings are discussed with supportive examples and literature. This chapter is divided into 3 sections. The first section discusses the differences in students' IC. The second section discusses the understanding of IC and its relationship with English competence. In the final section, the influence of COVID on the process of IaH or IC training is discussed.

5.1 Training of students' IC: comparisons and influential factors

5.1.1 Comparisons between two schools

Overall, in terms of students' IC, the students in internationalized school demonstrate a generally higher level of IC than those in the traditional school. The result is similar to Fang and Liu (2020), which conducted research themed on IaH and IC in Beijing, and also shares many similarities to the former studies on IaH, especially for these schools which have implemented such reformation in Chinses other cities (Liu, 2018; Yao, et al., 2019; Wu, et al., 2017). Consequently, it means that the policies (GOV, 2019; EDU, 2019) made by the Chinese government aiming to improve the quality of IC training has been producing benefit, especially the *implementation of Internationalization of Colleges and Universities* (PKU, 2016).

Besides, there is statistical significance on factors such as knowledge of the world, intercultural communication, and international consciousness, when comparing students from different schools. The students from the internationalized school have a higher level of capacity on these factors. It seems that the selection of students in internationalized school and the internationalized training provided could benefit students in improving their IC.

Firstly, the selection process is important and has an impact on IC. When comparing the IC of the 1st year students, it is easy to find out that the students from the internationalized school perform better than those from traditional school. It is almost the same when it comes to the comparison of them on the 7 factors. As all of them have

only studies in schools for 1 year, this study infers that the selection process of the students is the dominant reason for this result, besides the international context effect.

As shown in the findings, the selection of the students has already emphasized on the performance of IC, which use the score of English, test their written and spoken English, as well as their humanistic quality. The selection process is rigorous and has been updating since the enrollment of internationalized school. There is a huge possibility that the students who enter the internationalized school already have a higher level of IC.

Secondly, it could be inferred that an internationalized context affects the training of IC. In this study, the internationalized context means that there are more opportunities to attend international academic activities and other extra-curriculum activities, exchange and communication, and internationalized teachers in internationalized school. As shown in the regression analysis of the questionnaire's part 2, the IC is related to factors such as participation in international activities, attitudes to international communication, value and attention of the school, and internationalized teachers. From the qualitative findings, the researcher found that international activities are very helpful, especially the overseas exchanges, its efficiency is confirmed by interviewees. Researchers have already claimed that the international context has a positive effort on the training of these factors (Soria & Troisi, 2013; Custer & Tuominen, 2016; Peng, 2004).

This finding echoes previous research on IC, which suggests IC can be developed through institutional training and internationalization (Fang & Liu, 2020; Shcheglova, et al., 2017). In the Chinese context, the policies implemented (e.g. Liu, 2018) and actions taken by institutions (e.g. Zhang & Liu, 2017) may therefore facilitate the development of students' IC. The result with other researches on IaH and IC in the Chinese context (Fang & Liu, 2020; Liu, 2018; Yao, et al., 2019; Wu, et al., 2017) support the idea that the policy making relating to IaH and IC is beneficial and productive, specifically, the internationalized context could be helpful in IC training.

5.1.2 Comparison between 1st and 4th year students

In terms of the different factors, the 4th year students in internationalized school perform better than these in their 1st year when comparing skills, and the difference was statistically significant. It may be due to there are many courses delivered in the schools, which are directly beneficial for students to improve their abilities in using of English, Internet, and software, such as College English, Computer Science and so on. For example, in China, almost every college student needs to attend the College English Test Band 4, as it is a certificate to prove the essential ability to use English in job hunting. And the passing rate of this test in 4th year student is definitely higher than any other grade in undergraduate students (You, 2006).

When comparing the IC of the 1st year and 4th year students in internationalized school, there is statistical significance on factors such as understanding of globalization, intercultural communication, and value recognition. On both of the former 2 factors, the 4th year students perform better than the 1st year students, showing the impacts of the IC training in the internationalized school. However, on the 3rd factor, the result is the opposite, that the 1st year students have a better performance. There are the following possible reasons for this difference.

Firstly, these students are different batches of students. Due to the limitation of the research time and design, the questionnaires are filled by the 1st year students and the 4th year student in 2021, which means the two groups of students may have a greater difference on the value recognition, which could not be narrowed down by the process of three years of college education. To further investigate the development of students' IC, longitudinal studies on the theme could be conducted in the future.

Secondly, as shown in the findings, the younger generation may have an advantage on IC for several reasons. S5 claims that the selection process is updating and the exposure to internationalization is increasing, which lead to the younger generation tends to have a higher level of IC. Besides, researchers also have pointed out that exposure to international context could benefit IC (Shcheglova, et al.,2017).

Thirdly, respondents may have subjective underestimation or subjective reasons on this

factor. In the findings, S4 mentioned that many students have given up the opportunity to continue their graduate studies at the internationalized school without taking exams so that they can apply for a higher-ranking Chinese university or apply to study abroad. It means that when the students are graduating from schools, they know them better and have a clearer aim for their life than the freshmen. Besides, S3 explained that she got 90 out of 100 in the final English exam, it is a very high score for most students, but she still held the idea that her English competence is not good enough, as other students are performing better in her class. Moreover, S2 filled the English Version of the questionnaires, and in the interviews, she mentioned that there are some misunderstandings of the questions. The result is supported by studies. For example, Gichiru (2016) claims that it is challenging for students to evaluate their own IC.

5.2 The Relationship of IC and English competence

In the practice of IaH, almost all of the universities in China which implemented internationalization based on English as a language of instruction (Zhang & Liu, 2017). In the previous research related to IaH in China, many of them have mentioned the courses taught by English as a reformation and the lectures given by foreign lecturers to broaden students' horizons. This study also reveals findings relevant to this theme: the understandings of IC and its relationship with English competence.

From the questionnaires, it is apparent that the English language is the composite of skills, since many international activities are related to English competence, which means, to some extent, the level of using English could infer one's performance of IC. In the interviews, almost all of the interviewees have said that English is important. However, when it comes to the relationship between IC and English competence, participants have different ideas, as shown in the findings. It seems that although the students and staff hold different understandings of IC, there are similarities. IC is a concept that includes English competence. It is similar to the definition discussed in the literature review (Jiang and Wang, 2010), and quite related to the questionnaires reflection. Certainly, participants' understandings of IC are not as comprehensive as in the academic world. It is quite understandable as they have not to need to summarize

the understanding and they maybe not have many accesses to the definition or research related to IC, for they are all students or staff in a school of STEM discipline.

Then, what is the reason that when discussing IC in a Chinese context, there is a need to discuss English competence. Why is English so important?

The dominant reason may be that English is still the universal language. According to a report by the Xinhua News Agency (GOV, 2010), almost 25 percent of the books published every year were written in English. Similarly, according to the UNESCO statistics from 2004 to 2013, the combined value of book exports between the United States and the United Kingdom has always accounted for about one-third of the total value of global book exports (UNESCO, 2016). Specifically, in academic journals, 1,229 journals and 725 journals included by Social Science Citation Index (SSCI) were hosted in America and the UK, accounting for about 45 percent and 26.5 percent of all SSCI journals (Li, 2012), and 89 percent of journals were written by researchers from European and American countries (Mosbah-Natanson and Gingras, 2014). Besides the quantity, the academic quality of these is also predominant. It is reported that these journals were cited by scholars all over the world, 80 percent of citations were from these journals (Mosbah-Natanson and Gingras, 2014). What is more, as one of the important academic assessment criteria for humanities and social science researchers in Chinese universities, SSCI has a total of 2,731 journals, 2383 of which were written in English, occupying about 87.3 percent of all SSCI journals (Li, 2012). In sum, as concluded by Beigel (2014, p. 621), “the publishing system has become determinant in the distribution of scientific recognition by reinforcing a hierarchy built based on a triple principle: institutional development, discipline, and proficiency in English”.

In teaching and learning, English medium instruction is also on the rise across the world. Learning English as a foreign language has been a long interest over the world (Khajloo, 2013) and English medium instruction is expanding rapidly across the world (Macaro, 2018). Researchers even claim that English has shifted to “an important educational language used for learning and teaching non-language-related academic” (Rose, et al., 2020, p. 4). Take China as an example, “English is massively the principal foreign

language taught (and sought after) in the PRC (People's Republic of China)” (McArthur, 2002, p. 353). It is claimed that the total number of English learners in China is over 250 million (Chen & Hu, 2006), and the figure is still increasing (Fang, 2010). Besides, the College English Test Band 4 (CET-4) is used to test almost every undergraduate on their English ability in China (Qian, D. & Li, L. (Eds.). ,2014), and the score is an essential credential in graduates’ job hunting.

Another reason is that the Anglo-American countries are still at the center of the academic world. At the starting point, among the world, well-known university rankings, such as Times Higher Education World University Rankings, QS World University Rankings, U.S. News & World Report Best Global Universities Rankings, and Leiden Ranking, only Academic Ranking of World Universities is published by country outside the Anglo-American countries. What is more, on every ranking, the majority of top universities, such as Oxford, Cambridge, Harvard, and Yale, are based in Anglo-European countries (e.g. CWTS, 2020). Consequently, when talking about the internationalization of higher education in a Chinese context, sometimes it means learning from these countries. As mentioned by S5, English is the leading language used by the academic world, especially in the science field. So, it becomes essential for schools to have courses taught in English and improve the English competence of students, as it is a basic skill for them to listen to foreign lectures, read literature written in English and communicate with researchers and students abroad in the English language.

5.3 The practice of IaH and IC training, and the influence of COVID on the two processes

Academia holds the view that IaH is related to domestic environments (Beelen & Jones, 2015). And the evolution and practice of IaH is aiming to alleviate the problems cause by internationalization (Nilsson, 2003), such as greater gap in scientific and technological issues between countries (Altbach, 2007), unequal enrollment (Sellar & Gale, 2011), and the poor gets poorer (Zhang & Liu, 2017). Research suggested that IaH might be an alternative route to internationalization, replacing the

“internationalization abroad” approach that focus on mobility (Li & Eryong, 2021). However, during the practice of this concept in China, there is still a great amount of oversea exchanges and internationalization abroad (Knight, 2004; MOE, 2019; MOE, 2020).

In the previous literature, IaH is also considered to be valuable alternatives to internationalization abroad (Custer & Tuominen 2016; Zhang & Liu, 2017). However, the findings of this study suggest that students do not perceive the international experiences abroad as fully replaceable by the international experiences at home. Although they can attend activities or classes online that are held by foreign institutions, they do not perceive them as equivalent to actually going abroad and being there.

Another challenge of these two processes is the impact of COVID. First of all, it affects short-term overseas exchanges. As mentioned above, students and the staff believe it is very efficient approach for students to enhance their IC. However, almost all the international activities have been suspended or been transformed into online formats. From this perspective, the process of internationalization or IC training is seriously influenced.

Secondly, because of COVID, there are many problems reported after turning several domestic internationalized activities into an online version, Firstly, due to Chinese traditional exam-oriented studying, the majority of students do not have communication with tutors in or off class. And when the lectures or courses are online, the teaching and learning process becomes having no contact at all. Besides, the communication between the school and the other schools/ tutors become less frequent. As mentioned by S5, she would contact many tutors in every term before the COVID. However, after the COVID, she has almost never contacted them for 1-2 years. If the COVID was not under control, the cooperation between Chinese and foreign universities would be impacted. And from S5’s perspective, there is no good solution to such a situation at the moment.

In sum, the efficiency of IaH still needs to be discussed and studied in the future, and the influence of COVID needs to be considered in depth.

Chapter 6 Conclusion

This chapter summarizes the findings from both qualitative and quantitative data, the comparison of IC is made between different grades and schools. Then, factors impacting the training of IC are presented. Finally, the limitations of the study and the suggestions for further research are given.

6.1 Summary of findings

Affected by the huge expansion of higher education and globalization in the past 20-30 years, the number of graduates has grown, as well as the mobility of international students (Bhandari & Blumenthal, 2010; WB, 2020). These situations are even more apparent in China than in other countries, after China joined the WTO in the year 2001 (WTO, 2021). As a country that has the largest population in the world, China is interacting with the world increasingly more frequently than ever before, in all areas including higher education. However, the higher education system in China is still improving its approach to cultivating students to be contributors in a developing society. Recently, IaH is a reformation that seems to have many advantages, and there have been practices and research about it (Zhang & Liu, 2017). However, there is a lack of study aiming to compare the real differences of IC training in a Chinese context.

Consequently, this research contributes to the studies on IaH in the Chinese context, to test the efficiency of such a reformation. Based on the analysis of 328 questionnaires and 5 interviews, this research explored students' IC training at an internationalized school and a traditional school at a case study university.

Findings of the study confirmed that students in the internationalized school perform better in terms of their IC than those in the traditional school and that the 4th year students have a higher level of IC than the 1st year students. In other words, it means that the internationalized context is efficient in benefiting students in IC training, and international training offered by institutions could facilitate the enhancement of students' IC. There have already been many studies and practices on internationalization and IaH in different countries, as shown in the literature review. In

China, as mentioned above, the universities are implementing many policies to reach the aim of being a center of recruiting and training talents, as well as improving students' IC. The current study further proves that institutional training can help students to improve their IC. The study thus suggests that universities in China and beyond can pay attention to the reformation related to IaH, as well as improving the students' IC training in the future.

Conceptually, this study unpacked the concept of students' IC. Building on the existing literature and findings of this study, this thesis argues that IC includes international knowledge, cognition, practice, attitude, and values. The training model of IC mainly consists of international courses, overseas study, international scientific research activities, and international teachers. In this study, international activities were found to be the most influential factors for students' IC, as reported in the surveys and interviews. There are still many questions to be answered about how the different factors are influencing the interaction with each other. Nevertheless, the study has testified that all these factors may be related to each other, and all being part of IC. It may be of interest to future studies to explore the interactions between different factors.

This research has practical implications for universities in practicing IaH and cultivating students' IC. Although using English as a language of instruction is a common way in IaH, this study shows that at the case study institution in China, the majority of students felt difficult to learn knowledge taught in English. Besides, English competence is not considered by participants as the most important ability in research, whereas the research potential and ability would be more convictive. As a result, universities implementing IaH need to design the curriculum more carefully and pay more attention to the feedback from students. Universities also need to critically reflect on the role of English in teaching and learning. Besides, this study also found that there might be a need to pay attention to the education of international values, in the future development of IaH. This is because many training programs just focus on international skills and abilities while ignoring the value factor. This research suggests that international values include the willingness to intercultural communication, the

adaption of different culture and environment, and the determination to challenges. International values are important because to some extent, the values decide the behavior of the human beings and affect the IC training.

This research benefited from the support of students and staff from the case schools, who were very supportive and encouraging towards this research. Despite several limitations of the study, it has identified differences between different schools and grades and synthesized feedback from both students and staff. The findings and recommendations of the study will be shared with the staff and students in these two schools, as well as other academics and professional staff who were interested in learning about the study.

6.2 Limitations of the study

As with all research, this study is not without its limitations. The part 2 questionnaires are adopted and modified, the reliability and validity of them may need to be further tested. The sample of students who filled the questionnaires are in the 2 schools and selected randomly, especially the 4th year students, leading to not positively distributed data. To specify, many of the 4th year students are doing an internship in their final semester or busy working on the issues related to graduation. As a result, some of the questionnaires are filled not that cautious and patient, as mentioned in the discussion part, which leads to inaccurate data. For the interviewees, despite the researcher's efforts to recruit more interview participants, the sample was not perfect. The number of students and staff interviewed is not large, and all of them are from internationalized school. Besides, the researcher's professional connections with the schools may lead to students' and staff's hesitation in criticizing the school openly. Students who decided to fill in the questionnaire and participated in the follow-up interviews may be interested or satisfied in IC in the first place, while those not interested or dissatisfied may not participate in the study; therefore, not every student is represented and it was difficult to find dissatisfied students in interviews, but their voices must also be considered. This research was also only conducted at two schools of one case university. Findings of the research may thus not generalizable to all institutions. Further research may expand the

scope of the sampling institutions.

6.3 Suggestions for further research

This research may be of relevant to further inquiry regarding the IaH in China and the IC training in a Chinese context. Further research may be conducted to find out whether the findings are consistent across other institutions and contexts. Comparative research can be carried out with different batches of students, such as those in a different discipline, universities to yield insightful results. The findings of those studies can be compared or contrasted with the findings of this study to understand the full context of the IaH in China and the IC training in a Chinese context. Besides, observation methods and more interviews could be used to develop a deeper understanding of the nature of interactions that happen between staff and students when the internationalized context is offered. What is more, if the research time and resources are sufficient, longitudinal studies focusing on the comparison of IC of the same batch of students could be conducted in the future, this could be very helpful to yield an understanding of the development or changes of IC training across time.

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Appendixes

Appendix A Questionnaire for Evaluation of Internationalization Level of Undergraduate Students

Part 1 : Basic Information

1. Which school are you in:

Traditional School

Internationalized School

2. What is your gender:

Male

Female

3. Which grade are you in?

Freshman year

Sophomore year

Junior year

Senior year

4. What is your Level of English language?

CET4: _____

CET6: _____

IELTS: _____

TOEFL: _____

Other tests: _____

Part 2: International Competence & Perception of Internationalized Campus Culture

Please select your answers to the questions below on a scale of 1-5 (from “completely disagree” to “completely agree”)

International Competence

Number	Content	Completely disagree (1)	Somewhat disagree (2)	Neutral (3)	Somewhat agree (4)	Completely agree (5)
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5.1	I have knowledge of the definition of internationalization and its variation tendency					
5.2	I believe there is an interdependency among countries in political, economic, and environmental aspects					
5.3	I have knowledge of the impact of internationalization (e.g. its impact to the development of countries and individual life)					
5.4	I have knowledge of current world events and important international issues					
5.5	I have knowledge of the history and geography of at least one country except China					
5.6	I have knowledge of the politics, economy, and legal system of at least one country except China					
5.7	I have knowledge of religious faith, cultural norms and expectations of at least one country except China					
5.8	I could easily read the English-language literature of my research field					
5.9	I could easily use at least three of the following common software: Excel, PDF, SPss, Amos, Mplus, Stata, HLM, DEA, EViews, Nvivo, AutocAD, Matlab, Ansys, Solid works, Unity3D					
5.10	I could easily get knowledge and information from foreign websites					
5.11	I could analyze and ponder problems from foreign cultural perspective					
5.12	I have experience of working with foreigners					
5.13	I could find cultural difference during the communication with					

	foreigners					
5.14	I could quickly find common ground during the communication with foreigners					
5.15	I could quickly adjust my tongue and pattern during the communication with foreigners					
5.16	I could easily work and live in an intercultural environment					
5.17	I hope to have a connection with foreign scholars and students					
5.18	I hope to experience lifestyle in different cultural norms in a foreign country					
5.19	I hope to experience academic environment in different cultural norms in a foreign country					
5.20	I would try my best to respect others' culture and value during the communication with foreigners					
5.21	I would try my best to understand others' culture and value during the communication with foreigners					
5.22	I would try my best to appreciate others' culture and value during the communication with foreigners					
5.23	I identify with Chinese culture and values					
5.24	I think I am valuable to the nation and society					
5.25	My view to the world is one of the many possible views to the world					
5.26	I think I am a Chinese citizen					
5.27	I think I am a global citizen					

Perceptions on Internationalized Campus Culture

Number	Content	Completely disagree (1)	Somewhat disagree (2)	Neutral (3)	Somewhat agree (4)	Completely agree (5)
6.1	I have participated in international discussion, training or conference(e.g. World University Forum on Materials Science & Engineering, et al.)					
6.2	I have participated in international recreational and sports activities (e.g. International Garden Flower Expo, Military World Games, et al.)					
6.3	I have participated in extra-curricular activities that have international elements (e.g. Global village, M-Day, English Corner, et al.)					
6.4	I have many opportunities to attend these activities mentioned above					
6.5	I think these activities could broaden my international horizon					
6.6	I think these activities could enhance my abilities to communicate and cooperate with others					
6.7	I think our school attach importance to the international exchange and cooperation of students (e.g. Monash University 2+2, international academic competition, et al.)					
6.8	I think our school offer sufficient opportunities for students to attend international exchange and cooperation					

6.9	I think international exchange and cooperation could broaden my international horizon					
6.10	I think international exchange and cooperation could enhance my abilities to communicate and cooperate with others					
6.11	I have attended international courses (e.g. using international advanced textbooks, of taking English-medium courses et al.)					
6.12	I think the number of full-time foreign teachers in my school is relatively large					
6.13	I think the teachers in our school have rich experiences abroad (e.g. foreign doctoral degree, work experience)					
6.14	I think the teachers in our school could deliver international advanced knowledge, research hotspots to students during courses					
6.15	I think the teachers in our school could provide international vision and view to students during courses					
6.16	I have many opportunities to communicate with students from other countries in my school					
6.17	I think communications with students from other countries in my school are beneficial to improving my international competence					

7. Which aspects are important for you to improve international competence? Please explain the reasons

- Curriculum
- Teachers
- Teaching Activities
- Extra-curriculum Activities
- International Students
- Atmosphere

8. Do you think there are any other opportunities your school is supposed to provide to the students to improve your international competence?

9. Do you have any other suggestions for international competence training in your school?

10. Would you mind if I conduct a follow-up interview with you? (About 30 minutes)

Yes [Please leave your contact information, such as QQ, Wechat, or Email address]

No

Appendix B Interview Questions

Undergraduate Students

[Interviews are semi-structured so the questions may be slightly different for each participant, depending on their responses.]

1. Which school are you in?
2. Which year are you at?
3. How many international courses have you attended? (e.g. international advanced textbooks, English-medium courses et al.)
-- Follow-up questions on the courses, teachers, and students

4. Have you attended international extracurricular activities?
 - If so, what kind of activities?
 - How do you feel about attending those activities?
 - What are the outcomes of attending the activities?
5. What is your understanding of international competence?
6. How do you feel about the training of international competence for students in your school? And of the other internationalized school?
7. Do you think your international competence has been improved during your study at this school?
8. What do you think the School can do to further improve the quality of student training/international competence?

Appendix C Interview Questions

Staff Members

[Interviews are semi-structured so the questions may be slightly different for each participant, depending on their responses.]

1. What is your understanding of the purpose of student training at your School?
2. What is your understanding of international competence?
3. How do you feel about the quality of student training on international competence in your school?
4. What aspects do in your mind have positive influence on improving international competence of students?
5. What are(is) the next stages/reformation would be applied to improve student training/international competence in your school?

Appendix D PARTICIPANT INFORMATION SHEET

Undergraduate Students' International Competence in the Context of Internationalization at Home: A Case Study in China

Central University Research Ethics Committee (CUREC) Approval Reference: ED-CIA-21-210

1. *Why is this research being conducted?*

Recently, many countries have given great attention to the study of internationalization at home (IaH) in order to enhance the international competence of students in a local context, which is much affordable for the students than the traditional international education abroad. However, a review of the literature reveals a lack of research on the comparison of impact caused by such reformation on the training of students in a Chinese context. The research aims to compare the students' international competence in the context of IaH with these in the context of traditional Chinese higher education. Secondary data collection would be applied, combined with questionnaires and interviews, to explore the development of students' international competence in an IaH context and a non-IaH context.

2. *Why have I been invited to take part?*

This study has chosen two Schools at one case university. If you are an undergraduate student, you have been invited because you are studying in one of the case Schools. The research aims to find the largest difference of international competence, you are suitable to participate as you are in your first year or fourth year of studying in your school.

If you are a staff member, it is because that you are familiar with the policy or implementation of the student training of international competence at the selected case School.

3. *Do I have to take part?*

No. You can ask questions about the research before deciding whether or not to take part. If you do agree to take part, you may withdraw yourself from the study, without giving a reason, by advising the researcher of this decision. The data will be stored on a personal password protected laptop and a password protected personal hard disk ensuring confidentiality until the point of withdrawal.

4. *What will happen to me if I take part in the research?*

If you are a student and are happy to take part in the research, you will be asked to fill in a questionnaire, the questions are mainly about the extent of your international competence and your participation of the activities related to international competence. If you are willing to attend a follow-up interview, which should take about half an hour and focused on your experience related to international competence, you could leave your contact information in your questionnaire. The entire interview will be audio-recorded for the purpose of data analysis. You will be invited to attend the questionnaires on campus or online. You will be invited to attend interviews at public spaces on campus.

If you are a staff member and are happy to take part in the research, you will attend an interview mainly about your understanding and experience related to international competence. This should take approximately half an hour. The entire interview will be audio-recorded for the purpose of data analysis. You will be invited to attend interviews online or on campus.

If you are still happy to take part, you will need to sign a consent form.

5. *Are there any potential risks in taking part?*

There is no known risk for the attendance except that there is a slight possibility that you might

be recognized by participants' institution and experience in the final report. To reduce any potential risks, the researcher will make every effort to preserve confidentiality and anonymize the case institutions and the participants.

6. *Are there any benefits in taking part?*

The direct benefit of taking part is that you will have a chance to reflect about the student training of international competence and give suggestions on future plan. It might be beneficial for the future students and administrators to rethink the pass ways of strengthening international competence for students.

7. *Expenses and payments*

There will be no payment for taking part in this study.

8. *What happens to the data provided?*

The information you provide during the study is the research data. Any research data from which you can be identified (e.g. grade, audio recording) is known as personal data.

Personal / sensitive data will be stored in the researcher's personal password protected laptop and save these data under file names of random letters. These data will be deleted after three years from the finishing date of the research.

Other research data (including consent forms) will be stored for at least three years after publication or public release of the work of the research.

Only the researcher will have access to the research data.

9. *Will the research be published?*

The University of Oxford is committed to the dissemination of its research for the benefit of society and the economy and, in support of this commitment, has established an online archive of research materials. This archive includes digital copies of student theses successfully submitted as part of a University of Oxford postgraduate degree program. Holding the archive online gives easy access for researchers to the full text of freely available theses, thereby increasing the likely impact and use of that research.

The research will be written up as a master's thesis. On successful submission of the thesis, it may be deposited both in print and online in the University archives to facilitate its use in future research. If so, the thesis will be openly accessible. The research may be published in other formats such as academic papers or conference papers.

10. *Who has reviewed this study?*

This study has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee (Reference number: ED-CIA-21-210).

11. *Who do I contact if I have a concern about the study or I wish to complain?*

If you have a concern about any aspect of this study, please contact the relevant researcher [anonymized here]. We will acknowledge your concern within 10 working days and give you an indication of how it will be dealt with. If you remain unhappy or wish to make a formal complaint, please contact the Chair of the Research Ethics Committee at the University of Oxford who will seek to resolve the matter as soon as possible:

Chair, **Social Sciences & Humanities Inter-Divisional Research Ethics Committee**; Email: ethics@soesci.ox.ac.uk; Address: Research Services, University of Oxford, Wellington Square, Oxford OX1 2JD

12. *Data Protection*

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study.

The University will process your personal data for the purpose of the research outlined above. Research is a task that is performed in the public interest.

Further information about your rights with respect to your personal data is available from <http://www.admin.ox.ac.uk/councilsec/compliance/gdpr/individualrights/>.

13. Further Information and Contact Details

If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please contact:

XXXXX, MSc student
Department of Education, University of Oxford
St Hugh's College, St Margaret's Road Oxford
University tel: XXXXXX
University email: XXXXX3@ox.ac.uk

Appendix E PARTICIPANT CONSENT FORM

Central University Research Ethics Committee (CUREC) Approval Reference: ED-CIA-21-210

Undergraduate Students' International Competence in the Context of Internationalization at Home: A Case Study in China

Purpose of Study:

The research is going to compare the students' international competence in the context of internationalization at home (IaH) with these in the context of traditional Chinese higher education.

Please initial each box

- | | | |
|----|--|--------------------------|
| 1 | I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. | <input type="checkbox"/> |
| 2 | I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without any adverse consequences or penalty. | <input type="checkbox"/> |
| 3 | I understand that research data collected during the study may be looked at by authorized people outside the research team. I give permission for these individuals to access my data. | <input type="checkbox"/> |
| 4 | I understand that this project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee. | <input type="checkbox"/> |
| 5 | I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project. | <input type="checkbox"/> |
| 6 | I understand how this research will be written up and published. | <input type="checkbox"/> |
| 7 | I understand how to raise a concern or make a complaint. | <input type="checkbox"/> |
| 8 | [For interviews not for the questionnaire] I consent to being audio recorded | <input type="checkbox"/> |
| 9 | [For interviews not for the questionnaire] I understand how audio recordings will be used in research outputs [please delete as appropriate | <input type="checkbox"/> |
| 10 | I agree to the use of anonymized quotes in research outputs | <input type="checkbox"/> |
| 11 | I agree to take part in the study | <input type="checkbox"/> |

_____ dd / mm / yyyy _____
Name of Participant Date Signature

_____ dd / mm / yyyy _____
Name of person taking consent Date Signature

Appendix F Recruitment material [Poster]

Undergraduate Students' International Competence in the Context of Internationalization at

Home: A Case Study in China

Ethics Approval Reference: ED-CIA-21-210

VOLUNTEERS NEEDED FOR SURVEY

Recently, many countries have given great attention to the study of internationalization at home (IaH) in order to enhance the international competence of students in a local context, which is much affordable for the students than the traditional international education abroad. However, a review of the literature reveals a lack of research on the comparison of impact caused by such reformation on the training of students in a Chinese context. The research aims to compare the students' international competence in the context of IaH with these in the context of traditional Chinese higher education.

I am looking for volunteers who are in their first or fourth year in the School of X or School of Y [School names anonymized here]. You would be invited to fill in a questionnaire either online or at the students' affair office, which will take about half an hour of your time. You will be asked to provide contact information if you are interested in taking part in a follow-up interview. The questionnaire is otherwise anonymized.

If you are interested and would like more information please contact XXXXX at the Department of Education, XX Norham Gardens, Oxford at XXXXX@ox.ac.uk. There is no obligation to take part.

Thank you!

Appendix G CUREC Approval

Dear XXXXX

Undergraduate Students' International Competence in the Context of Internationalization at Home: A Case Study in China

The above application has been considered on behalf of the Departmental Research Ethics Committee (DREC) in accordance with the procedures laid down by the University for ethical approval of all research involving human participants.

I am pleased to inform you that, on the basis of the information provided to DREC, the proposed research has been judged as meeting appropriate ethical standards, and accordingly, approval has been granted.

Please continue to follow all current guidance issued by CUREC during the pandemic, notably COVID-19: CUREC guidance on research involving human participants, <https://researchsupport.admin.ox.ac.uk/governance/ethics/coronavirus>

If relevant please also check the CUREC website for their best practice research guides, <https://researchsupport.admin.ox.ac.uk/governance/ethics/resources/bpg>

Good luck with your research study,

Keep well and safe,

Yours sincerely,

All good wishes,

XXXXX

Chair, DREC

XXXXX, PhD, FHEA, FRSA, Docent