Influences of Cultural Capital and Internationalization on Global Competence: Evidence from China’s Higher Vocational Education

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Influences of Cultural Capital and Internationalization on Global Competence: Evidence from China’s Higher Vocational Education

A Dissertation by

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Orange, CA

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Submitted in partial fulfillment of the requirements for the degree of

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May 2024

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April 2024
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by Yiyings Teng
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Many thanks to those who have contributed in various ways to the enhancement of this dissertation: my peer doctoral students and intellectual partners for their critical discussions, generous endorsement, and ongoing support on this research.

I aspire that the evidence and insights from this dissertation will sharpen our focus on the necessity for and purposeful design of “global competence” in higher vocational education. In so doing, we will achieve better thinking outcomes for preparing higher vocational students with life-long career prospects and responsibility for global sustainability, equity, and inclusion.
ABSTRACT

Influences of Cultural Capital and Internationalization on Global Competence:
Evidence From China’s Higher Vocational Education

by Yiying Teng

The purpose of the study was to explore global competence-based pedagogy in higher education. Under the umbrella of cultural capital theory and internationalization framework, a systematic literature review analyzed and synthesized 26 empirical studies pertaining to global competence education in postsecondary education from 2013 to 2022. The review revealed a research gap highlighting the lack of exploration into global competence pedagogy among students in higher vocational education. To address this gap, the present study focused on a sample of 1,504 participants recruited from a Chinese vocational university situated on the eastern coast of China, encompassing both 3-year college students and 4-year undergraduates. Employing hierarchical linear regression, the study examined the relationship between participants’ attainment of global competence and 19 influencing factors identified through the systematic review.

Consistent with cultural capital theory, the findings indicated that higher vocational students with favorable family and educational backgrounds tended to access more educational opportunities and achieve higher levels of global competence. However, limited opportunities for international mobility among higher vocational education students constrained the impact of overseas experiences on their global competence attainment. The study also revealed that internationalization framework played a significant role in fostering globally competent students in China’s higher vocational system. Specifically, faculty international mobility positively influenced the growth of global competence. The internationalization curriculum, cocurricular...
activities, and extracurricular engagements significantly enhanced global competence achievement. Furthermore, the results underscored the importance of off-campus intergroup contact in supplementing the limited on-campus interactions. Both in-person and online contact with foreign individuals outside of campus were found to facilitate the development of global competence. Notably, mediated contact made a unique contribution to global competence development among Chinese higher vocational students, suggesting that such mediums offer invaluable opportunities for students to acquire global resources, particularly for those lacking social connections with foreign individuals in their daily lives.

In conclusion, the findings of this study contribute novel insights to the literature on global competence-based education, suggesting that students in higher vocational education, regardless of their socio–economic background or opportunities for international mobility, can benefit from the adoption of internationalization pedagogies in achieving global competence.
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<tr>
<td>ACE</td>
<td>American Council on Education</td>
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<tr>
<td>CIEE</td>
<td>Council on International Educational Exchange</td>
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<td>CNKI</td>
<td>China National Knowledge Infrastructure</td>
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<td>COIL</td>
<td>Collaborative Online International Learning</td>
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<td>ERIC</td>
<td>Education Resource Information Center</td>
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<td>F</td>
<td>F-statistic</td>
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<tr>
<td>GC</td>
<td>Global Competence</td>
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<td>GCSHVS</td>
<td>Global Competence Survey on Higher Vocational Students</td>
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<td>GCSU</td>
<td>Global Competence Survey for Undergraduates</td>
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<td>GPA</td>
<td>Grade point average</td>
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<td>HMR</td>
<td>Hierarchical multiple regression</td>
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<td>IA</td>
<td>Internationalization Abroad</td>
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<td>IaH</td>
<td>Internationalization at Home</td>
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<td>IRB</td>
<td>Institutional Review Board</td>
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<td>MOE</td>
<td>Ministry of Education</td>
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<td>n</td>
<td>Sample Size</td>
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<tr>
<td>NCEE</td>
<td>National College Entrance Examination</td>
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<td>OECD</td>
<td>Organization for Economic Co-Operation and Development</td>
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<tr>
<td>p</td>
<td>p-value</td>
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<tr>
<td>Abbreviation</td>
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<tr>
<td>PISA</td>
<td>Program for International Student Assessment</td>
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<td>PRISMA</td>
<td>Preferred Reporting Items for Systematic Reviews</td>
</tr>
<tr>
<td>$t$</td>
<td>$t$-statistic</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific, and Cultural Organization</td>
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<tr>
<td>VIF</td>
<td>Variance Inflation Factor</td>
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CHAPTER 1. INTRODUCTION

This project was inspired by my working experiences in Chinese higher vocational education. Having been a foreign language instructor for over 15 years, I have frequently encountered vocational students exhibiting low levels of proficiency in foreign languages. This deficiency significantly constrains their prospects for pursuing overseas education and securing employment opportunities in multinational corporations. Compared to students in higher general education, Chinese vocational students predominantly originate from socioeconomically disadvantaged backgrounds, such as rural and low-income families (Jia & Ericson, 2017). They and their family consider higher vocational education as an alternative pathway for social up-mobility (Gausel & Bourguignon, 2020). However, higher vocational students manifest a deficit in sustainable employability both in international and Chinese context; thus, necessitating vocational educators to bolster their adaptability to shifts in labor market requirements (Xu et al., 2022). As a vocational educator, I aspire to assist vocational students in acquiring life-long employability beyond foreign language proficiency. During the doctoral journey, the conceptual framework global competence (GC) inspired me to nurture a new generation of higher vocational students, who will be able to effectively interact with people in various intercultural contexts and be responsible for global sustainability, equity, and inclusion. Through this study, I aim to furnish empirical evidence and insights pertinent to augmenting the GC of higher vocational students.

In Chapter 1, I introduce the study’s background, including the internationalization of higher education, the necessity of cultivating students’ GC in international higher education, and
the importance of developing students’ GC in Chinese higher vocational education. Then, I discuss the problem, the purpose, the research questions, and the study’s significance. I review GC theoretical models and assessment instruments and then concentrate on the theoretical framework influencing GC in Chapter 2. Following the Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines (Tugwell & Tovey, 2021), I also scrutinized 26 studies about the relationships between GC and its influencing factors such as students’ cultural capital backgrounds, the overseas experiences of students and faculty, schools’ internationalization at home pedagogies encompassing curricular, cocurricular, and extracurricular activities, and students’ off-campus involvement in International intergroup contact. In Chapter 3, I delineate the research methodology of this research, including a web-based survey and quantitative data analyses. Chapter 4 portrays the findings derived from the quantitative data analyses. Chapter 5 delves into a comprehensive discussion concerning the results, their implications, the strengths and limitations of the study, and provides insights into future research avenues.

**Statement of the Problem**

The statement of problem is discussed in this section. I first provide the definition of GC. Then, I introduce the significance of GC in higher education. Additionally, this section lays the foundation for understanding the significance of internationalization development and the necessity of developing students’ GC in Chinese higher vocational education.

**Definition of Global Competence**

Global Competence Associates (n.d.) stated the notion of GC has been conceptualized differently in research, education, business, and government worldwide since the mid-1980s.
Zhou (2022) concluded the conception of GC was developed from Butler’s (1978) four dimensions of competence (e.g., knowledge, skill, attitude, and value). Two principal orientations of GC were developed based on these four dimensions over the past half-century (Zhou & Green, 2022): employability for a life-long career (Engel et al., 2019; Global Leadership Excellence, 2018a; W. D. Hunter, 2004; Liu-Farrer et al., 2021; Resnik, 2009) and responsibility for social sustainability/equity/inclusion (Banks & Banks, 2019; Council on International Educational Exchange [CIEE], 1988; Gurin et al., 2002; Organization for Economic Co-Operation and Development [OECD], 2018). This study defines an orientation that career and civic orientation of GC are indispensable. Both are interwoven into the lives of students throughout their postsecondary education (Tsinghua University, 2016).

**Global Competence in Higher Education**

Global competence has been a buzzword in global tertiary education since the end of the last century. The American Council on The Stanley Foundation International Intercultural Education (ACIIE, 1996) called for a globally aware and competent citizenry at the end of the 20th century (Zhou, 2022). The Association of American Colleges and Universities (2011) regarded GC as a pedagogical goal for U.S. universities. Since then, the popularity of GC has been reflected in numerous universities’ initiatives and mission statements (Zhou, 2022). For instance, Project Zero at Harvard University concentrated on GC development and aimed to equip its students with knowledge, skills, and responsibility as they ventured into the world. It included the knowledge of languages, culture, economics, and policies of the countries they would visit, and the skills of interacting in a knowledgeable way (Reimers, 2009).
Except for the abilities of cross-cultural communication, The United Nations Educational, Scientific and Cultural Organization (UNESCO) has advocated for cultivating global citizens for peace and sustainable development (UNESCO, 2013). With the discourse on *Education 2030: Towards inclusive and equitable quality education and lifelong learning for all*, the Organization for Economic Co-Operation and Development (OECD) emphasized GC for cultivating a new generation with responsibility for social sustainability and equity, and GC was comprised as a new dimension in the Program for International Student Assessment (PISA), an influential international large-scale test of 15-year-old students’ achievement (OECD, 2018).

**Internationalization and Global Competence in Chinese Higher Education**

Higher education stands as a paramount facet of China’s national policy such as the Belt and Road Initiative (BRI) because universities are regarded as pivotal means for knowledge production, transmission, and transference contributing to socioeconomic advancement (Etzkowitz, 2008; Y. Liu & Huang, 2018). Internationalization in Chinese higher education institutions has been strategically integrated into its national agenda for regional and global development.

A multitude of documented policies underscore that China’s endeavors in the internationalization of higher education have an indispensably positive impact on its development in globalization through BRI. For instance, “*The Education Action Plan for the Belt and Road Initiative Education Action under BRI*” (MOE, 2016), articulates a comprehensive outline detailing how education can serve as a facilitator and contributor to the objectives BRI. The Action Plan delineates three principal visions for educational partnerships, fostering
interpersonal connections, nurturing supportive talent, and attaining mutual development. These abilities are all encompassed in GC framework. Following this, the necessity of promoting students’ GC for globalization adaptation has been well addressed in numerous initiatives issued by the Chinese Ministry of Education (MOE). MOE (2010) promulgated the framework of China’s National Plan for Medium and Long-Term Education Reform and Development (2010–2020), stating higher education should: (a) set an international understanding of education for the demands of national economic and social opening-up; (b) promote globally competent talents with international knowledge and capability of communicating and cooperating in international affairs; (c) encourage cross-cultural communication, exchange and cooperation; and (d) increase students’ understanding of various cultures.

Despite the COVID-19 global pandemic, the “Suggestions on Accelerating and Expanding Education Opening up in the New Era” (MOE, 2020a) and the “Plan for Strengthening the Construction of Higher Education Talent Training System” (MOE, 2022a), reiterated the significance of internalization in Chinese higher education and cultivation of globally competent students. As the leading university in China, Tsinghua University set up the Centre for Student Global Competence Development to respond to the international and national policy of cultivating GC. This center provides an academic platform for investigating curricular, cocurricular, and extracurricular activities by gathering resources inside and outside the University (Zhou, 2022). These initiatives and policies from the state and universities reflect the urge for globally competent talents in China.
Internationalization and Global Competence in Chinese Higher Vocational Education

The scope of contributions to BRI-driven initiatives have extended to include Chinese higher vocational education. According to statistics issued by MOE (2023), by 2022, the aggregate count of higher vocational institutions stood at 1,521, encompassing 1,489 colleges (e.g., equivalent to 3 academic years of study) and 32 universities (e.g., offering both 3 and 4 academic years of study). By 2022, the number of higher vocational institutions has surpassed higher general institutions, which totaled 1,239 (MOE, 2023).

With the growing quantity of facility construction projects in the BRI, an emergent trend in the internationalization of postsecondary education extends beyond research and academic mobilities, now including bringing new opportunities to higher vocational education in China (Ge & Ho, 2022). The new orientation toward vocational education in the BRI has two primary reasons. First, it aligns with the less developed Chinese provinces, where vocational education has been prioritized as a means for local advancement. Consequently, these regions have amassed expertise leverageable for education, training, and knowledge dissemination to emerging international collaborators. Second, many partners in the Global South, such as Laos, Cambodia, and Myanmar, have a pressing need for this expertise to aid in their development (Dwyer, 2020).

Since the initiation of BRI, policies and initiatives have been promulgated to facilitate and govern the internationalization of vocational education. In 2014, the State Council launched the 2014–2020 Plan for Constructing Modern Training Schools and Vocational Education System (MOE, 2014). This document underscored the expansion of the vocational education
system through the exploration of international prospects and the identification of vocational training demands among BRI nations and international entities. “Guiding Principles for Promoting Collaboration in International Capacity of Productivity and Equipment Manufacturing” was issued with the aim of urging vocational colleges and universities to proactively engage in on-site training initiatives (State Council of the People’s Republic of China, 2015). Following this, Chinese initiatives aligned with BRI, highlighting the cultivation of globally competent talents proficient in cross-cultural collaboration and responsible for international industrial development, documented in the Report on the development of vocational education in China (2012–2022; MOE, 2022b).

**Research Background**

In the previous section, the significance of fostering Chinese higher vocational students’ GC was explicated from the internationalization of higher education and GC in international and Chinese higher general and vocational education. China has a strong demand for cultivating higher vocational students’ GC. For this to happen, this study first applied Bourdieu’s (1973, 1974, 1984, 1986) cultural capital theory (Bourdieu & Passeron, 1990) to understand the relationship between individual’s cultural capital background and GC attainment. Then, the internationalization framework (American Council on Education’s [ACE], 2023a; Knight, 1994) guided the study to identify the internationalization pedagogies from the literature. Guided by the theoretical model, a systematic literature review derived 19 factors influencing GC achievement in higher education.
Theoretical Framework

With the definition of GC in this study, cultural capital theory (Bourdieu, 1984, 1986) and comprehensive internationalization framework (ACE, 2023a; Knight, 1994) underpin the understanding of the characteristics of students’ GC in Chinese higher education. I apply cultural capital theory to uncover the relationships between the characteristics of GC and students’ cultural capital background. Y. Yang (2013) regarded Pierre Bourdieu, the architect of social and cultural capital theory, as “one of the most influential figures of the 20th century in the social science realm” (p. 1522). Bourdieu (1984, 1986) delineated capital as a power undergirding society possibly relating to money, social or cultural relationships which contribute to legitimizing the conception of GC (Andrews, 2021). I apply Bourdieu’s (1984, 1986) theoretical perspective to explore cultural capital (e.g., family and education background) and capital reproduction (e.g., further study abroad and foreign language engagement) to bring coherence to GC education in higher vocational education.

The progression of internationalization has enlarged cross-cultural communication and exchanges and expanded the interrelationship of universities worldwide (J. Li & Eryong, 2021). The internationalization process of tertiary education consists of two genres of activities: internationalization abroad (IA) and internationalization at home (IaH; Y. Guo et al., 2021). IA provides cross-border opportunities for education to foster globally competent students through international partnership agreements, branch campuses, and research projects (De Wit & Altbach, 2020; Y. Guo et al., 2021). IaH refers to domestic activities like the intercultural and international dimensions in the curricular, cocurricular and extracurricular activities with local cross-cultural
communities, and transnational corporations (Beelen & Jones, 2015; De Wit & Altbach, 2020). Under the framework of comprehensive internationalization (ACE, 2023a; Knight, 1994), I explore how the internationalization of Chinese postsecondary education constructs the global intellectual shared community in professional and academic activities (e.g., faculty and student mobility, internationalized curricula) and influences students’ GC. Facing the challenges in higher education internationalization in the post-COVID-19 global pandemic world, this study aims to provide evidence for enhancing the governance and strategic layout of higher vocational education opening to the outside world.

**Influencing Factors in Systematic Literature**

Based on the PRISMA systematic review approach, this study reviewed 26 selected studies in international (7/26 manuscripts) and Chinese (19/26 manuscripts) higher education from the last decade (2013–2023). The influencing predictors of GC are classified into students’ cultural capital background and internationalization factors.

**Students’ Cultural Capital Background**

Findings demonstrated students’ GC level was significantly influenced by participants’ cultural capital background. The emerged influencing factors of GC entail personal information such as personal and family background (i.e., gender, family location, family income, and first-generation student), educational background (i.e., high school type, degree types, and fields of studies), and capital reproduction (i.e., foreign language engagement, further study, further overseas study, and future employment expectation).
Internationalization Factors

According to the systematic review, internationalization factors are distributed in internationalization abroad (IA) and internationalization at home (IaH). IA is an asset for cultivating GC through faculty overseas mobility (Butum et al., 2020) and student overseas (Alfaro & Paz-Albo, 2021; Chong et al., 2022; Doerr, 2018; Fang et al., 2018; Y. Hu & Jing, 2018; X. Liu & Cao, 2020; Schenker, 2019; X. Zhang, 2020).

Nevertheless, the high cost and limited funding impede a majority of the population from studying abroad (Soria & Troisi, 2013; Woicoesco et al., 2022). Furthermore, the breakout of the COVID-19 global pandemic has shaped the scale and pattern of student-abroad mobility (Q. Yang et al., 2021). Findings from researchers (Altbach & de Wit, 2020; Mok et al., 2021) and organizations (UNESCO, Goris, 2020; Institute of International Education, Martel, 2020) implied the number of student-abroad opportunities would decrease. Therefore, educators need to strengthen IaH to develop GC. In the literature, IaH activities consisted of internationalization at home curriculum and intergroup contact.

An internationalized curriculum instills cross-cultural and global issues for cultivating all students’ GC domestically for students from all fields of study (ACE, 2023a). Empirical findings showed curricula are related to the content of in-class curriculum, including foreign language for specific fields of study (Butum et al., 2020), a global topic preparing students for international careers (Butum et al., 2020; Q. Meng et al., 2017a), positively influenced students’ GC.

Cocurricular activities, referring to on-campus engagements such as virtual collaboration and discussion with foreign students (Commander et al., 2016; Kang et al., 2018; Leung et al., 2017;
Y. Li, 2013; Ndubuisi et al., 2022), and extracurricular pursuits, denoting off-campus endeavors such as intercultural training and internship (J. Li & Xu, 2016), were instrumental in promoting students’ GC.

The intergroup contact factors surfacing from the systematic review were not included in the internationalization framework proposed by (ACE, 2023a). This study hypothesizes intergroup contact factors can be framed into internalization at home because social life is an integral part of embedding GC acquisition. The internationalization at home intergroup contact consists of direct contact (Cao & Meng, 2020b; Kang et al., 2018; Q. Meng et al., 2017b), online contact (Cao & Meng, 2020b), and mediated contact (Cao & Meng, 2020a; Kang et al., 2018; Q. Meng et al., 2017b).

The Scale for Global Competence

Although the studies in the Chinese context recruited the participants from bachelor, master, and doctoral levels, no samples of 3-year college students and 4-year undergraduates from higher vocational institutions (HVIs) were discovered. This finding echoed higher vocational education marginalization in China’s postsecondary education system at the bottom of this education hierarchy (e.g., first tier: prestigious public research universities, second tier: provincial universities, last tier: vocational education colleges; Trent & Liu, 2023). However, MOE (2022b) in China is emphasized “As a type of education that is equally important as general education, vocational education is an important and vibrant part of building a high-quality educational system” (p. 63). Hence, the investigation on higher vocational students holds considerable implications and contributes to the internationalization efforts of HVIs in China.
Moreover, 4-year vocational undergraduates are newcomers to China’s higher education. To augment the quality of vocational education and the social status of higher vocational students (MOE, 2020a, 2020b, 2021), the Chinese government has launched a series of initiatives and policies. With the spirit of enhancing the adaptability of vocational and technical education of the fifth plenary session of the 19th Central Committee of the Communist Party of China (CPC, State Council of the People’s Republic of China, 2020), the MOE in China decided to set up 4-year undergraduates in Chinese higher vocational education in 2020. Other policies supported the establishment of the bachelor’s degree of higher vocational education in China, such as the *Implementation Plan of National Vocational Education Reform* (State Council of the People’s Republic of China, 2019), the Implementation Plan for Accelerating the Transformation of Independent Colleges issued by the Ministry of Education (MOE, 2020a), and the Action Plan for Improving the Quality and Excellence of Vocational Education (2020–2023; MOE, 2020b).

In 2021, 32 Chinese vocational universities recruited the first cohort of 4-year bachelor students. As a result, my target sample of this research represents the China’s higher vocational education because they are marginalized in GC research and new in Chinese tertiary education, accounting for nearly 40% of the whole higher education population in 2022 (MOE, 2023).

Given gaps in the research on students’ GC in the Chinese postsecondary vocational education landscape, I conducted a quantitative study to explore students’ GC characteristics, examine GC differences across groups, and investigate how students’ cultural capital background, student/faculty international mobility, and the internationalized curriculum are related to students’ GC in a private vocational university in Shanghai. I chose Shanghai because
it is a highly internationalized city. The internationalization of Shanghai sets a higher GC requirement for people who study and work in Shanghai. This requirement makes my research more necessary and meaningful.

**Purpose of the Study**

The purpose of this quantitative study was to research a Chinese private vocational university in Shanghai named Z University to (a) identify 3-year college and 4-year bachelor students’ GC characteristics and examine GC differences across different characteristic groupings and (b) investigate the relationships between GC and students’ cultural capital background, student and faculty overseas mobility, internationalization at home curriculum, and internationalization at home inter-group contact.

To examine the relationship between the level of GC among Chinese higher vocational students and the 19 predictors identified through systematic review, I developed the Global Competence Survey on Higher Vocational Students (GCSHVS). Adapted from Y. Liu and Wu’s (2015) Global Competence Survey for Undergraduates (GCSU), the GCSHVS comprised five principal sections, encompassing one set of dependent variables (i.e., global competence and its four dimensions) and four sets of independent variables (i.e., students’ cultural capital background, student and faculty overseas mobility, internationalization at home curriculum, and internationalization at home inter-group contact).
Research Questions

Based on the research purpose, the research questions for this study were:

Research Question 1: What are the characteristics of students’ GC in Chinese vocational university? Is there any difference in the overall GC score and its four subdimensions score between higher vocational 3-year college students and 4-year undergraduates?

Research Question 2: How much variance in the overall GC score and its four subdimensions score of Chinese higher vocational students is explained by cultural capital factors? What cultural capital factors predict the likelihood of Chinese higher vocational students’ GC overall score and its four subdimensions score?

Research Question 3: How much variance in the overall GC score and its four subdimensions score of Chinese higher vocational students is explained by internationalization abroad factors? What internationalization abroad factors predict the likelihood of Chinese higher vocational students’ GC overall score and its four subdimensions score?

Research Question 4: How much variance in the overall GC score and its four subdimensions score of Chinese higher vocational students is explained by internationalization at home curriculum factors? What internationalization at home curriculum factors predict the likelihood of Chinese higher vocational students’ GC overall score and its four subdimensions score?

Research Question 5: How much variance in the overall GC score and its four subdimensions score of Chinese higher vocational students is explained by internationalization at
home intergroup contact factors? What internationalization at home intergroup contact factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

Significance of the Study

This study significantly contributes to the existing literature on GC education. A notable strength lies in its focus on GC among Chinese higher vocational students, who constitute a substantial proportion of the Chinese higher education system, thus addressing a research gap and enriching quantitative analyses in this area. By investigating the GC level of higher vocational students in China, the study fills a significant gap in the existing quantitative research landscape. Furthermore, by examining the characteristics and dynamics of undergraduate students in Chinese higher vocational education who enrolled in 2021 this study offers valuable insights into an emerging population in this educational domain.

Additionally, the study addresses the dearth of suitable measurement instruments for assessing GC among higher vocational students by empirically validating the Global Competence Survey for Undergraduates (GCSU; Y. Liu & Wu, 2015). Through this validation process, the study demonstrates the suitability of the GCSU scale for Chinese higher vocational students. Furthermore, it introduces a new survey measurement tool, the Global Competence Survey on Higher Vocational Students (GCSHVS), facilitating further research in higher vocational systems of both Chinese and international context. The GCSHVS survey also enables a nuanced exploration of the relationship between students’ GC and pertinent theoretical frameworks such as cultural capital theory and the internationalization framework.
The COVID-19 global pandemic reshaped the internationalization model in global and Chinese tertiary education (Q. Yang et al., 2021). This study provides statistical data on students’ cultural capital background and internationalization predictors to promote GC in the postpandemic era. The findings will offer valuable information for universities to grasp the changing trends of international student mobility, formulate countermeasures and long-term strategies based on their own actual conditions, and better promote international exchanges, cooperation, and internationalized curriculum in higher education.

**Definitions of Terms**

For this study, I used the terms of global competence, internationalization, internationalization abroad, internationalization at home, cultural capital, internationalization at home curriculum, and internationalization at home intergroup contact. Some terms use general definitions, and others have specific meanings in this study. The definitions and implications of these terms are illustrated next.

**Global Competence.** Global competence consists of four dimensions: (a) knowledge of world events and foreign cultures (W. D. Hunter, 2004), global sustainable issues (OECD, 2018; Tsinghua University, 2016), foreign languages (Tsinghua University, 2016); (b) skills to cooperate cross-culturally and adaptability in a cross-cultural environment (W. D. Hunter, 2004; Tsinghua University, 2016), deal with challenging situations (OECD, 2018; Tsinghua University, 2016); (c) attitudes toward cultural diversity and preparedness to involve in the diversity (W. D. Hunter, 2004; OECD, 2018; Tsinghua University, 2016); and (d) value toward immigrants and respect for people from other cultures (OECD, 2018; Tsinghua University, 2016).
**Cultural Capital.** Cultural capital develops from Bourdieu’s (1984, 1986) cultural capital theory. It includes three areas: personal and family background (e.g., gender and parents’ highest degree), educational background (e.g., fields of study), and capital reproduction.

**Internationalization.** Internationalization is: The intentional process of integrating an international, intercultural or global dimension into the purpose, functions, and delivery of postsecondary education, to enhance the quality of education and research for all students and staff and to make a meaningful contribution to society. (De Wit et al., 2015, p. 29)

**Internationalization Abroad.** Internationalization abroad means an individual has to go beyond the national board for international interactions or study, including student abroad mobility, and faculty abroad mobility (De Wit & Altbach, 2020; Y. Guo et al., 2021).

**Internationalization at Home Curriculum.** Internationalization at home focuses on the integration of home-campus-based activities or environments for a population of students. This includes international dimensions in the curriculum, cocurriculum activities, and extracurriculum of interconnection with local multinational communities or companies (Beelen & Jones, 2015).

**Internationalization at Home Intergroup Contact.** Internationalization at home intergroup contact refers to internationalization approaches to enhance GC in social life. The intergroup contact theory (Allport, 1954; Pettigrew & Tropp, 2008) perceives intergroup contact diminishes intergroup preconception and increases intergroup trust/empathy when the interactions between both sides are in equal status, cooperative attitudes, and pursuit of common goals (Kormos et al., 2014). This study included three subthemes such as in-person contact, online contact, and mediated contact).
CHAPTER 2. REVIEW OF LITERATURE

The literature review first delineated the multifaceted perspectives on the definitions of global competence (GC) coupled with its significance and assessments. Second, this chapter explains the theoretical underpinnings of the present study, including Bourdieu’s (1973, 1974, 1984, 1986) cultural capital theory (Bourdieu & Passeron, 1990) and the internationalization framework (ACE, 2023a; Knight, 1994, 2004). Guided by the theoretical model, a systematic literature review and the themes from the literature describe the theoretical framework. Bourdieu’s cultural capital theory (1973, 1974, 1984, 1986) unraveled a demographic level of capital to buttress the theoretical model. Moreover, this study employed internationalization theory as a conceptual framework, which shaped and guided this research about internationalized predictive factors of learners’ GC development. Furthermore, the research gap emerging from the systematic review is detailed.

Global Competence

Global Competence in Higher Education

GC was initially coined by the Council on International Educational Exchange (1988) intending to catalyze global mobility of students in higher education, especially in non-English speaking countries. This initiative aimed to prepare U.S. postsecondary students with a competence to understand the multifarious perspectives in their academic field outside the United States. Since then, literature has delineated the diverse capacities of a globally competent person, such as cross-cultural knowledge and intercultural communication skills (Adler &

Intending to prepare a new generation to deal with the hastening pace of globalization shaped by the immense variations in technology, economy, and politics (ACE Commission on International Education, 1998), academia called for a precise definition to assess GC grounded on these scattered interpretations. This section introduces various perspectives on the definitions and assessments of GC and the significance of global competence in higher education.

**Definition of Global Competence**

Butler’s (1978) definition of competence drew a foundational structure of GC. According to Butler (1978), competence is a mixture of knowledge, skills, values, and attitudes to address complex cultural demands in societies (see Figure 1). Knowledge refers to the informational basis/strategies (e.g., who, what, when, where, how, and why) for a skill. *Skill* stands for the capability to achieve a purposeful task with facility. Values mean concepts/principles of particular importance and worth to the individual, a group/community/society, or a culture. Values are the foundation for attitudes. *Attitude* consists of affection (i.e., emotion, ways of thinking) and behavior (i.e., motivation, personality) to react to a particular value or purpose. Competence-Based Education aims to provide learning experiences designed to lead to the attainment of a group of consensual competencies.
The concrete elements of GC are derived from knowledge, skill, value, and attitudes built on the structure of competence (Butler, 1978). However, no consensus exists on what GC should mean for students in higher education (Zhou, 2022). Table 1 outlines the definitions of GC from various institutions and scholars coupled with the dimensions of GC assessment.
### Table 1

**Review of Global Competence Definition and Assessment in Literature**

<table>
<thead>
<tr>
<th>Citation</th>
<th>Definition</th>
<th>Dimension and assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>W. D. Hunter’s (2004) Global Competence Checklist</td>
<td>having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this knowledge to interact, communicate and work effectively outside one’s environment.</td>
<td><strong>knowledge</strong> of world events and foreign cultures; <strong>skills</strong> to cooperate cross-culturally and adaptability in a cross-cultural environment; <strong>attitudes</strong> toward cultural diversity and preparedness to involve in the diversity</td>
</tr>
<tr>
<td>Global Competence Aptitude Assessment (Global Leadership Excellence, 2018a)</td>
<td>having flexible, respectful attitudes, including self-perspective, and applying knowledge of the historical, geographic, and societal factors that influence cultures to interact and build relationships with people around the world effectively</td>
<td><strong>internal readiness aptitudes</strong> (i.e., self-awareness, open-mindedness, attentiveness to diversity, risk-taking) <strong>external readiness aptitudes</strong> (i.e., global awareness, historical perspective, intercultural capability, collaboration across cultures)</td>
</tr>
<tr>
<td>Global Competence Assessment in PISA 2018 (OECD, 2019)</td>
<td>Capable of examining local, global, and intercultural issues, understanding, and appreciating different perspectives and world views, interacting successfully and respectfully with others, and taking responsible action toward sustainability and collective well-being</td>
<td><strong>knowledge</strong> about global sustainable issues (i.e., self-efficacy, awareness); <strong>skills</strong> (i.e., flexibility/adaptability in dealing with challenging situations); <strong>attitude</strong> (i.e., openness and intercultural communicative awareness); <strong>value</strong> (i.e., attitude toward immigrants and learning about different cultures; respect for people from other cultures)</td>
</tr>
<tr>
<td>Tsinghua University (2016)</td>
<td>the ability to learn, work and live sustainably together in global, international, and intercultural contexts</td>
<td><strong>Cognition:</strong> knowledge of global issues and foreign languages to communicate with people from different cultures <strong>Individual:</strong> responsibility and confidence <strong>Interpersonal relationship:</strong> skills of communication/cooperation and attitudes of openness/respect</td>
</tr>
</tbody>
</table>
W. D. Hunter’s (2004) Global Competence Checklist

Using a Delphi Technique, W. D. Hunter (2004) generalized an agreed-upon GC definition from 42 human resource executives at multinational enterprises and 133 international educators working in higher institutions. W. D. Hunter (2004) defined GC as “having an open mind while actively seeking to understand cultural norms and expectations of others, leveraging this knowledge to interact, communicate and work effectively outside one’s environment” (p. 81). Established from the definition and previous literature, W. D. Hunter (2004) provided a GC checklist with three dimensions: (a) knowledge of world events and foreign culture, (b) skills to cooperate cross-culturally and adaptability in a cross-cultural environment, and (c) attitudes toward cultural diversity and preparedness to involve in the diversity. W. D. Hunter’s (2004) GC checklist developed GC from a definition to an embryonic assessment (Todd, 2017).

Global Competence Aptitude Assessment

Built on W. D. Hunter’s (2004) work, Global Competence Associates. (n.d.), a pedagogical consulting corporation, launched the Global Competence Aptitude Assessment (GCAA) for use by the education and nonprofit domains in 2009 (Global Leadership Excellence, 2018a). Global Leadership Excellence (2018a) aimed to reach a worldwide agreement on the definition of GC and presented on their website “having flexible, respectful attitudes, including self-perspective, and applying knowledge of the historical, geographic and societal factors that influence cultures to effectively interact and build relationships with people around the world” (Global Leadership Excellence, 2018a, para. 2).
The reliability and validity of GCAA have been verified in more than 40 countries on six continents. The GCAA assessed GC of students from high school to postsecondary institutions in both private and public institutions (Global Leadership Excellence, 2018a), measuring internal readiness aptitudes (i.e., self-awareness, open-mindedness, attentiveness to diversity, risk-taking) and external readiness aptitudes (i.e., global awareness, historical perspective, intercultural capability, collaboration across cultures).

To minimize bias in self-evaluation, the GCAA applies a triangulated assessment method, including scenario-based, behavioral-based, and Likert-scale self-appraisal items (Global Leadership Excellence, 2018b). Since GCAA is nonculture specific, it can be applied in any context and reports on “an individual’s ability to fit and function within a global environment” (Kaushik et al., 2017, p. 83). Niehaus (2012) argued the GCAA could assist participants in finding methods to promote GC by identifying their disadvantages and advantages. With this merit, Morgan and King (2013) regarded the GCAA as a useful tool for a pre and post assessment. Kaushik et al. (2017) applied the GCAA to assess first-year students’ level of GC and remeasure them as seniors.

Global Competence Assessment in PISA 2018

The Organization of Economic Cooperation and Development (2019) defined global competence as “Globally competent individuals can examine local, global and intercultural issues, understand and appreciate different perspectives and world views, interact successfully and respectfully with others, and take responsible action toward sustainability and collective well-being” (p. 166). PISA2018 measured GC from four perspectives, adding to W. D. Hunter
(2004): (a) knowledge about global issues (i.e., self-efficacy and awareness), (b) value (i.e., attitude toward immigrants and learning about different cultures and respect for people from other cultures), (c) skills (i.e., flexibility/adaptability in dealing with challenging or difficult situations), and (d) attitude (i.e., openness and intercultural communicative awareness; OECD, 2019). Nonetheless, GC assessment in PISA2018 was designed for a limited population, adolescents at approximately 15 years old.

**Dimensions of Global Competence from Tsinghua University**

Having been a leading university in China for over a century, Tsinghua University has developed as a spirited educational heartland in a vibrant multicultural of academic disciplines and fields to sustain pedagogical China’s modernization (Zhong et al., 2022). Tsinghua University is the benchmark for the education of global competence in China. With the goal of sustainability, the initiative Tsinghua Global Strategy was launched to promote globally competent students in 2016 (Tsinghua University, 2016). Tsinghua University characterized global competence as “the ability to learn, work and live sustainably together in global, international, and intercultural contexts” (Zhong et al., 2022, p. 564). Tsinghua University featured the process of cultivating in three dimensions: (a) cognition signifies knowledge of global issues and using a foreign language to communicate with people from different cultures; (b) individual refers to responsibility and confidence; and (c) interpersonal relationship stands for skills of communication/cooperation and attitudes of openness/respect (Song & Li, 2020).

Figure 2 presents some definitions and assessments in the past 2 decades and summarizes GC’s dimensions of W. D. Hunter (2004), OECD (2019), and Tsinghua University (2016) based
on Butler’s (1978) four dimensions of competence. GCAA was excluded from the figure because it developed several words from W. D. Hunter (2004).

**Figure 2**

*Summary of the Dimensions of Global Competence Based on Butler (1978)*

![Diagram of Global Competence Dimensions]

**Significance of Global Competence**

In the 21st century, GC has been nurtured by myriad educational stakeholders, policymakers, and organizations, such as Project Zero at Harvard University (Reimers, 2009), the Global Citizenship Education initiative from the United Nations Educational, Scientific, and Cultural Organization (UNESCO, 2015), a GC assessment in PISA 2018 (OECD, 2019), and the Center for Global Competence Development at Tsinghua University (Tsinghua University, 2016). These organizations consider GC education an essential initiative for promoting globally ready generations to work and be responsible citizens in a progressively internationalized, multicultural
world. Furthermore, GC empowers students to be better employees, residents, and citizens living harmoniously in diverse societies, adapting to changing employment, using mass media efficiently and responsibly, and supporting sustainability goals (Matei, 2020).

With global interconnectedness and interdependence, the significance of preparing students with GC has been well addressed in many initiatives released by the Chinese government. The Ministry of Education (MOE, 2010) promulgated the framework of China’s National Plan for Medium and Long-Term Education Reform and Development (2010–2020), setting a decisive goal for cultivating a large population of students permeated with global knowledge and adaptability for involving in global affairs.

Despite the COVID-19 global pandemic, the “Suggestions on Accelerating and Expanding Education Opening up in the New Era,” released by eight key sections of MOE (2020a), declared cultivating internationally competent talents remained one of the priorities in Chinese higher education. The Plan for Strengthening the Construction of Higher Education Talent Training System (MOE, 2022a) reiterated the relevance of preparing students with a global vision and reinforcing international cooperation with world-rate universities and academies. In 2018, Tsinghua established the Centre for Student Global Competence Development to support students’ GC development. This center acts as an extensive network of curricular, cocurricular, and extracurricular activities by integrating resources inside and outside the University (Zhong et al., 2022).
Summary of the Historical Narrative of Global Competence

Although different authors and institutions described GC from multifarious dimensions, Zhou and Green (2022) summarized two principal goals of GC in postsecondary education: career global competence and civic global competence. Career orientation refers to preparing students with career readiness, like collaborating and facilitating business in a multicultural context. Civic orientation aims to cultivate global citizens with responsibility for sustainability and social justice/equity/inclusion (Zhou, 2022).

Career and civic perspectives have developed separately in history. From the 1970s to the 1980s, U.S. tertiary education was in civic orientation to cultivate tolerant and democratic citizens who could understand perspectives from different cultures and collaborate with people having multicultural backgrounds (CIEE, 1988) because multicultural pedagogy disseminated in North America and Europe in that period (Zhou, 2022). In the mid-1980s, a social market capitalism orientation interjected the diversity and career perspective of GC (Resnik, 2009). Social market capitalism defined GC with career qualities for economic objectives (e.g., second language competence), accentuating efficiency and productivity of individuals’ working performance (Liu-Farrer et al., 2021). Becoming the leading definition of GC, the social market capitalism framework guided higher education to cultivate students (Lambert, 1994). With the growth of citizenship education in the 2010s, GC emphasized both economy and diversity perspectives (Banks & Banks, 2019).

With the review of the definitions and assessment of GC in the literature, this study examines career and civic orientations of GC overlapping in higher education (Tsinghua
University, 2016). GC contributes to students’ employability development (Global Leadership Excellence, 2018a; W. D. Hunter, 2004) and promotes responsible global citizenship and social sustainability (OECD, 2019). The two orientations are indispensable to delineating the panorama of student lives. Figure 3 concludes my understanding of GC based on career and civic orientations. With the understanding of the four dimensions of GC in the literature shown in Figure 3, the theoretical framework will explore how theories guide global-competence-based educational paradigms to support cultivating students’ GC development.

Figure 3

Global Competence

Theoretical Framework

With the four dimensions of GC serving as a foundation, this section explores GC-based pedagogical approaches guided by cultural capital theory (Bourdieu, 1973, 1974, 1984, 1986; Bourdieu & Passeron, 1990) and the American Council on Education (2023a) model for comprehensive internationalization (De Wit et al., 2015; Knight, 1994, 2004). These two theories underpin the cultural capital and internationalization factors influencing students’ GC in tertiary education.

Bourdieu’s Capital Theory

The French anthropologist and sociologist Bourdieu (1973, 1974, 1984, 1986) conceptualized capital theory as a framework underlying the social world correlated to assets or relationships that might impact the Organization for Economic Co-Operation and Development (OECD)’s assessment of global competence (Andrews, 2021). Based on Bourdieu’s (1973, 1974, 1984, 1986) capital theory, Bourdieu and Passeron (1990) studied the origin of social stratification and how stratification led to social structural inequality. Their cultural capital and social reproduction theory provided theoretical support for understanding the relationship between students’ family/school background and their academic opportunity/success in higher education (Xiang, 2021; Yu, 2021), which may parallelly influence GC learning in higher education. This section explores the family and school background factors influencing university students’ GC development from the lens of cultural capital and social reproduction.
The Definition of Capital

Karl Marx’s conception of capital theory accentuates the role of economic capital in social reproduction. The upper classes dominate economic capital, such as material resources in society. In economic reproduction, one generation accrues and transmits the economic capital to the descendants in terms of traditional mechanisms (Marx & Fowkes, 1990). Bourdieu (1973) defined cultural capital as an individual’s knowledge and mastery of the behaviors, habitus, and attitudes corresponding with the perceptions of the higher class in society. Akin to economic capital, Bourdieu (1973) asserted cultural capital led to an alternative manner of social reproduction through inter-generational transmission.

Cultural Capital

The higher class owns the predominant cultural capital in a society. Cultural capital includes embodied state, objectified state, and institutionalized state (Bourdieu, 1983). Embodied state is “in the form of long-lasting dispositions of the mind and body” (Bourdieu, 1986, p. 243), which can be demonstrated by students’ dispositions, tastes, vocabulary, practices, skills, personalities, or the knowledge residing in learners (Lareau & Weining, 2003; McDonough, 1997).

Bourdieu (1986) regarded embodied state as an individual’s body and spirit and termed it as habitus or disposition. The accumulation of embodied cultural capital needs time and the investment of economic capital. It is intangible and can be influenced by family background (e.g., family location and family income) and accumulated through educational background.
Objectified state is in the form of cultural goods. They are tangible and can be valued at a price. Institutionalized state can be conferred by institutions like degrees.

Bourdieu and Passeron (1990) used capital reproduction theory to explicate the model of social reproduction in education. The three forms of cultural capital (i.e., embodied state, objectified state, and institutionalized state) are inherited from one generation to the next, causing capital reproduction. It revealed the reasons why students from stratified backgrounds achieved different learning outcomes. Family dominates the cultural reproduction process. Individuals from upper-class families receive more cultural capital from their families, which assists them in achieving higher educational achievements. Effectively developing GC needs numerous resources of cultural capital prerequisite. Students with lower cultural capital have fewer opportunities to access internationalized experiences, such as foreign language learning (Warriner, 2016) and international mobility (Shaftel et al., 2007; Soria & Troisi, 2013). Moreover, students who inherit different cultural capital tend to have various ambitions of future careers and life (Williams et al., 2015), which may impact their GC attainment.

Based on Bourdieu, DiMaggio (1982) proposed the social mobility model, stating society had the responsibility to compensate for the deficiency from family. DiMaggio (1982) called for educational activities to consciously accumulate cultural capital and realize upward mobility. For individuals with lower economic and cultural backgrounds, their GC acquisition can be made up from involvement in pedagogical activities.
Summary of Cultural Capital Factors

Bourdieu’s (1973, 1974, 1984, 1986) cultural capital theory implies that cultural capital may influence GC development from an individual’s family and educational background (see Figure 4). In the next section, the internationalization framework will guide the exploration into global competence-based education to remedy learners with cultural capital deficiency.

Figure 4

Integrating Cultural Capital into Global Competence Development

Comprehensive Internationalization Framework

In the 1990s, internationalization was defined as a process by which universities struggle to augment students’ global education (Knight, 1994). Knight (2004) claimed, “Internationalization is a changing the world of higher education, and globalization is changing the world of internationalization” (p. 5). Based on Knight’s (2004) definition, De Wit et al. (2015) defined internationalization:
The intentional process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of postsecondary education, to enhance the quality of education and research for all students and staff, and to make a meaningful contribution to society. (p. 29)

De Wit’s (2002) conceptualized comprehensiveness, referring to systematic ways influencing the three levels of the pedagogical mechanism: macro (e.g., policy design and decision), medium (e.g., curriculum), and micro (e.g., teaching and learning process). Chinese higher education has followed a Western comprehensive internationalization model since the 1990s (Y. Guo et al., 2021).

**Comprehensive Internationalization Model of the American Council on Education**

The American Council on Education (2023a) built a comprehensive internationalization model based on Knight and others’ contributions. ACE argued comprehensive internationalization intended to connect the holistic institution systems (e.g., teaching, research, and service sections) for supporting three strategical lenses (i.e., diversity, equity and inclusion lens, agility and transformation lens, and data-informed decision-making lens) and six interconnected target domains of the model (i.e., institutional commitment and policy, leadership and structure, curriculum and cocurriculum, mobility, partnerships and networks, faculty and staff support; see Figure 5).

**The Three Strategical Lenses.** The model of comprehensive internationalization includes three strategic lenses. They are diversity/equity/inclusion, agility/transformation, and data-informed decision-making.
**Diversity, Equity, and Inclusion Lens.** The purpose of this lens is to boost the success and engagement of students and staff with various identities. It aims to build an inclusive campus climate, making all students/faculty feel supported and equitable.

**Figure 5**

*Author’s Summary of Comprehensive Internationalization Model*

**Agility and Transformation Lens.** This lens underscores internationalization is an ongoing process of discernment and growth. Agility refers to innovative and entrepreneurial initiatives in a time of crisis. Transformation means a coordinated journey through which universities coordinate and incorporate macro, medium, and micro levels of pedagogical mechanisms.

**Data-Informed Decision-Making Lens.** This lens states the process of internationalization is advanced through a scientific path. Research-based decisions support leaders in identifying international engagement benefits and dilemmas across the institution.

**The Six Interconnected Domains.** Building on three strategic lenses, the ACE model for comprehensive internationalization includes six interrelated domains. They are institutional commitment and policy, leadership and structure, curriculum and cocurriculum, mobility, partnerships and networks, and faculty and staff support.

**Institutional Commitment and Policy.** This dimension is the priority of internationalization. It designs a university’s strategic plans to align with a holistic institution system (i.e., from macro to micro), providing a blueprint for executing goals, assessment mechanisms, and policies providing agility for sustainable improvement.

**Leadership and Structure.** This domain orchestrates “campus-wide global engagement, international student services, and off-campus learning experiences; and units that are responsible for research, institutional research, faculty development, student support services (e.g., academic advising, counseling, career exploration), enrollment management, finance, community and alumni relations, and advancement” (ACE, 2023a, p. 3).
Curriculum, Cocurriculum, and Extracurriculum. An internationalized curriculum incorporates international perspectives for cultivating all students’ global/intercultural and workforce-ready competence domestically no matter their specialized discipline. Cocurricular programs/activities integrate international learning experiences supplementing curricular instruction to prepare students with working competencies in a diverse/international environment. ACE (2023a) detailed four guidelines for curriculum, cocurriculum and extracurriculum:

(a) General education obligatory curricula ensure that all students engage in learning global and national sustainability, equity, and inclusion. It includes “foreign language, regional studies, global issues, and intentional opportunities for self-reflection, intercultural interaction, and identity exploration” (p. 4).

(b) Specialized courses incorporate international global context, resources, and scholarship in the target domain.

(c) Cocurriculum and extracurriculum as international/ intercultural replenishment programs provide discussion/interaction with students and faculty with diverse/international backgrounds and engagement in international organizations/companies.

(d) Technology supports curriculum, cocurriculum, and extracurriculum through “collaborative online international learning, research partnerships, virtual exchange, guest speakers, or administrative collaboration” (ACE, 2023a, p. 4).
**Mobility.** It means students/faculty go abroad to engage in learning/research/collaboration with people from other communities/countries. Mobility includes student mobility, academic staff mobility, program mobility, and online mobility (De Wit & Altbach, 2020).

(a) Student mobility. The mobility of students is mainly embodied in three forms. Degree mobility refers to students pursuing a degree (i.e., bachelor, master, Ph.D.). Credit mobility stands for students who study abroad for less than 1 academic year. They can convert credits abroad into a domestic degree. Certificate mobility means studying abroad to perfect some skills (e.g., language proficiency) with no degree or credits (De Wit & Altbach, 2020).

(b) Academic faculty mobility. Faculty mobility increases global knowledge of tertiary education, although no consensus has been reached on the conception of academics. It is an understudied domain (Yudkevich et al., 2016).

(c) Program mobility. Programs and institutions’ mobility is also named Transnational Education or Cross-Border Delivery of Education. International branch campuses are the program of mobility, containing “education cities and knowledge hubs, franchise operations, articulation, and twinning programs, and joint and dual degree programs” (De Wit & Altbach, 2020, p. 15).

(d) Online mobility. Technology is shaping internationalization and mobility in multiple ways. It has expanded the virtual exchange opportunity for all learners at domestic institutions (ACE, 2023a). Virtual mobility includes online distance education, and massive open online courses. Although terms like virtual mobility or virtual
exchanges are used in literature, the term Collaborative Online International Learning (COIL) coined by the State University of New York system is widely used in global academia (De Wit & Altbach, 2020, p. 15). COIL (SUNY COIL, n.d.) provides joint virtual courses in which they are educated by professors from partner universities abroad.

**Partnerships and Network.** They are essential indigenous and international relationships to comprehensive internalization. Relationships can be built with overseas institutions, organizations, governments, communities, local and community collaborations, and internal institution networks.

**Faculty and Staff Support.** The global competence of faculty is suggested to be promoted to maximize the support to student learning, research, and service. Professional development entails faculty mobility, on-campus professional training, incentives, and rewards.

**Internationalization Approaches in Higher Education**

Internationalization contributes to higher education development. In correspondence with the QS World University Ranking (Times Higher Education, 2023), evaluating university performance is across five areas: academic reputation (40%), employer reputation (10%), faculty/student ratio (20%), citations per faculty (20%), and internationalization (10%). The internationalization parameter calls for various internationalization approaches and activities to prepare students with long-term professional competence (Watkins & Smith, 2018) and
responsibility for social equity/sustainability (ACE, 2023b). Figure 6 illustrates internationalization in tertiary education forms two ways, internationalization abroad (IA) and internationalization at home (IaH; Y. Guo et al., 2021).

Figure 6

*Comprehensive Internationalization Model Integrated With IA and IaH Approaches*

*Internationalization Abroad*

Internationalization abroad (IA) is an individual going to other countries for international interactions or study (De Wit & Altbach, 2020; Y. Guo et al., 2021). In line with the
internationalization model of ACE (2023a), IA includes student, faculty, and program mobility. IA cultivates global students with intercultural maturity and sensitivity. However, despite the numerous merits of IA, challenges do exist for students, such as fees associated with mobility abroad, the transfer of study abroad course credits to domestic institutions, and graduation delays (Shaftel et al., 2007). Moreover, the COVID-19 global pandemic has decelerated international mobility in education (J. Li & Eryong, 2021). Due to these difficulties, academia has begun to focus on domestic internationalization (Soria & Troisi, 2013).

**Internationalization at Home**

Besides student and faculty mobility abroad, literature indicated internationalization at home also contributed to global learning (De Wit & Altbach, 2020). Internationalization at home refers to integrating international activities or environments into the domestic curriculum for the entire student population (Beelen & Jones, 2015). In the ACE (2023a) internationalization model, internationalization at home comprises virtual mobility/collaborative online international learning, massive open online courses, cross-cultural curriculum/cocurriculum/extracurriculum, and collaboration with international partnerships.

**Integrating Internationalization at Home Approaches Into Curriculum, Cocurriculum, and Extracurriculum**

The curriculum, cocurriculum, and extracurriculum assist in instilling internationalization at home (IaH) approaches into local global competence-based education (Butum et al., 2020). Jary and Jary (1991) defined curriculum as: “A set of values, attitudes, knowledge frames, which are embodied in the organization and processes of schooling and which are implicitly conveyed
to pupils” (p. 273). Bagilhole and Goode (1998) then narrowly defined curriculum as “seen as referring to a well-defined body of knowledge which was to be transferred to students largely by lecturing” (p. 449). Combining the two definitions of curriculum and the internationalization framework (ACE, 2023a), this study regarded the internationalization curriculum as courses providing global knowledge, skills, attitudes, and value framework (e.g., foreign language learning, global issues, international communication skills). Cocurriculum refers to international/intercultural supplementary activities that provide in-person or online discussion/interaction with foreign students/faculty in class or on campus. Extracurricular are off-campus activities engaging students in international partnerships, networks, organizations, and companies. Figure 7 describes internationalization pedagogies for global competence learning by integrating IA and IaH approaches into ACE’s (2023a) comprehensive internationalization model.

Figure 7

*Internationalization Pedagogies for Global Competence Acquisition*
Summary of Theoretical Framework

The cultural capital theory assumes students from lower-class families inherit less global competence. The internationalization framework depicts global competence-based pedagogies to make up for the scarcity of family education. In the next section, the cultural capital theory (Bourdieu, 1973, 1974, 1984, 1986; Bourdieu & Passeron, 1990) and internationalization framework (ACE, 2023a) will guide a systematic review for exploring the relationship between students’ GC and postsecondary outcomes influenced by cultural capital (e.g., family and educational background) and internationalization factors (e.g., international student/faculty mobility and internationalized curriculum/cocurriculum/extracurriculum) in the last decade. This ultimately builds a global competence-based education model based on student’s cultural capital background and university’s internationalization pedagogies (see Figure 8).

Figure 8

*Cultural Capital and Internationalization Model for Global Competence-Based Education*
Systematic Review

Building upon the cultural capital theory (Bourdieu, 1973, 1974, 1984, 1986; Bourdieu & Passeron, 1990) and comprehensive internationalization framework (ACE, 2023a), this section applies a systematic review to investigate the pedagogies for cultivating students’ global competence (GC) in higher education, especially in the Chinese context. To ensure the quality of the revision process and construct a nonbiased and representative sample of published studies, the study followed the Preferred Reporting Items for Systematic Reviews (PRISMA) guidelines (Tugwell & Tovey, 2021). The review protocol was developed into steps: (a) identifying search terms, (b) establishing inclusion and exclusion criteria, (c) searching procedures, (d) frequency analysis of study attributes, (e) results analysis and discussion, and (f) research gap.

Search String

Studies for selection in this review started with an extended manual keyword search in articles’ titles, abstracts and provided keywords in Scopus, Web of Science, and ERIC, the three most highly valued databases for social science academia. For a better understanding Chinese context, the search was also conducted in CNKI, a valuable database in Chinese academia. Addressing the topic of this research interest, the search keywords were categorized into two categories related to GC and higher education-related substring (i.e., “higher education” or “university” or “college” or “postsecondary” or “tertiary” or “undergraduates”). Then, the two strings were applied to search peer-reviewed academic journal articles written in English and Chinese between January 2013 and January 2023. The databases accessed included:

Scopus (https://www.elsevier.com/solutions/scopus)
Web of Science (https://clarivate.com/products/web-of-science)

ERIC (https://eric.ed.gov)

CNKI (https://www.cnki.net/index/)

The first search yielded 136, 53, and 70 original articles sequentially in Scopus, Web of Science, and ERIC databases. After removing duplicates and repeats from previous research, articles remained at 75, 20, and 18 respectively in Scopus, Web of Science, and ERIC (see Table 2). A second search used the strings in Chinese “全球胜任力” or “国际素养” referring to “global competence” and “高等教育” or “高校” or “大学生” referring to “higher education” in CNKI. This second search yielded 38 peer-reviewed Chinese articles with no duplicates or repeats.

Table 2

<table>
<thead>
<tr>
<th>Search</th>
<th>Database</th>
<th>Initial number</th>
<th>Duplicates and repeats removed</th>
<th>Remaining original, relevant articles</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scopus</td>
<td>136</td>
<td>75</td>
<td>18</td>
</tr>
<tr>
<td>2</td>
<td>Web of Science</td>
<td>53</td>
<td>20</td>
<td>8</td>
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<tr>
<td>3</td>
<td>ERIC</td>
<td>70</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>CNKI</td>
<td>38</td>
<td>38</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>297</td>
<td>151</td>
<td>48</td>
</tr>
</tbody>
</table>

Inclusion and Exclusion Criteria

Articles eligible for inclusion were: (a) empirical quantitative and qualitative studies; (b) stick to the keyword global competence; and (c) potential predictors related to cultural capital, internationalization abroad, and internationalization at home. First, this literature review only
includes empirical studies, and others (e.g., review work) were excluded. Next, scholars have applied multifarious terminologies to conceptualize the notion of GC. These include global citizenship, global leadership, intercultural competence, intercultural communicative competence, transcultural competence, intercultural sensitivity, and cross-cultural understanding (Deardorff & Jones, 2012; Todd, 2017). To narrow the topics, this study sticks to global competence containing two orientations (i.e., career and civic). Thus, the reaching results only can be “global competence” in English, and “国际胜任力” or “国际素养” or “全球胜任力” in Chinese. Others are excluded. Moreover, this study aims to understand the influence of cultural capital and internationalization factors on GC achievement. Hence, other factors are excluded, such as students’ personality traits (Cao & Meng, 2020c).

**Searching Procedure**

After removing duplicates, the first stage of coding comprised screening using titles and abstracts with the inclusion and exclusion criteria. Manuscripts were included liberally at this stage, not to unintentionally exclude a relevant study. A total of 48 studies were reviewed in full text at the second stage. Table 2 demonstrated 18, 8, 14, and 8 articles remained, respectively, in Scopus, Web of Science, ERIC, and CNKI databases. Studies included at this stage were scrutinized. Figure 9 demonstrated the procedures studies sampled in the preliminary inclusion process were systematically refined, resulting in the ultimate sample selected in this literature review. Lastly, 26 selected manuscripts were analyzed for adherence to quality indicators specific to their respective correlational (Thompson et al., 2005) and qualitative (Brantlinger et al., 2005)
methodologies. The subsequent sections present the results of study attributes and the quality analysis (see Table 3).

**Figure 9**

*Screening and Review Procedure*

![Screening and Review Procedure Diagram]

### Table 3

**Results of Systematic Literature Review**

<table>
<thead>
<tr>
<th>Citation</th>
<th>Sample size</th>
<th>Gender</th>
<th>Degree; fields of study</th>
<th>GC scale</th>
<th>GC level</th>
<th>Methodology</th>
<th>Cultural capital factors</th>
<th>Internationalization factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alfaro and Paz-Albo (2021)</td>
<td>203 college students from Universidad Complutense de Madrid (Spain)</td>
<td>46 (22.7%) males, 157 (77.3%) females</td>
<td>Bachelor; Social and economic</td>
<td>Self-created ad hoc questionnaire based on OECD scale</td>
<td>Independent samples $t$ tests</td>
<td>Foreign language proficiency</td>
<td>Student long-term mobility</td>
<td></td>
</tr>
<tr>
<td>2. Butum et al. (2020)</td>
<td>310 students from two Romanian universities</td>
<td></td>
<td></td>
<td></td>
<td>Independent samples $t$ test, Pearson correlation</td>
<td>Faculty mobility, Extensive English courses, Subjects taught in English, Preparation for international employability, Interconnection with local multinational communities/comp anies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citation</td>
<td>Sample size university location</td>
<td>Gender</td>
<td>Degree; fields of study</td>
<td>GC scale; GC level</td>
<td>Methodology</td>
<td>Cultural capital factors</td>
<td>Internationalization factors</td>
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<tr>
<td>3. Chong et al. (2022)</td>
<td>83 students from a Singapore university</td>
<td>43 (51.8%) males, 40 (48.2%) females</td>
<td>Business, social sciences, accountancy, economics, tech/management</td>
<td>3 Case studies</td>
<td></td>
<td>Student short-term mobility to USA/Germany/South Korea.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Doerr (2018)</td>
<td>4 students from a U.S. university</td>
<td>2 (50%) males, 2 (50%) females</td>
<td>Biochemistry, economics, International business, a double major in psychology/marketing</td>
<td>2 Case studies.</td>
<td></td>
<td>Minority immigrant students mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Kang et al. (2018)</td>
<td>51 students (27 students from a U.S. university/2 students from a Korean university)</td>
<td>6 (11.8%) males, 45 (88.2%) females</td>
<td>Fashion industry</td>
<td>Multiple regression T-tests</td>
<td></td>
<td>In-person foreign acquaintances Virtual collaboration with foreign students in class Mediated contact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Ndubuisi et al. (2022)</td>
<td>14 students from a Canadian university</td>
<td></td>
<td>Engineering</td>
<td>Interview</td>
<td></td>
<td>Virtual collaboration with foreign students in class</td>
<td></td>
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<tr>
<td>Citation</td>
<td>Sample size</td>
<td>Gender</td>
<td>Degree; fields of study</td>
<td>GC scale; GC level</td>
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<td>Cultural capital factors</td>
<td>Internationalization factors</td>
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<tr>
<td>7. Schenker (2019)</td>
<td>42 students from a U.S. university</td>
<td>23 (54.8) males 19 (45.2%) females</td>
<td>GCAA</td>
<td>Paired samples t-test</td>
<td></td>
<td></td>
<td>Student short-term mobility</td>
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<tr>
<td>8. Cao and Meng (2020b)</td>
<td>210 Chinese International students from Belgian universities</td>
<td>87 (41.4%) females 123 (58.6%) males</td>
<td>W. D. Hunter’s (2004) validated by Q. Meng et al. (2018)</td>
<td>SEM</td>
<td></td>
<td></td>
<td>In-person contact Online contact</td>
<td></td>
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<tr>
<td>9. Cao and Meng (2020a)</td>
<td>555 local Chinese students from Chinese universities</td>
<td>367 (66.1%) males 188 (33.9%) females</td>
<td>W. D. Hunter (2004)</td>
<td>SEM</td>
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<td></td>
<td>Mediated contact</td>
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<td>Citation</td>
<td>Sample size</td>
<td>Gender</td>
<td>Degree; fields of study</td>
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<tr>
<td>10. Commander et al. (2016)</td>
<td>65 (30 students from university in Hong Kong, 35 students from a U.S. university)</td>
<td>9 (13.8%) males 56 (86.2%) females</td>
<td>Bachelor</td>
<td>Content analysis</td>
<td>Virtual collaboration with foreign students in class</td>
<td></td>
<td></td>
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<tr>
<td>11. Jiang et al. (2022)</td>
<td>713 local Chinese students from Suzhou, Nantong, Weifang, Xuzhou</td>
<td>260 (36.47%) males 453 (63.53%) females</td>
<td>Master Doctorate Medicine</td>
<td>Adapted from GSGCS (Y. Liu et al., 2020)</td>
<td>Multiple regression</td>
<td>Gender Parents’ highest degree Grade</td>
<td>School’s Internationalization concept/system Faculty’s international development International academic engagement</td>
<td></td>
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<tr>
<td>12. Leung et al. (2017)</td>
<td>8 (4 from a university in Hong Kong and 4 from a Swedish university)</td>
<td>Doctorate Nursing</td>
<td>Reflective journals Focus group interviews</td>
<td>Virtual collaboration with foreign students in class</td>
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<td>Citation</td>
<td>Sample size university location</td>
<td>Gender</td>
<td>Degree; fields of study</td>
<td>GC scale</td>
<td>Methodology</td>
<td>Cultural capital factors</td>
<td>Internationalization factors</td>
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<tr>
<td>13. Y. Li (2013)</td>
<td>68 (34 from a Chinese university and 34 from a U.S. university)</td>
<td>Bachelor Master Business</td>
<td>Self-created survey</td>
<td>Paired comparison t-tests</td>
<td>Virtual collaboration with foreign students in class</td>
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</tr>
<tr>
<td>14. J. Li and Xu (2016)</td>
<td>2,50 Chinese local students from Beijing</td>
<td>1,258 (50.28 %) males 1,244 (49.72 %) females</td>
<td>Bachelor</td>
<td>Self-created survey</td>
<td>Causal inference analysis</td>
<td>Intercultural training/internship</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Y. Liu et al. (2020)</td>
<td>1618 local Chinese students from Beijing</td>
<td>732 (51.7%) males 683 (48.3%) females</td>
<td>1168 (82.4%) masters 249 (17.6) doctorates 570 (40.4%) engineering 542 (38.4%) social sciences 198 (14%) sciences 76 (5.4%) humanities &amp; arts 26 (1.8%) Others</td>
<td>Creating GSGCS</td>
<td>Exploratory factor analysis</td>
<td>One-order CFA Two-order model Hierarchical CFA model</td>
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<tr>
<td>Citation</td>
<td>Sample size</td>
<td>Gender</td>
<td>Degree; fields of study</td>
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<tr>
<td>16. Q. Meng et al. (2017a)</td>
<td>2,695 local Chinese students from Beijing, Nanjing, Changchun</td>
<td>1,204 (44.7%) males, 1,491 (55.3%) females</td>
<td>Bachelor 951 (35.3%) physics and engineering, 1,428 (53%) social sciences and humanities, 310 (11.5%) life sciences</td>
<td>W. D. Hunter’s (2004) Global Competence Checklist validated by Grudzinski-Hall (2007)</td>
<td>ANOVA Hierarchical multiple regression</td>
<td>Gender High school experience, University types, University locations, Fields of studies</td>
<td>Preparation for international employability, In-person contact with foreigners in class, In-person contact with foreigners in campus activities</td>
<td></td>
</tr>
<tr>
<td>17. Q. Meng et al. (2017b)</td>
<td>179 Chinese International students from Belgian universities</td>
<td>93 (51.7%) males, 86 (48.3%) females</td>
<td>25 (13.9%) bachelors, 67 (37.2%) masters, 88 (49%) doctorates, 87 (48.3%) physics and engineering, 53 (29.4%) social sciences and humanities, 40 (22.2%) life sciences</td>
<td>W. D. Hunter (2004) validated by Grudzinski-Hall (2007)</td>
<td>ANOVA Hierarchical multiple regression</td>
<td>Foreign language proficiency, The number of foreign countries visited</td>
<td>Mediated contact</td>
<td></td>
</tr>
<tr>
<td>Citation</td>
<td>Sample size</td>
<td>Gender</td>
<td>Degree; fields of study</td>
<td>GC scale</td>
<td>Methodology</td>
<td>Cultural capital factors</td>
<td>Internationalization factors</td>
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<tr>
<td>18. Q. Meng et al. (2018)</td>
<td>206 Chinese International students from Belgian universities</td>
<td>87 (42.2%) males 119 (57.8%) females</td>
<td>31 (15%) bachelors 94 (45.6%) master 77 (37.4%) doctorates 2 (1%) postdocs 2 (1%) visiting scholars 91 (44.2%) physics and engineering 76 (36.9%) social sciences and humanities 39 (18.9%) life sciences</td>
<td>W. D. Hunter (2004)</td>
<td>SEM</td>
<td>Foreign language proficiency</td>
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</tr>
<tr>
<td>Studies in the Chinese context (written in Chinese)</td>
<td>19. Cen and Yang (2022)</td>
<td>1,478 local Chinese students from Eastern Coastal in China</td>
<td>919 (62.2%) males 559 (37.8%) females</td>
<td>Master 964 (65.22%) engineering 90 (6.09%) science 126 (8.53%) life science 298 (20.16%) social sciences and humanities</td>
<td>Logit regression</td>
<td>The number of foreign countries visited</td>
<td>Discussions on global events/ issues</td>
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<td>Literature in written in foreign language</td>
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<td>International academic engagement</td>
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</tr>
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<td>Citation</td>
<td>Sample size</td>
<td>Gender</td>
<td>Degree; fields of study</td>
<td>GC scale</td>
<td>GC level</td>
<td>Methodology</td>
<td>Cultural capital factors</td>
<td>Internationalization factors</td>
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<tr>
<td>20. Fang et al.</td>
<td>Chinese</td>
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<td>1 case study</td>
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<td>Student abroad mobility</td>
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<tr>
<td>(2018)</td>
<td>students</td>
<td></td>
<td>traveling from Beijing</td>
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<td></td>
<td>traveling</td>
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<td>to the United States.</td>
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</tr>
<tr>
<td>21. Y. Hu and</td>
<td>Chinese</td>
<td></td>
<td></td>
<td>4 case studies</td>
<td></td>
<td>Student abroad mobility</td>
<td></td>
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<tr>
<td>Jing (2018)</td>
<td>students</td>
<td></td>
<td>traveling from Beijing</td>
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<tr>
<td></td>
<td>traveling</td>
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<td>to Kenya, Ethiopia, Iran,</td>
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<td></td>
<td>and UAE</td>
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<tr>
<td>22. X. Liu and</td>
<td></td>
<td></td>
<td></td>
<td>Content analysis of 189 overseas exchange programs</td>
<td></td>
<td>Student mobility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cao (2020)</td>
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</tr>
<tr>
<td>Citation</td>
<td>Sample size</td>
<td>Gender</td>
<td>Degree; fields of study</td>
<td>GC scale</td>
<td>Methodology</td>
<td>Cultural capital factors</td>
<td>Internationalization factors</td>
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<tr>
<td>24. Song and Li (2020)</td>
<td>124 Chinese local students from Beijing</td>
<td>72(58.1%) males, 52(41.9%) females</td>
<td>Master</td>
<td>Mixed methods (interview and descriptive data)</td>
<td>Optional courses related to global issues</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. X. Zhang (2020)</td>
<td>Chinese students traveling from Hangzhou to Indonesia, Serbia, United Arab Emirates</td>
<td>Master</td>
<td>3 case studies</td>
<td>Student mobility</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citation</td>
<td>Sample size university location</td>
<td>Gender</td>
<td>Degree; fields of study</td>
<td>GC scale</td>
<td>GC level</td>
<td>Methodology</td>
<td>Cultural capital factors</td>
<td>Internationalization factors</td>
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</tbody>
</table>


Frequency Analysis Study Attributes

A total of 26 articles met the inclusion criteria for this systematic literature review. Table 3 summarizes the studies included in this review along with study attributes (i.e., publication year, location, and sample size), participants’ demographic information (i.e., gender, degree, and fields of study), and methodologies.

Publication Year

As shown in Figure 10, the 3 years in the past decade with the highest number of publications include 2020 ($n = 8$), 2018 ($n = 5$), and 2022 ($n = 4$). The years with the lowest number of publications (one article per year) are 2013, 2015, 2019, and 2021. No study was found published in 2014.

Figure 10

Number of Studies by Year of Publication


Locations

The 26 manuscripts used in the literature review were distributed across three continents: North America, Europe, and Asia. Figure 11 demonstrates, 19 out of 26 studies were conducted
in the Chinese context (i.e., studies conducted in Mainland China and Hong Kong or involving Chinese students). Of these 19 articles, 11 were written in English and 8 were published in Chinese. The remaining seven out of 26 studies fell outside of the Chinese context, with two studies in the United States; one study each in Canada, Spain, Romania, and Singapore; and one study in the United States and South Korea.

**Sample Size**

The sample size was reported in 21 out of 26 manuscripts. The total number of cases across the 21 studies was 13,774. Figure 11 shows the seven studies outside of the Chinese context included 707 (5.13%) participants in six countries (Canada, United States, Romania, Spain, Singapore, and South Korea). Out of these seven studies, the largest number of participants was in Romania \( (n = 310) \), and the smallest sample size was in Canada \( (n = 14) \).
The sample size of the 14 studies conducted in the Chinese context totaled 13,067 (94.87%). Per Figure 11, eight of these 14 studies involved a total of 12,365 (89.77%) Chinese mainland university students distributed in seven cities (Beijing, Nanjing, Changchun, Suzhou, Nantong, Weifang, and Xuzhou). Three studies recruited 595 (4.32%) Chinese international students studying in Belgium, and two studies involved a total of 34 (0.25%) students from Hong Kong. Three studies included a total of 69 (0.50%) U.S. citizens and 4 (0.03%) Swedish participants who worked with Chinese students to develop GC.

**Gender**

Figure 12 demonstrated 16 of the 26 manuscripts included gender data. Out of 10,615 participants in these 16 studies, 5,208 (49.1%) were male students, and 5,407 (50.9%) were
female students. Out of 383 students in the 5/16 studies in international contexts, female participants (263/383) were twice more than male students (120/383). In the Chinese context, 11/16 studies identified the gender of the population, with a total number of 10,232. The number of male and female participants was similar, respectively 5,088 and 5,144.

**Figure 12**

*Gender of Population*

![Gender of Population Graph](image)

**Education Level and Field of Study**

Of the 26 articles in the literature review, 14 studies detailed the education levels of 13,109 participants, which included local Chinese students, Chinese international students, and students in Hong Kong, Romania, the United States, and Sweden. Figure 13 illustrates undergraduates made up the majority of the sample \((n = 8,855, 67.55\%)\), followed by master’s students \((n = 3,656, 27.88\%)\) and doctoral students \((n = 594, 4.53\%)\). A small group of postdocs \((n = 2, 0.02\%)\) and visiting scholars \((n = 2, 0.02\%)\) participated in GC research.
A total of 16/26 manuscripts detailed the participants’ fields of study and majors. Internationally, 5/16 studies categorized the majors of the participant into seven domains (i.e., social sciences, accountancy, technology biochemistry, fashion industry, psychology, and engineering). The other 11 Chinese studies included six domains of majors (i.e., physics and engineering, social sciences and humanities, life sciences, natural sciences, humanities and arts, and medicine).

**Methodologies**

As seen in Figure 14, the number of quantitative research exceeded that of qualitative ones by five. In the international context, 3/7 studies applied qualitative methods, including case
In the Chinese context, 10 research studies used quantitative methods to address GC predictors, two leveraged a one-way ANOVA and hierarchical multiple regression (HMR), and three used structural equation modeling (SEM). Researchers of the five remaining studies used one of the following methods: logit regression, ordinary least squares regression, multiple regression, paired comparison t-tests, and causal inference analysis. Regarding the six studies in which researchers applied qualitative methods to understand the Chinese pedagogical initiatives to cultivate GC, two applied a content analysis method, three were case studies, and one used reflective journals and focus group interviews to gather information. Researchers in one of the 21 studies employed mixed methods. As for the two studies that included GC scale development, Y. Liu and Wu (2015) applied SEM model fit to validate their GC scale for Chinese undergraduates,
and Y. Liu et al. (2020) used exploratory factor analysis, one-order confirmatory factor analysis (CFA), two-order CFA, and hierarchical CFA to create a GC scale for Chinese graduate student.

**Results Analysis and Discussion**

To address the research questions of this study, this section first discusses GC assessments and level of GC. Then, guided by cultural capital theory (Bourdieu, 1973, 1974, 1984, 1986; Bourdieu & Passeron, 1990) and the internationalization model (ACE, 2023a), this section addresses the three GC influencing factors identified in the 26 manuscripts: students’ cultural capital background (i.e., family background, educational background, and capital reproduction), internationalization abroad experience (i.e., student abroad mobility, and faculty abroad mobility), and internationalization at home experience (i.e., internationalization at home curriculum, and internationalization at home intergroup contact). The subtheme, internationalization at home intergroup contact, was not included in the theoretical framework, but the systematic literature results indicated a strong relationship with GC achievement in postsecondary education.

**Global Competence Assessments**

The aim of GC assessment is to “gather data on how well students are prepared to examine contemporary issues of local, global, and intercultural significance and live in multicultural societies” (Asia Society & OECD, 2018, p. 5). However, little consensus has been reached on GC scales globally.

Scales have been used to assess GC in and outside of the Chinese context (see Figure 15). Three quantitative studies outside of the Chinese context used GC scales. Alfaro and Paz-Albo
(2021) designed an ad hoc questionnaire for student self-assessment, which is based on the 2019 OECD framework for GC. The questionnaire consists of seven categories: (a) intercultural communication awareness, (b) global mindedness toward issues of poverty and environment, (c) interest in different cultures, (d) adaptability to unusual situations and new cultures, (e) perspective taking of others, (f) self-efficacy regarding global issues, and (g) awareness of global issues. Schenker (2019) applied Global Leadership Excellence’s (2018a) Global Competence Aptitude Assessment (GCAA) to evaluate participants’ GC before and after a short-term overseas program because the GCAA is a good assessment for the paired \( t \) test. Kang et al. (2018) designed a three-dimensional GC survey: (a) global attitude, adapted from Cleveland and Laroche’s (2007) scale; (b) intercultural communication skills, based on Larke’s (1990) scale; and (c) global knowledge, developed to assess students’ knowledge of the other country’s culture.

In the Chinese context, 13 studies applied a GC scale, and 11 of them reached a consensus on W. D. Hunter’s (2004) GC checklist with three dimensions of GC (e.g., knowledge, skills, and attitudes). Four studies validated W. D. Hunter’s (2004) checklist to measure students’ GC level (Cao & Meng, 2020a, 2020b; Q. Meng et al., 2018; L. Zhang & Wen, 2018).

**Figure 15**

*Global Competence Scales Applied in the Literature*

![Diagram of global competence scales](image)

**Note.** OECD = Organisation for Economic Cooperation and Development; GCAA = Global Competence Aptitude Assessment; DeSeCo = Definition and Selection of Competencies; GC = global competence; GSGCS = Graduate Students’ Global Competence Scale.

academic knowledge and skills (e.g., ability to access commonly used international databases for academic research, such as Web of Science, EBSCO, and Scopus).

Cen and Yang (2022) assessed Chinese graduates’ GC based on Hu’s (2017) work. Y. Liu et al. (2020) included two orientations of GC (e.g., career and civic) in their Graduate Students’ Global Competence Scale (GSGCS) and adjusted 20 items that suited Chinese graduate students based on career orientation, using the Global Perspective Inventory (Braskamp et al., 2014), the GCAA (B. Hunter et al., 2006), the Global Competence Measurement Instrument (Y. Li, 2013), the Global Competency Index Questions (Olson & Kroeger, 2001), and the Global Citizenship Scale (Morais & Ogden, 2011). Then, Y. Liu et al. designed 15 new items to describe the specific characteristics of GC for Chinese graduate students.

After exploratory factor analysis, two items were moved. The final version of the GSGCS included three dimensions: knowledge (9 items), skills (13 items), and attitudes and values (11 items). Jiang et al. (2022) expanded on Y. Liu et al.’s work to assess GC in Chinese graduate students, adjusting some items of the GC scale for medical graduate students because of unique traits in the medical domain.

Researchers in two studies created a survey to measure global attitudes, knowledge, and skills. Y. Li (2013) designed 17 items for assessing three dimensions of GC. J. Li and Xu (2016) detailed three simple questions (e.g., one item for each dimension): (a) global knowledge (e.g., knowledge of a foreign language and foreign culture), (b) global skills (e.g., ability to read foreign-language references), and (c) global attitude (e.g., tolerance of a foreign culture).
Level of Global Competence

It is better to have a clear picture of the level of GC from different samples based on the consistency of the scale. Four out of 10 studies assessed participants’ GC based on W. D. Hunter (2004) have reported students’ GC level in the Chinese context. W. D. Hunter (2004) included three dimensions: knowledge, skill, and attitude, with a 5-point Likert scale (1 = low and 5 = high). Table 4 reported the overall GC scores from different samples of four studies.

Table 4
The Level of Global Competence Based on W. D. Hunter (2004) in the Literature

<table>
<thead>
<tr>
<th>Citation</th>
<th>Overall global competence</th>
<th>Knowledge dimension</th>
<th>Skills dimension</th>
<th>Attitudes and values dimension</th>
<th>Sample population and size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q. Meng et al. (2017a)</td>
<td>M = 3.14, SD = 0.56</td>
<td>M = 3.33</td>
<td>M = 4</td>
<td>Undergraduates n = 2,695</td>
<td></td>
</tr>
<tr>
<td>Y. Liu et al. (2020)</td>
<td>M = 3.40, SD = 0.52</td>
<td>M = 3.43</td>
<td>M = 3.11</td>
<td>M = 3.71</td>
<td>Graduates n = 1,618</td>
</tr>
<tr>
<td>Jiang et al. (2022)</td>
<td>M = 3.52, SD = 0.49</td>
<td>M = 3.61</td>
<td>M = 3.08</td>
<td>M = 3.87</td>
<td>Graduates n = 1,159</td>
</tr>
<tr>
<td>Cen and Yang (2022)</td>
<td>M = 3.82, SD = 0.53</td>
<td>M = 3.62</td>
<td>M = 3.86</td>
<td>M = 3.96</td>
<td>Graduates n = 1,478</td>
</tr>
</tbody>
</table>

The sample from 2,695 Chinese undergraduates displayed a higher capacity for global attitudes than global knowledge and skills (Q. Meng et al., 2017a). The results illustrated contemporary Chinese undergraduates inherited traditional Chinese virtues (e.g., cultural tolerance and respect for diversity). Among the four samples, bachelor students displayed the lowest scores in global knowledge but the highest in global attitudes.
The two samples, including master’s and doctorate students, represented similar scores. In Y. Liu’s et al. (2020) study, Chinese graduates showed lower communication skills than global knowledge and attitudes (Y. Liu et al., 2020). Regarding Chinese medical graduate students, the scores of three dimensions of GC ranked from highest to lowest were global attitude, global knowledge, and global skills (Jiang et al., 2022). The findings underscored Chinese medical students were open to cultural diversity and willing to communicate but needed complementary skills (e.g., intercultural communication, international academic interaction, and writing proficiencies). Master students from Cen and Yang’s (2022) sample displayed the highest level of GC. The scores of the three dimensions of GC ranked from highest to lowest were global attitude, global skills, and global knowledge.

**Cultural Capital Factors**

Researchers of seven out of 26 studies analyzed the associations between students’ cultural capital factors and GC, one study in the international context and five studies in the Chinese context. Table 5 describes 10 demographic factors categorized in three dimensions in line with the cultural capital theory, such as personal and family background (i.e., embodied state), educational background (i.e., embodied state), and capital reproduction.

**Personal and Family Background**

Concerning personal and family background, four factors significantly impacted GC. They include gender, geographic location/origin, parents’ highest degree, and paternal job position.
Table 5

<table>
<thead>
<tr>
<th>Cultural Capital Factors Influencing Global Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories/Subcategories</td>
</tr>
<tr>
<td>Personal and family background</td>
</tr>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Geographic location/origin</td>
</tr>
<tr>
<td>Parents’ highest degree</td>
</tr>
<tr>
<td>Educational background</td>
</tr>
<tr>
<td>High school experience</td>
</tr>
<tr>
<td>Fields of studies</td>
</tr>
<tr>
<td>University types</td>
</tr>
<tr>
<td>University location</td>
</tr>
<tr>
<td>Capital Reproduction</td>
</tr>
<tr>
<td>Foreign language proficiency</td>
</tr>
</tbody>
</table>

**Gender.** A total of three manuscripts demonstrated a significant association between gender and GC. Specifically, male students exhibited higher GC than female students (Jiang et al., 2022; Q. Meng et al., 2017a). However, the mean scores of female students were significantly higher than those of male students, specifically in terms of skills, attitudes, and values (L. Zhang & Wen, 2018).

**Geographic Location/Origin.** L. Zhang and Wen (2018) indicated students from urban cities had better GC than students from rural places. Students living in cities, especially in provincial capitals, have the benefits of cultural capital, such as educational institutions, libraries,
museums, and cultural and art venues. These city resources enrich students’ exposure to internationalization and improve their GC.

**Parents’ Highest Degree.** The association between the parents’ highest degree and GC was measured in three studies (Jiang et al., 2022; J. Li & Xu, 2016; L. Zhang & Wen, 2018). Findings underscored the highest degree of parents positively predicted GC. L. Zhang and Wen (2018) explained parents with higher degree are more likely involved in students’ academic development and GC cultivation.

**Paternal Job Position.** L. Zhang and Wen (2018) found students with civil servant fathers scored the highest in the three dimensions of GC. These students were followed by those whose fathers worked as senior professional and technical personnel, people in business, and middle- and low-professional and technical personnel. The group whose fathers were manual laborers scored lowest and significantly lower than the other four groups.

**Educational Background**

Regarding educational background, two Chinese studies found four factors significantly impacting GC. They include high school experience, fields of study, university type, and university location.

**High School Experience.** In L. Zhang and Wen’s (2018) research on 3,646 first-year local students at a Chinese research university, the independent predictor of high school experience contained two dummy variables, high school type and fields of study. Students with high scores on the Zhongkao (China’s high school entrance exam) can be selected for a high school. L. Zhang and Wen’s findings demonstrated participants from leading high schools had a
better GC because selective high schools may provide better internationalized curricula. Moreover, high school students had to choose either science or art as one of the subjects on the Gaokao (i.e., National College Entrance Exam, [NCEE]). Students who specialized in science had lower knowledge of GC (L. Zhang & Wen, 2018). The result may be due to the lack of political, historical, and geographic content in science courses, which contributes to GC knowledge.

**University Type.** Q. Meng et al. (2017a) reported students from top Chinese universities (i.e., 985 project universities) demonstrated higher level GC than those from less prestigious universities. Davey et al. (2007) explained students from top universities amassed more knowledge for GC because they scored higher on the Gaokao, which assesses diverse subjects such as Chinese, a second language (mainly English), mathematics, physics, chemistry, geography, and history. Moreover, top universities attract a larger population of international students and scholars, which provides their local students with more opportunities for intercultural experiences (Q. Meng et al., 2017a).

**University Location.** The location of universities significantly influenced GC. Q. Meng et al. (2017a) argued participants from Beijing (denoting first-tier cities of China) gained higher GC than students from Nanjing (representing second-tier cities of China) and Changchun (denoting third-tier cities of China).

**Fields of Study.** Q. Meng et al. (2017a) reported respondents in social sciences and humanities disclosed having higher GC than physics/engineering and life sciences students. Social sciences and humanities students may have a stronger motivation for studying abroad and
better knowledge of global citizenship (Cao et al., 2016; The Commission on the Abraham Lincoln Study Abroad Fellowship Program, 2005; Hoffa, 2007). Another potential reason is the difference in curriculum content. Humanities-related courses provide more humanity and social knowledge associated with GC (Q. Meng et al., 2017a).

**Capital Reproduction**

As for capital reproduction, three studies indicated foreign language learning influenced GC level. One study assumed an individual’s employment expectation was related to GC achievement.

**Foreign Language Proficiency.** In Spain, Alfaro and Paz-Albo (2021) found a more significant proportion of female students than male students could speak foreign languages. Moreover, foreign language proficiency positively influenced GC acquisition.

In the Chinese context, Q. Meng et al. (2017b) found local language proficiency assisted Chinese international students’ GC development. In addition, Q. Meng et al. (2018) assessed GC of 206 Chinese international students studying in Belgium. SEM analysis showed English and second foreign language proficiency were positively associated with GC. Meanwhile, GC positively predicted students’ “social connectedness” and “social and academic adaptation” (Q. Meng et al., 2018, p. 131).

**Employment Expectation.** L. Zhang and Wen (2018) classified employment expectations according to public (e.g., government departments, state-owned enterprises) and nonpublic (e.g., private enterprises, transnational corporations) sectors. Their findings showed students interested in nonpublic sectors had better skills and attitudes toward GC than those
planning to work in public sectors. The potential reason is the stereotypes of Chinese students in their occupational cognition. If students believe nonpublic sectors have higher GC requirements than public sectors, students who intend to work in nonpublic sectors will consciously improve their GC in various ways. However, with globalization extending from economics to education, GC has become essential for all global citizens (OECD, 2016, 2018).

**Internationalization Factors**

Consistent with the ACE (2023a) internationalization framework, I divided the internationalization factors into two areas. Table 6 details two subcategories reflected in internationalization abroad and internationalization at home.

**Internationalization Abroad**

Corresponding to ACE’s (2023a) model, international mobility consists of student mobility and faculty mobility. Researchers in eight of 26 studies addressed the contribution of student mobility to GC, and one study investigated the relationship between faculty mobility and GC.
## Table 6

*Internationalization Factors Influencing Global Competence*

<table>
<thead>
<tr>
<th>Factors</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internationalization Abroad</strong></td>
<td></td>
</tr>
<tr>
<td>Student international mobility</td>
<td>Alfaro &amp; Paz-Albo (2021); Cen &amp; Yang, (2022); Chong et al. (2022); Doerr (2018); Fang et al. (2018); Y. Hu and Jing (2018); X. Liu and Cao (2020); Q. Meng et al. (2017b) Schenker (2019); X. Zhang (2020)</td>
</tr>
<tr>
<td>Faculty international mobility</td>
<td></td>
</tr>
<tr>
<td><strong>Internationalization at Home</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Curriculum</strong></td>
<td></td>
</tr>
<tr>
<td>Intensive courses of foreign languages</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>Subjects taught exclusively in foreign languages</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>Literatures and textbooks written in foreign languages</td>
<td>Cen and Yang (2022)</td>
</tr>
<tr>
<td>Courses related to global issues and Internationalization</td>
<td>Cen and Yang (2022); Q. Meng et al. (2017a); Song and Li (2020)</td>
</tr>
<tr>
<td>Preparation for International employability</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td><strong>Cocurriculum</strong></td>
<td></td>
</tr>
<tr>
<td>In-person contact with foreigners in course learning</td>
<td>Q. Meng et al. (2017a)</td>
</tr>
<tr>
<td>In-person contact with foreigners in campus activities</td>
<td>Q. Meng et al. (2017a)</td>
</tr>
<tr>
<td>Virtual collaboration/discussion with foreign student in class</td>
<td>Commander et al. (2016); Kang et al. (2018); Leung et al. (2017); Y. Li (2013); Ndubuisi et al. (2022)</td>
</tr>
<tr>
<td>International activities</td>
<td>Song and Li (2020)</td>
</tr>
<tr>
<td><strong>Extracurriculum</strong></td>
<td></td>
</tr>
<tr>
<td>Interconnection with local multinational communities/companies</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>Joint/dual diplomas from foreign countries</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>Recruiting new international cooperations</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>Intercultural training or internship</td>
<td>J. Li and Xu (2016)</td>
</tr>
<tr>
<td>International academic engagement</td>
<td>Cen and Yang (2022); Jiang et al. (2022)</td>
</tr>
<tr>
<td><strong>Internationalization at Home Intergroup Contact</strong></td>
<td></td>
</tr>
</tbody>
</table>
### Student Mobility

The relationship between student mobility and GC was investigated in four international studies. Researchers demonstrated long-term (1 academic year, Alfaro & Paz-Albo, 2021) and short-term (less than 1 semester; Chong et al., 2022; Schenker, 2019) nurtured students’ GC. Schenker (2019) claimed one activity for all students in the curriculum might push students into entirely new environments and cause anxiety. Schenker suggested students engage in various activities to ameliorate learning abroad, such as attending lectures with discussion at the local library, participating in religious events different from their own, or shopping in the local market. However, Doerr (2018) found marginalized students gained GC in other ways; minority immigrant students experienced similarities and differences from their own culture when traveling abroad, which was seldom found in samples of white mainstream students.

For Chinese students, two quantitative studies highlighted the significance of overseas experience in developing GC (Cen & Yang, 2022; Q. Meng et al., 2017b). The number of countries students visited positively impacted their GC scores. A total of four qualitative studies stated overseas mobility augmented graduate students’ interaction with culturally different people and understanding of multiculturalism, which cultivated GC. Researchers gathered positive feedback on overseas academic programs and detailed eight case studies at Tsinghua.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct contact</td>
<td>Cao and Meng (2020b); Kang et al. (2018); Q. Meng et al. (2017b)</td>
</tr>
<tr>
<td>Online contact</td>
<td>Cao and Meng (2020b)</td>
</tr>
<tr>
<td>Mediated contact</td>
<td>Cao and Meng (2020a); Kang et al. (2018); Q. Meng et al. (2017b)</td>
</tr>
</tbody>
</table>
University (Fang et al., 2018; Y. Hu & Jing, 2018) and three at Zhejiang University (X. Zhang, 2020) with destinations in the United States, Kenya, Ethiopia, Iran, Indonesia, Serbia, and UAE.

X. Liu and Cao (2020) analyzed 189 students’ international mobility programs in 62 Chinese universities through the lens of GC. Results showed approximately half of the programs emphasized the cultivation of global knowledge and language proficiency. However, less than one-quarter of programs aimed to promote global attitudes and skills (e.g., international cooperation and communication). These findings called for more strategies for GC cultivation when designing international mobility in Chinese higher education.

**Faculty Mobility.** Only one study investigated the relationship between faculty mobility and GC. Using Pearson correlation analysis, Butum et al. (2020) found faculty mobility promoted GC reflected in helping student problem-solving, knowledge of the labor market, and employment opportunities.

**Internationalization at Home Universities**

Internationalization at home refers to all internationally related activities that promote GC without experience abroad (Nilsson, 2003). A total of 10 of the 26 studies affirmed students without an opportunity to study overseas could enhance GC through engaging domestically in internationalization curriculum, cocurriculum, and extracurriculum.

**Internationalization Curriculum.** The curriculum is the central pathway for schools and educators to instill GC (ACE, 2023a). This section describes the strategies researchers detailed in internationalization settings in correspondence with curriculum, cocurriculum, and extracurriculum.
**Curriculum.** In correspondence with the theoretical framework, the systematic review seeks internationalization curriculum as courses providing students with knowledge, skills, attitudes, and values related to their GC. A total of five studies underscored four themes for the curriculum facilitating GC learning outcomes. They are intensive foreign language courses, subjects taught exclusively in foreign languages, literatures and textbooks written in foreign languages in the fields of study, courses related to global issues and internalization, and preparation for international employability.

Butum et al. (2020) depicted three themes for designing internationalization curricula in Romania. The curricula include intensive courses of foreign languages (e.g., English), subjects taught exclusively in foreign languages (e.g., English), or an international topic preparing students for international employability.

Cen and Yang (2022) added two predictors of the internationalization curriculum including reading information related to the fields of study in English or other foreign languages and courses providing topics or discussions related to global issues. Another two studies echoed the courses related to global issues and internationalization topics catalyzed both Chinese undergraduates’ and graduates’ GC acquisition (Q. Meng et al., 2017a; Song & Li, 2020).

**Cocurriculum.** In this study, cocurriculum is defined as international/intercultural activities that provide direct or indirect discussion/interaction with foreign students/faculty in class or on campus. A total of eight studies presented four cocurriculum factors for enhancing GC learning, such as in-person contact with foreigners in course learning, in-person contact with
foreigners in campus activities, virtual collaboration/discussion with foreign students in class, and international activities.

Q. Meng et al. (2017a) argued “contact with foreigners through campus activities” and “attending courses of internationalization” can catalyze students’ GC, but “contact with foreigners in course learning” had no contribution to GC (p. 14). One probable reason was students tended to feel more stressed in a formal learning environment, which decreased out-group interaction (Lee et al., 2012).

Virtual collaboration and discussion with international students in class is the principal element of a cocurriculum. Ndubuisi et al. (2022) reported an online program called International Virtual Engineering Student Teams cultivated engineering professional attributes and GC in students across the globe. The virtual program included GC training modules and platforms to actively engage engineering graduate students worldwide in online collaborative activities, focusing on “communication, intercultural competence, leadership, decision-making, and relationship building” (Ndubuisi et al., 2022, p. 262). Participants described positive outcomes gained from the program, such as “intercultural awareness and understanding, diversity appreciation, project planning and coordination, intercultural communication and sensitivities, social cohesion, and commitment” (Ndubuisi et al., 2022, p. 270). However, participants also detailed some challenges related to virtual contact, such as differences in time zones and academic administration practices (e.g., differing course credits), dual faculty supervision, and difficulty accessing technology.
Kang et al. (2018) developed a one-semester virtual cross and intercultural project for fashion courses between U.S. and Korean universities. Kang et al.’s findings demonstrated incorporating online contact in the curriculum improved U.S. students’ intercultural communication skills and knowledge and the Korean students’ open attitude and knowledge. Nevertheless, no improvement was found in Korean students’ intercultural communication skills. This suggested language proficiency might be essential for GC and could not be improved in only 1 semester.

In the Chinese context, three studies stated online contact embedded in curriculum contributed to GC achievement. Y. Li (2013) devised a one-semester online research paper collaboration between U.S. and Chinese undergraduates as a compulsory course element. A total of 34 groups were randomly paired, with one U.S. student and one Chinese student on each team. Results from paired comparison t-tests conveyed virtual contact with foreigners was an additional pedagogical intervention program for promoting GC. Furthermore, Commander et al. (2016) designed asynchronous online discussions for U.S. and Hong Kong undergraduates at their home campuses.

Data of content analysis on the written responses of all participants mirrored the effectiveness of virtual interaction for increasing GC. Based on the notion of critical friends, Leung et al. (2017) invited four groups of doctoral nursing students to engage in 1-year online research seminars on analogous research themes and methods (e.g., one student from Hong Kong and one from Sweden in each group). Critical friends signified reliable individuals with similar research interests and backgrounds who posed inspiring questions, offered information from
another perspective, and gave productive and pertinent comments (Carlson, 2015; Costas & Kallick, 1993). The qualitative findings (e.g., reflective journals and focus group interviews) reiterated the relevance of virtual interactions for GC and described several implications for future virtual internationalization activities. First, educators’ assistance encouraged students to develop the capacity to identify cultural diversity. Second, adequate preparedness in infrastructure might smooth virtual cooperation, promoting a willingness and generating active motivation to distinguish similarities and enjoy research cultural diversity.

Cocurriculum including international activities were suggested in two studies. From the perspective of 124 participants at a research university, Song and Li (2020) reported students were attracted by international activities such as global issues workshops. Nevertheless, they were not motivated to participate in the course on laboratory safety standards, reflecting lack of attendance was the fundamental reason for frequent laboratory accidents in recent years.

**Extracurriculum.** Extracurriculum refers to internationalization activities outside campus that promote students’ involvement in international partnerships, networks, organizations, and companies. A total of four studies detailed three genres of extracurricular that augment GC achievement, such as interconnection with local multinational communities/companies, intercultural training or internship, and international academic engagement.

In the international context, Butum et al. (2020) regarded students’ interconnection with local multinational communities/companies as a genre of extracurriculum, which positively influenced their GC level. Moreover, Butum et al. (2020) indicated two items of extracurriculum positively influencing GC acquisition, such as a university providing joint or dual
specialization/diplomas and an institution recruiting international students, researchers, enterprises, and organizations to develop new programs and provide new skills.

In China, J. Li and Xu (2016) stated international extracurriculum (e.g., intercultural training/internship) was conducive to GC development, based on the causal inference analysis of 2,505 respondents from eight universities in Beijing. Two studies found a positive correlation between GC and global academic involvement (e.g., international course involvement, international publication, and international conference engagement. Jiang et al. (2022) reported medical postgraduates could enhance their GC through international course involvement, international publication, and international conference engagement. The frequency of involvement in international conferences had the highest impact on GC. The results suggested medical universities should offer adequate opportunities for global academic activities. Cen and Yang (2022) echoed experience presenting at international conferences augmented graduate students’ global knowledge.

**Internationalization at Home Intergroup Contact**

A total of four out of 26 studies revealed internationalization approaches to enhance GC were reflected in social life. The four studies followed the intergroup contact theory (Allport, 1954; Pettigrew & Tropp, 2008) and found a positive effect of intergroup contact on GC. Intergroup contact theory perceives intergroup contact diminishes intergroup preconception and increases intergroup trust/empathy when the interactions between both sides are in equal status, cooperative attitudes, and pursuit of common goals (Kormos et al., 2014). In line with the
literature findings, three subthemes emerged in internationalization at home intergroup contact (i.e., in-person contact, online contact, and mediated contact).

**Direct Contact.** Cao and Meng (2020b) defined direct contact as in-person contact with foreigners in the physical world. Using data from 210 Chinese students in Belgium, they found positive relationships between GC and foreign acquaintances with whom students can communicate (bridge social capital) and foreign acquaintances with whom students can get valuable advice (bonding social capital). They added three subcategories of direct contact with culturally different students: vis-à-vis conversation, social activity/interaction, and friendship. Furthermore, Q. Meng et al. (2017b) reiterated intergroup contact (the number of foreign friends and intimacy level with foreign friends) was positively associated with GC growth.

In the international context, Kang et al. (2018) declared mass migration in the United States boosted the opportunities for in-person contact with people from different cultures. This phenomenon had a positive influence on students’ open attitudes toward differences and diversity and the improvement of intercultural communication skills.

**Online Contact.** Cao and Meng (2020b) viewed online contact as “contact with culturally different students via any type of social media, such as Facebook, Twitter, Snapchat, LinkedIn, and WeChat” (p. 7). They assessed the frequency and duration of virtual contact with foreign friends through social media. Their findings demonstrated online contact with foreign acquaintances positively predicted global skills, but negatively predicted global attitudes (i.e., openness toward cultural diversity and activities) among students with few direct contact experiences. They explained people only connecting virtually had decreased motivation for face-
to-face intercultural interactions and reduced global attitudes. Therefore, these findings prompt educators to consider balancing students’ motivation for communication when leveraging indirect contact through social media to lessen their discomfort levels for direct contact.

Mediated Contact. The omnipresence of mass media provides extended mediated contact for immersion in information about the outgroup (Joyce & Harwood, 2014). Furthermore, viewers tend to use the information received on the mass media to deal with similar real-life issues (Schiappa et al., 2005).

In the International context, Kang et al.’s (2018) multiple regression findings indicated global mass media strongly impacted students’ GC achievement and significantly increased knowledge of multicultures. Nonetheless, extensive knowledge of other cultures lessened the comfort level in communicating with people from different countries. Hence, Kang et al. (2018) called for virtual contact with foreign peers through social media to assist educators in designing cross/intercultural projects to decrease students’ discomfort levels of communication with international students.

In the Chinese context, two manuscripts stated mediated contact contributed to GC achievement. Berry (2005) defined acculturation as “the dual process of cultural and psychological change that occurs as a result of contact between two or more cultural groups and their individual members” (p. 698). Q. Meng et al. (2017b) assessed participants’ acculturation by measuring their interest in entertainment (e.g., movies, music) from Chinese culture (e.g., home acculturation) and foreign cultures (e.g., host acculturation).
Q. Meng et al. (2017b) divided the participants into four levels of acculturation: (a) marginalization (e.g., low identification with both home and foreign cultures), (b) separation (e.g., strong identification with home culture but low identification with foreign cultures), (c) assimilation (e.g., low identification with home culture but strong identification with foreign cultures), and (d) integration (e.g., strong identification with both home and foreign cultures). The findings revealed students with assimilation and integration strategies had a higher level of GC than those at the separation and marginalization levels. In other words, mediated contact (e.g., exposure to foreign entertainment) tends to augment GC. Moreover, Cao and Meng (2020a) assessed two acculturation predictors (i.e., foreign TV series and movies) and found mediated connection indirectly influenced all three dimensions of GC through intergroup anxiety.

**Research Gap—Sample From China’s Higher Vocational Education**

The majority of the population (94.87%, 13,067/13,774) from the literature was in Chinese higher general education. The samples included Chinese bachelor, master, and doctorate students, but no study has sampled 3-year and 4-year students from higher vocational education institutions. This finding echoes higher vocational education’s underrepresentation and supports a planned target sample for this study to include students in China’s higher vocational education, accounting for approximately half of the regular higher education sector (MOE, 2023). By 2022, there were 1,489 higher vocational colleges (3 academic years) and 32 higher vocational universities (4 academic years), accounting for 50.48% of the total number (2,720) of regular higher education institutions in China (see Figure 16; MOE, 2023). In 2022, higher vocational
education had 6.0421 million newly admitted students (0.1094 million 4-year bachelor students and 5.9327 million 3-year college students) and 16.9377 million enrolled students (0.2287 million 4-year bachelor students and 16.709 million 3-year college students), accounting for 47.09% and 42.08%, respectively, of whole regular higher education enrollment (see Figure 17; MOE, 2023).

Figure 16

Institution Distribution in Chinese Higher Education


http://www.moe.gov.cn/jyb_sjzl/sjzl_fztjgb/202307/t20230705_1067278.html
To highlight the significance of global competence (GC) for students in Chinese higher vocational education. This section portrays (a) vocational education in the Chinese educational system, (b) vocational undergraduates, (c) cultural capital of students from Chinese vocational system, (d) the employability goal of China’s higher vocational education, (e) Belt and Road initiatives for China’s internationalization of higher vocational education, (f) cross-cultural communication and collaboration goal of China’s higher vocational education, and (g) the significance of global competence for students in China’s higher vocational education.
**Vocational Education in the Chinese Regular Higher Education System**

Chinese higher education comprises two systems, regular higher education (i.e., higher general education and higher vocational education) and adult higher education (N. R. Liu, 2008). The regular higher education system recruits students enrolling directly from high school through gaokao, a national college entrance examination (NCEE). It involves full-time education and awards formal degrees (S. L. Chen, 2015). The adult higher education system targets working adults and those who have failed in gaokao (L. Chen et al., 2017). In this section, only the Chinese regular higher education system is detailed in accordance with the research topic.

Since economic reforms in 1978, the Chinese economy has opened up “with a sustained growth rate unparalleled in human history” (Harvey, 2005, p. 1). China has shaped its educational system, containing higher general education and higher vocational education (D. Guo & Wang, 2020; Liao, 2019). The paramount goal of higher general education is to train high-level professionals and solve major problems meeting Chinese economic and social development (Cai, 2013). In the *Report on the Development of Vocational Education in China (2012–2022)*, vocational education aims to cultivate “diversified talents, passing down technical skills, and promoting employment and entrepreneurship, making an outstanding contribution to supporting the transformation and upgrading of the national industrial structure, improving Chinese manufacturing and services, and safeguarding people’ s livelihood” (MOE, 2022b, pp. 51–52).

Since the 1980s, a number of vocational institutions have been constructed to cultivate applied technology talents to meet China’s economic needs. After over 3 decades of practice and
development, higher vocational education has expanded to the same scale as academic universities in the Chinese education system. Nevertheless, for a long time, higher vocational education was regarded at the bottom of the hierarchy of the Chinese educational system, usually as inferior to general education (X. Fan, 2020; Tadesse et al., 2022; Trent & Liu, 2023; G. Wang & Wang, 2022). Vocational graduates (a) have fewer opportunities to obtain high-skilled positions, (b) earn lower salaries, and (c) experience greater job instability and face more possibilities of unemployment (G. Wang & Wang, 2022). Figure 18 details a three-stage vocational education in the modern Chinese regular educational structure, ranging from junior to higher vocational education (Hansen & Woronov, 2013; Y. Liu, 2016). It also explains why vocational graduates are more likely in lower status in their career, compared to academic graduates.

As demonstrated in Figure 18, a crucial exam named zhongkao is the second stage separating vocational students from general education after graduating from compulsory education (lower/junior secondary) in the Chinese education structure. Students with high scores in zhongkao are admitted to high general school. Students with low scores have to pursue a high vocational education system as a second alternative (D. Chen et al., 2019; G. Wang & Doyle, 2020; Woronov, 2015), which includes three genres of schools, vocational upper-secondary school, secondary specialized school, skill-workers’ school (Tadesse et al., 2022). Students in the high vocational education system are termed in Chinese as sanxiaosheng, students from the three types of high vocational schools but not from high general schools.
Summary of Chinese Educational System

The ultimate factor that separates vocational students from general education is gaokao. At the end of high general education, students who pass the score of their respective provinces will be enrolled in higher general education and employed in well-paid positions (Hansen & Woronov, 2013; Muthanna & Sang, 2015). Conversely, students who have low academic capabilities join higher vocational education (Liao, 2019). A national college entrance examination exists exclusively for students in the high vocational school, named sanxiaosheng gaokao. However, only a small number of students participate in the sanxiaosheng gaokao and shift from the vocational education system to the general education system for better odds of being employed. Those who do not participate in sanxiaosheng gaokao join vocational colleges/universities or start working after graduation.

**Vocational Undergraduates**

Before 2021, China’s higher vocational institutions only recruited 3-year college students who did not receive a bachelor’s degree. In January 2019, the China State Council published *Implementation Plan of National Vocational Education Reform*, which projected to cultivate undergraduate-level talents in China’s higher vocational education to fill the gap of approximately 30 million high-skilled talents in China’s principal manufacturing industry (State Council of the People’s Republic of China, 2019). In September 2020, the Ministry of Education and other nine departments documented the *Action Plan of Vocational Education for Enhancing Quality and Cultivating Excellence (2020–2023)*, which reiterated the significance of fostering vocational undergraduates (4 academic years as in higher general education system) for the increase of technical and skilled talents (MOE, 2020b).
In September 2021, vocational undergraduates entered into the historical stage of Chinese higher education system (MOE, 2021). In 2021, 41,400 first group of vocational undergraduates were enrolled in 32 undergraduate-level vocational institutions in China (MOE, 2021). In 2022, 76,300 students were enrolled in vocational universities, with an increase of 6.11% compared to 2021(MOE, 2023).

**Cultural Capital of Students From Chinese Vocational System**

From the flow map of the three-stage vocational education (see Figure 18), the institution entrance examinations (e.g., zhongkao, gaokao, and sanxiaosheng gaokao) principally determined students’ trajectory to general or vocational education system. For a long time, institution entrance examinations as a measurement of the Chinese government meritocracy that gives youth their career path in line with their academic achievement (Y. Liu, 2013, 2016; G. Wang & Doyle, 2020; Woronov, 2015). Moreover, students in higher general education are more likely from families with higher cultural capital, and vocational students mainly come from low-class families (Jia & Ericson, 2017) and regard higher vocational education as an alternative to climb the social ladder (Gausel & Bourguignon, 2020).

Literature underscored the negative relationship between students’ institution entrance examination score and their socioeconomic status (SES), because of cultural capital advantage deficiency between rural and urban cities/families/schools (Hansen & Woronov, 2013; Jia & Ericson, 2017; Tadesse et al., 2022; G. Wang & Doyle, 2020). Report on the Development of Vocational Education in China (2012–2022) found more than 70% of students in vocational education originated from rural areas. Concerning “one person in vocational education means
one person in employment and one household out of poverty” (MOE, 2022b, p. 63), the Chinese government has featured vocational education more prominently in socioeconomic development.

**Employability Goal of China’s Higher Vocational Education**

With a long-term lower status in the higher education system, the *Implementation Plan for National Vocational Education Reform* elucidated, for the first time, vocational education and general education are two different types of education with equal importance and emphasized on the scale development and quality enhancement (State Council of the People’s Republic of China, 2019). Higher vocational education will develop in two domains, academic education and vocational training, with equal importance. Vocational training will cultivate life-long employment competency of individuals from families with lower cultural capital backgrounds (MOE, 2022b).

**Belt and Road Initiatives for China’s Internationalization of Higher Vocational Education**

One Belt and One Road Initiatives (BRI) were first issued by Chinese President Xi Jinping in 2013. BRI plan to consolidate infrastructure/trade/investment connection between China and countries along the Silk Road Economic Belt (i.e., traversing Central Asia to the Middle East) and the New Maritime Silk Road (i.e., across South China Sea to the Indian Ocean, east Africa, the Red Sea, and the Mediterranean). As the BRI marks its 10th anniversary, the State Council of the People’s Republic of China (2023) issued the white paper *The Belt and Road Initiative: A Key Pillar of the Global Community of Shared Future* and concluded “A decade after its launch, BRI yielded substantial benefits and achieved initial success in
promoting shared development and prosperity for participating countries, all amid a changing global situation” (p. 1).

By June 2023, China had signed more than 200 BRI cooperation agreements with over 150 countries and 30 international organizations across five continents. From 2013–2022, the cumulative value of trade between China and BRI partner countries reached $19.1 trillion, with an average annual growth rate of 6.4%. Cumulative two-way investment between China and partner countries reached $380 billion, including $240 billion from China (State Council of the People’s Republic of China, 2023).

The fruitful outcomes of BRI led China’s higher education to redesign the plan of world education, talent flow, and knowledge production (Ge & Ho, 2022). The large construction projects (e.g., constructing a high-speed railroad and communication infrastructure), called for a great number of technical personnel. Regarding the “Bring-in” (引进来 in Chinese) and “Going-out” (走出去 in Chinese) strategies, Chinese higher vocational education in China is attracting students from BRI countries and exploring opportunities for worldwide cooperative education (Ge & Ho, 2022). Concerning facility connectivity projects collaborated with BRI countries, Chinese higher vocational education is invigorated to provide on-site training, in conjunction with Chinese enterprises (H. Liu, 2015).

Under the umbrella of BRI, numerous policies and documents support the internationalization of Chinese higher vocational education. The Plan for Constructing Modern Training Schools and Vocational Education System (2014–2020) highlights the opening up of the vocational education system by seeking global opportunities for vocational training with BRI
countries/organizations (MOE, 2014). The following year, *Guiding Principles for Promoting Collaboration in International Capacity of Productivity and Equipment Manufacturing* was issued to emphasize the going-out strategy and to encourage vocational institutions to promote on-site training (State Council of the People’s Republic of China, 2015). Since then, many higher vocational institutions have started developing training schemes customized from BRI.

The collaboration between Beijing Polytechnic College and China Nonferrous Metal Mining Group (Co. Ltd.) sent vocational educators to support onsite training, set up a branch campus in Zambia, and host Zambian students to study in Beijing (Ge & Ho, 2022). Furthermore, the Lu Ban Workshop was inaugurated in Tianjin with the goal of providing technical training and encouraging cooperation among vocational institutions in BRI countries (MOE, 2022b). Since 2010, Chinese vocational institutions have been actively involved in World Vocational College Skills Competition to catalyze technological and cultural interactions in terms of competition. In the past five sessions of the World Vocational College Skills Competition (from 2010–2022), Chinese vocational students have achieved impressive results (i.e., 36 gold, 29 silver, and 20 bronze medals; MOE, 2022b).

**Cross-Cultural Communication and Collaboration Goal of China’s Higher Vocational Education**

Concerning integrating world-class industry with vocational education, China has created steady cooperation with more than 70 international enterprises, organizations, and vocational institutions. For instance, the China-Central Eastern Europe Vocational Education International League (C-CEEVEIL), a platform was launched to promote cooperation between China and
Central and Eastern European Countries (e.g., Germany, France, and Switzerland); the China-
Africa TVET Cooperation Program and the China-Africa TVET Cooperation Consortium were
implemented for further solid collaborations with vocational institution in Africa.

For Southeast Asia, the China-ASEAN 100+100 Institutional Cooperation Flagship
Programs (MOE, 2022b, pp. 65–66) has effectuated 80 collaboration projects. In 2022, China
held the BRICS TVET Cooperation Alliance Conference (BRICS, a grouping of Brazil, Russia,
India, China, and South Africa), founded the BRICS TVET Cooperation Alliance, and hosted
BRICS Vocational Skills Competition actively promoting exchanges and dialogues among
BRICS countries on vocational education.

Based on Belt and Road vocational education cooperation, China will incessantly enlarge
networks of international cooperation/exchanges with foreign countries. Therefore, higher
vocational education has the responsibility to cultivate high-skilled technician talents with
competency in communicating and collaborating effectively with foreign individuals or groups
(MOE, 2022b).

**Significance of Global Competence for Students in China’s Higher Vocational Education**

This section summarized the goal of promoting high-quality employment and prosperous
international activities/exchanges/competitions/collaborations in China’s higher vocational
education (MOE, 2022b). GC comprises essential capabilities for students in both higher general
education and higher vocational institutions. GC prepares higher vocational students with local/international life-long employability and cross-cultural knowledge/skills/attitude/values (Global Leadership Excellence, 2018a; W. D. Hunter, 2004; OECD, 2018; Tsinghua University, 2016).

Chapter Summary

Based on an analysis of 26 selected studies from the last decade (2013–2023), this chapter explored global competence-based education in tertiary education guided by cultural capital theory and internationalization framework. Figure 19 outlines the roadmap of Chapter 2.

Figure 19

Roadmap of Chapter 2
This chapter first summarized the definition of global competence (GC) developed from four components of competence (e.g., knowledge, skill, attitude, and value) based on Butler’s (1978). Building on four perspectives (Global Leadership Excellence, 2018a; W. D. Hunter, 2004; OECD, 2019; Tsinghua University, 2016) of GC’s definition and assessment, this study synthesized and followed two orientations (i.e., career and civic) and four dimensions (i.e., knowledge, skill, attitude, and value) of GC.

In this study, GC aims to promote lifelong employability and responsibility for global sustainability, equity, and inclusion (OECD, 2018). In this research, I evaluate students’ GC from four dimensions: (a) knowledge of world events and foreign cultures (W. D. Hunter, 2004), global sustainable issues (OECD, 2019; Tsinghua University, 2016), foreign languages (Tsinghua University, 2016); (b) Skills to cooperate cross-culturally and adaptability in a cross-cultural environment (W. D. Hunter, 2004; Tsinghua University, 2016), deal with challenging situations (OECD, 2019; Tsinghua University, 2016); (c) Attitudes toward cultural diversity and preparedness to involve in the diversity (W. D. Hunter, 2004; OECD, 2019; Tsinghua University, 2016); and (d) value toward immigrants and respect for people from other cultures (OECD, 2019; Tsinghua University, 2016).

Inspired by Butler’s (1978) competence-based education, this study seeks for global competence-based education to support students’ GC development in China’s postsecondary education. Based on social and capital theory (Bourdieu, 1973, 1974, 1984, 1986; Bourdieu & Passeron, 1990) and a comprehensive internationalization framework (ACE, 2023a), the systematic literature review was used for filtering pedagogical approaches from students’ cultural
capital background and internationalization experience. Under Bourdieusian theory, the findings demonstrate 10 students’ culture capital factors related to GC, categorized into personal and family background (i.e., gender, geographic location/origin, parents’ highest degree, parents’ job position), educational background (i.e., high school experience, fields of studies, university type, university location), and capital reproduction (i.e., foreign language proficiency, employment expectation).

For internationalization factors, findings showed internationalization abroad (IA, i.e., student/faculty mobility) and international at home (i.e., curriculum, cocurriculum, and extracurriculum) positively influence GC growth. Furthermore, the systematic review highlights that intergroup contact factors (i.e., in-person contact, online contact, and mediated contact in social life) increase GC achievement. This study regards social life as a crucial part for instilling internalization accumulation and hypothesizes intergroup contact may be added into the internationalization framework (ACE, 2023a) as internationalization at home intergroup contact. Both the students’ cultural capital background factors and internationalization factors synthesized from the literature underpin the independent variables in Chapter 3.

A total 10 of quantitative studies applied a GC scale originated from W. D. Hunter’s (2004) GC checklist. Two authors developed GC scale on their own. Among all the scales used in the literature, Y. Liu and Wu (2015)’s GC scale for higher general undergraduates is consistent with the two orientations (i.e., international career and global civic) and Chinese higher vocational talent cultivating objectives mentioned (i.e., sustainable employability and cross-cultural adaptability). Therefore, this study employs Y. Liu and Wu (2015)’s scale for assessing
GC level of students in Chinese higher vocational education. The details of the scale will be discussed in the methodology.

Four of these 10 studies validated W. D. Hunter’s (2004) checklist to measure students’ GC levels from different samples (Cao & Meng, 2020a, 2020b; Q. Meng et al., 2018; L. Zhang & Wen, 2018). The mean score of overall GC is 3.56, with 3.45 in both knowledge and skills, and 3.89 in attitudes. Therefore, the scale of this study was developed from W. D. Hunter (2004). Moreover, the mean GC score is applied as a reference for the target sample in the next chapter.

The research gap emerging from the systematic review demonstrated the target sample, GC education of students in Chinese higher vocational, is unresearched. Moreover, 4-year bachelors are new in Chinese higher vocational education. It is crucial to understand their difference from 3-year college students for educators to design unique GC-based pedagogies for them. The next section details the methodologies of investigating the GC-based pedagogies for 3-year college and 4-year bachelor students in China’s higher vocational education. Chapter 3 analyzes the relationship between GC level and cultural capital/ internationalization factors.
CHAPTER 3. METHODOLOGY

This chapter details the methodology applied to explore global competence-based education by investigating the relationship between the global competence (GC) achievement of Chinese students in higher vocational education and 19 predictive factors distributed in the cultural capital theory and internationalization framework. The following sections describe (a) research design, (b) sampling method, (c) survey design, (d) data collection approach, (e) calculation of reliability statistics, (f) multiple regression analysis, and (g) ethical considerations for this research.

Research Design and Research Questions

This study applied a quantitative research design. I first recruited participants from a private vocational university on the eastern coast of China, by using a web-based survey on the Questionnaire Star platform. Second, after collecting participant responses, I employed descriptive statistics to describe the characteristics of students’ GC level in a Chinese vocational university. Then, I used independent-samples t test to separately compare the average scores of overall GC score and its four subdimensions between two different groups (i.e., higher vocational 3-year college students and 4-year undergraduates). Combining the findings from the systematic literature review and the research target sample, I ultimately used Hierarchical Multiple Regression (HMR) to examine the relationship between 19 predictive factors and the means scores of overall GC and its four dimensions (i.e., knowledge, skills, attitudes, and values) attainment of students in a Chinese higher vocational university.
Under the cultural capital theory, 11 predictors were distributed in personal information (i.e., gender), family background (i.e., family location, family income, first-generation student), educational background (i.e., high school type, degree type, major in university), and capital reproduction (i.e., further study, further study abroad, future job, and foreign language engagement). Based on the internationalization framework, eight independent variables (IVs) fell into three categories: Internationalization abroad (i.e., student mobility and faculty mobility), internationalization at home curriculum (i.e., curriculum, cocurriculum, and extracurriculum), and internationalization at home intergroup contact (i.e., direct contact, online contact, and mediated contact). The research questions and hypotheses are detailed in Figure 20.

**Figure 20**

*Research Hypotheses for Global Competence*
Research Questions and Hypotheses

Research Question 1: What are the characteristics of students’ global competence in a Chinese private vocational university? Is there any difference in the overall GC score and its four subdimensions score between higher vocational 3-year college students and 4-year undergraduates?

H1: There is no significant difference in the overall GC score and its four subdimensions score between Chinese higher vocational 3-year college students and 4-year undergraduates.

H1-1: There is no significant difference in the overall GC score between Chinese higher vocational 3-year college students and 4-year undergraduates.

H1-2: There is no significant difference in the GC knowledge score between Chinese higher vocational 3-year college students and 4-year undergraduates.

H1-3: There is no significant difference in the GC skills score between Chinese higher vocational 3-year college students and 4-year undergraduates.

H1-4: There is no significant difference in the GC attitudes score between Chinese higher vocational 3-year college students and 4-year undergraduates.

H1-5: There is no significant difference in the GC values score between Chinese higher vocational 3-year college students and 4-year undergraduates.

Research Question 2: How much variance in the overall GC score and its four subdimensions score of Chinese higher vocational students is explained by cultural capital factors? What cultural capital factors predict the likelihood of Chinese higher vocational students’ GC overall score and its four subdimensions score?
H2: Cultural capital factors significantly influence the overall GC score and its four subdimensions score of Chinese higher vocational students.

H2-1: Personal and family background factors (i.e., gender, family location, family income, first-generation student) significantly influence the overall GC score and its four subdimensions score of Chinese higher vocational students.

H2-2: Educational background factors (i.e., high school type, degree type, major in university) significantly influence the overall GC score and its four subdimensions score of Chinese higher vocational students.

H2-3: Capital reproduction factors (i.e., further study, further study abroad, future job, and foreign language engagement) significantly influence the overall GC score and its four subdimensions score of Chinese higher vocational students.

Research Question 3: How much variance in the overall GC score and its four subdimensions score is explained by internationalization abroad factors? What internationalization abroad factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

H3: Internationalization abroad factors significantly influence the overall GC score and its four subdimensions score of Chinese higher vocational students.

H3-1: Student mobility significantly influences the overall GC score and its four subdimensions score of Chinese higher vocational students.

H3-2: Faculty mobility significantly influences the overall GC score and its four subdimensions score of Chinese higher vocational students.
Research Question 4: How much variance in the overall GC score and its four subdimensions score is explained by internationalization at home curriculum factors? What internationalization at home curriculum factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

H4: Internationalization at home curriculum factors significantly influence the overall GC score and its four subdimensions score of Chinese higher vocational students.

H4-1: Internationalization at home curriculum significantly influences the overall GC score and its four subdimensions score of Chinese higher vocational students.

H4-2: Internationalization at home cocurriculum influences the overall GC score and its four subdimensions score of Chinese higher vocational students.

H4-3: Internationalization at home cocurriculum influences the overall GC score and its four subdimensions score of Chinese higher vocational students.

Research Question 5: How much variance in the overall GC score and its four subdimensions score is explained by internationalization at home intergroup contact factors? What internationalization at home intergroup contact factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

H5: Internationalization at home intergroup contact factors significantly influence the overall GC score and its four subdimensions score of Chinese higher vocational students.

H5-1: Direct contact significantly influences the overall GC score and its four subdimensions score of Chinese higher vocational students.
H5-2: Online contact influences the overall GC score and its four subdimensions score of Chinese higher vocational students.

H5-3: Mediated contact influences the overall GC score and its four subdimensions score of Chinese higher vocational students.

**Sampling**

This study employed a purposive sampling method to recruit a representative sample with characteristics of the research interest (i.e., 3-year college students and 4-year undergraduates in Chinese higher vocational education; McMillan, 2016). This section describes the sampling procedures, such as target population, setting, and sample size.

**Target Population**

Students in Chinese higher vocational education are currently being marginalized in research of GC, even as they account for nearly half of the higher education population in 2022 (MOE, 2023). Moreover, vocational undergraduates have been new in China’s higher education system since 2021 (MOE, 2020a). Few empirical studies have addressed their characteristics for educators to design suitable GC-based pedagogies. According to MOE (2023), only 32 vocational universities have been established. Therefore, the target sample of this study selected one of the 32 vocational universities which entailed both 3-year vocational college students and 4-year vocational undergraduates.

**Setting**

Z University is an appropriate site for study of students’ GC for two reasons. First, it contains the target sample of 3-year college students and 4-year undergraduates in China’s higher
vocational system. Second, Z University attaches great importance to the internationalization pedagogies consistent with this study’s internationalization independent variables.

Setting Description

This study was conducted at a vocational and technical university (Z University) on the eastern coast of China. Established in the 1990s, Z University is a representative sample because it is one of 32 vocational universities that includes both 4-year undergraduates and 3-year college students (MOE, 2023). Z University has eight colleges representing several discipline areas (i.e., College of Architecture and Engineering, College of Economics and Management, College of Foreign Languages, College of Nursing and Health, College of Intelligent and Manufacturing, College of Food and Drug, College of Art, College of Information Engineering).

By March 2023, the total student enrollment at Z University was 9,908, with 2,798 (28.24%) undergraduates and 7,110 (71.76%) college students (Academic Affairs Office of Z University, April 2023). Seven of eight colleges comprise both 3-year college students and 4-year undergraduates, except for the College of Foreign Language. Table 6 demonstrates the numbers and percentages of the population by college.
### Table 7

**Student Population by College and Degree**

<table>
<thead>
<tr>
<th>No.</th>
<th>College</th>
<th>Degree</th>
<th>Number of students and percentage</th>
<th>Total number of students and Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>College of Architecture and</td>
<td>3-year college</td>
<td>445 (4.49%)</td>
<td>593</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td>4-year bachelor</td>
<td>148 (1.49%)</td>
<td>(5.98%)</td>
</tr>
<tr>
<td>2</td>
<td>College of Economics and</td>
<td>3-year college</td>
<td>1,599 (16.14%)</td>
<td>1,975</td>
</tr>
<tr>
<td></td>
<td>Management</td>
<td>4-year bachelor</td>
<td>376 (3.79%)</td>
<td>(19.93%)</td>
</tr>
<tr>
<td>3</td>
<td>College of Nursing and</td>
<td>3-year college</td>
<td>608 (6.14%)</td>
<td>964</td>
</tr>
<tr>
<td></td>
<td>Health</td>
<td>4-year bachelor</td>
<td>356 (3.59%)</td>
<td>(9.73%)</td>
</tr>
<tr>
<td>4</td>
<td>College of Intelligent and</td>
<td>3-year college</td>
<td>399 (4.03%)</td>
<td>742</td>
</tr>
<tr>
<td></td>
<td>Manufacturing</td>
<td>4-year bachelor</td>
<td>343 (3.46%)</td>
<td>(7.49%)</td>
</tr>
<tr>
<td>5</td>
<td>College of Food and Drug</td>
<td>3-year college</td>
<td>729 (7.36%)</td>
<td>1,052</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-year bachelor</td>
<td>323 (3.26%)</td>
<td>(10.62%)</td>
</tr>
<tr>
<td>6</td>
<td>College of Art</td>
<td>3-year college</td>
<td>746 (7.53%)</td>
<td>1,433</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-year bachelor</td>
<td>687 (6.93%)</td>
<td>(14.46%)</td>
</tr>
<tr>
<td>7</td>
<td>College of Information Engineering</td>
<td>3-year college</td>
<td>1,967 (19.85%)</td>
<td>2,532</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4-year bachelor</td>
<td>565 (5.70%)</td>
<td>(25.55%)</td>
</tr>
<tr>
<td>8</td>
<td>College of Foreign Languages</td>
<td>3-year college</td>
<td>617 (6.24%)</td>
<td>617 (6.24%)</td>
</tr>
</tbody>
</table>

**Internationalization Goal**

Z University defines internationalization as one of its principal development strategies. Internationalization predictors in this study include student/faculty mobility and internationalization at home curriculum/cocurriculum/extracurriculum (International Exchange and Cooperation Office of Z University, 2023). As with International Exchange and Cooperation Office data (2023), Z University has established long-term partnerships with more than 20
quality universities overseas in approximately 20 countries, including the United States, the United Kingdom, Japan, Spain, New Zealand, Germany, and Korea.

As for internationalization abroad pedagogy (e.g., student abroad mobility), Z University has sent 421 students abroad for short-term or long-term study and internship from 2018 to 2022 (International Exchange and Cooperation Office of Z University, 2023). Due to the COVID-19 global pandemic, all short-term overseas study programs were suspended in 2021 and 2022, and long-term study abroad programs stayed at normal. Concerning faculty abroad mobility, Z University has a multilevel program of pedagogical exchange and cooperation overseas. Every year, approximately 10 faculty are selected to pursue abroad training and exchange in Singapore, Spain, and the United States. As of 2022, 45 faculty and administrators traveled abroad to study, train, and lecture.

Furthermore, Z University has instilled internationalization into its home curriculum. For instance, some curricula blend professional English courses and international teaching material. In cocurricular activities, Z University creates opportunities for students to contact directly or online with foreign teachers/students in class or on campus. Z University has organized multifaceted international activities on campus to enrich the cocurriculum, such as inviting experts from abroad to give lectures on foreign customs/cultures, and the Foreign Language Cultural Festival.

To extend internationalization activities outside campus, Z University has led students to actively participate in international competitions to learn from other overseas universities and to present themselves on the world stage. Moreover, Z University has actively cooperated with
international high-end industries and advanced enterprises, promoting students’ engagement in training or internships with multinational corporations/organizations. Based on the long-term vision of internationalization, Z University is developing joint/dual diplomas or credit transfer from different countries and new collaborative programs with foreign companies/institutions/organizations (International Exchange and Cooperation Office of Z University, 2023).

Sample Size

Inspired by the five studies in the systematic review that applied multiple regression to analyze the relationship between influencing factors and GC, this study used multiple regression to assess the practical and statistical significance across a range of sample sizes. This section describes the procedures that this study determines the sample size in line with the statistical power of the significance testing and the generalizability of the results, suggested by Hair et al. (2014).

Statistical Power

Sample size directly influences the appositeness and the statistical power of multiple regression analysis. According to Hair et al. (2014), small samples of 30 participants or fewer are only suitable for simple regression analysis with one IV to detect a strong association with any degree of certainty. Furthermore, large samples of more than 1,000 observations tend to result in excessive statistical significance in nearly all relationships in the study. For such extensive samples, researchers need to ensure agreement between practical and statistical significance (Hair et al., 2014).
Generalizability

Generalizability signifies multiple regression analysis requires a proper sample size for applying results to different samples. Findings from a small sample may fail to generalize to other cases, losing scientific value (Pallant, 2016). Even with a large sample, adding an IV to the regression equation each time leads to the growth of the $R^2$ value, which may cause the researcher to misinterpret generalizability without proper consideration (Hair et al., 2014). Concerning the appropriateness of the sample size, Tabachnick and Fidell (2013) developed a formula for calculating an accurate sample size based on the number of IVs: $N > 50 + 8m$ (where $m =$ the number of IVs).

This study includes 19 IVs. For categorical variables, each category is counted as a variable. A total of seven of 19 are continuous variables, and 12/19 are categorical variables, with 10 of them dichotomous variables and two IVs (i.e., high school type and fields of study) comprising separately three and eight categories. The IV (i.e., high school type) was recoded into two dummy variables (i.e., leading high school and high vocational school). The other IV, fields of study were recoded into seven dummy variables (i.e., nursing and health, architecture and engineering, economics and management, food and drug, foreign languages, information engineering, arts). Hence, this study consisted of seven continuous IVs and 19 dichotomous IVs. The number of the sample size will be greater than $N > 50 + 8*(7+19*2) = 410$. Moreover, the $df$ epitomizes the degree of sample generalizability. The growth of the $df$ for a particular sample augments the predictive accuracy. Hair et al. (2014) provided a formula for $df$ calculation: $df = N - (\text{number of IVs} + 1)$.
**Target Sample Size**

Regarding sample representativity, Dillman et al. (2014) suggested a sample size in the range of 1,013–1,067 can represent a target population from 20,000 to 1,000,000,000 with 85%. According to statistics on Chinese national education, 16,937,700 students enrolled in Chinese higher vocational education in 2022 (MOE, 2023). As a result, a sample size of approximately 1,050 participants can be considered representative. Regarding the sampling error, the sample size goal was 1,500 responses. This sample size was large enough to allow for equal representation of the characteristics identified as important. The large sample size can lessen the likelihood of sampling error (Terrell, 2015).

**Survey Design**

The survey instrument is the principal data collection method applied in this study. Surveys assist researchers in generalizing answers and conducting statistical analyses to detail the target population from which the sample was drawn by asking the respondents a series of standardized questions related to research goals (Fowler, 2013; Leavy, 2017). In this study, I applied the Global Competence Survey on Undergraduates (GCSU; Y. Liu & Wu, 2015) to collect data from respondents to investigate Chinese higher vocational students’ global competence (GC), because it comprises two orientations (i.e., career and civic) of GC defined in this study. What follows is a description of the structure and content of the original GCSU.
To address the research questions on the population in Chinese higher vocational education, I discuss the process of adaption and verification of the Global Competence Survey on Undergraduates (GCSU) into the Global Competence Survey on Higher Vocational Students (GCSHVS).

Global Competence Survey on Undergraduates

The Global Competence Survey on Undergraduates (GCSU) is a tool applied to assess the relationship between undergraduates’ GC scores and their demographic background and international mobility experience (i.e., student mobility abroad). The GCSU comprises two parts, demographic information and self-reporting of the GC scale.

Demographic Information

A total of 13 questions are listed in the demographic information part, distributed in personal information (i.e., gender), family background (i.e., family location, family income, the highest degree of father, the highest degree of mother), educational background (i.e., the score of gaokao, name of university, university type, grade, fields of study, grade point average [GPA]), and student abroad mobility (i.e., abroad experience and internship in cross-cultural environment).

Global Competence Measurement Scale

Y. Liu and Wu (2015) adapted GC scale based on W. D. Hunter’s (2004) checklist (i.e., career orientation) and global citizen conception (i.e., civic orientation) built on Definition and Selection of Competencies (DeSeCo; OECD, 2005). The following sections depict the content, reliability, and validity of the GC scale.
Content. Y. Liu and Wu (2015) divided GC into three dimensions (i.e., knowledge, skills, attitudes, and values) with seven subfactors (see Table 7). The 5-point Likert scale taps the respondents’ current self-reported GC level (from 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree), indicating how much the respondents agree or disagree with each item of GC scale.

Table 8

*Global Competence Scale in Y. Liu and Wu (2015)*

<table>
<thead>
<tr>
<th>Domains</th>
<th>Subfactors</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>1. World Knowledge</td>
<td>Have basic knowledge of other countries’ languages, cultures, histories, and geographies.</td>
</tr>
<tr>
<td>(8 items, Cronbach’s α = 0.895)</td>
<td>2. Understanding Globalization</td>
<td>Understand globalization, its developmental trends, and its influence.</td>
</tr>
<tr>
<td>Skills</td>
<td>3. Use of Tools</td>
<td>Be able to communicate in a foreign language and use information technology and other tools.</td>
</tr>
<tr>
<td>(12 items, Cronbach’s α = 0.867)</td>
<td>4. Cross-Cultural Communication</td>
<td>Be able to communicate, learn, and work with people from different cultural backgrounds.</td>
</tr>
<tr>
<td>Attitudes and Values</td>
<td>5. Intent to Interact</td>
<td>Seek cross-cultural experiences, learning, and research.</td>
</tr>
<tr>
<td>(11 items, Cronbach’s α = 0.914)</td>
<td>6. Open Attitude</td>
<td>Openness to understand, respect, and appreciate people outside one’s culture.</td>
</tr>
<tr>
<td></td>
<td>7. Values</td>
<td>Identify with one’s own culture and recognize that one’s own worldview is not universal.</td>
</tr>
</tbody>
</table>
Reliability. Y. Liu and Wu (2015) have well-documented the reliability and validity of the GC scale. Reliability stands for the consistency of items in a scale on a test to measure a single concept (Johnson & Christensen, 2004). Cronbach’s coefficient $\alpha$ is a statistical indicator to evaluate the stability of a scale. Y. Liu and Wu (2015) examined Cronbach’s $\alpha$ of the total scale (31 items, Cronbach’s $\alpha = .931$) and subscales for each of the three dimensions, respectively knowledge (Cronbach’s $\alpha = .895$), skills (Cronbach’s $\alpha = .867$), and attitudes and values (Cronbach’s $\alpha = .914$). All Cronbach’s coefficient ($\alpha$) show a high level of reliability ($\geq .86$) and excellent internal consistency of the scale domains (see Table 7).

Validity. Validity indicates the precision of a test’s inferences or interpretations. Y. Liu and Wu (2015) scrutinized the content validity and structural validity of the GC scale.

Content Validity. Content validity refers to the accuracy of the scale items that effectively characterize the content to be assessed (Pallant, 2016). To guarantee content validity, Y. Liu and Wu (2015) developed the GC scale building on the conceptual framework of GC (e.g., W. D. Hunter’s [2004] GC checklist and OECD’s [2005] Definition and Selection of Competencies), which had been well-measured in preexisting survey questionnaires. Furthermore, Y. Liu and Wu (2015) invited experts in related fields to appraise and confirm the content validity of the GC scale. The content validity was further ameliorated after Y. Liu and Wu’s (2015) revision and modification.

Structural Validity. Y. Liu and Wu (2015) applied the confirmatory factor analysis (CFA) model to demonstrate the good structural validity of their GC scale, because all of the scale items fit into the three basic dimensions, and the model fit indicators demonstrated a good model fit.
For instance, the ratio of Chi-square to degree of freedom (CIMIN/DF) is 3.683, root mean square error of approximation (RMSEA) is 0.049, and goodness of fit index (GFI) is 0.905.

**Global Competence Survey on Higher Vocational Students**

To analyze the relationship between Chinese higher vocational students’ GC level and the 19 predictors that emerged from the systematic review, I created Global Competence Survey on Higher Vocational Students (GCSHVS; see Appendix A for English version and Appendix B for Chinese version). Adapted from Y. Liu and Wu’s (2015) GCSU, the GCSHVS consisted of five key sections (i.e., one group of dependent variables [i.e., global competence and its four dimensions]) and four series of independent variables (i.e., cultural capital background, internationalization abroad, internationalization at home curriculum, and internationalization at home intergroup) to investigate the research questions of this study. To exclude the participants who did not meet the inclusion criteria, the GCSHVS was supplemented by two sections to filter the target sample through informed consent and screening questions. The following seven sections describe the GCSHVS and the survey translation process.

**Informed Consent**

The informed consent document was included at the beginning of the GCSHVS (see Appendices A and B). If students agree to consent to participating in the research, they could press agree and start the survey. Otherwise, they had the option to decline participation by pressing disagree to end the survey. The informed consent form includes (a) the purpose of the study, (b) what participation will involve, (c) potential risks and benefits, (d) how their participation decisions and information they provide will be protected, (e) what rights they have
as research subjects, (f) how the results will be presented, (g) how much time needed to complete
the study, and (f) the option to quit at any time.

**Screening Questions**

Inclusion criteria are the characteristics potential participants must have to be included in
the study. Two screening questions were designed to include the target sample (see Table 8,
Appendices A and B). The first screening question offered categorical options from *below 18* to
*23 or more* and the second screening question included dichotomous answers of either yes or no.
For the first screening question, if the participants press *below 18*, which meant they were not
adults, the survey automatically ended. Otherwise, participants who responded with answers *18*,
*19, 20, 21, 22, 23 or more* continued to screening question 2. For the second screening question,
the survey automatically ended if the participants answered *No*, which meant they were not
studying in Chinese higher vocational education at that time. Otherwise, participants who
pressed the answer *Yes* moved on to the main sections of GCSHVS.

**Table 9**

*Screening Questions*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>How old are you?</td>
<td>below 18, 18, 19, 20, 21, 22, 23 or more</td>
</tr>
<tr>
<td>Are you currently studying in China’s higher vocational education?</td>
<td>Yes/No</td>
</tr>
</tbody>
</table>
Dependent Variables of Global Competence

The GCSHVS survey directly used the GC scale from the GCSU questionnaire (Y. Liu & Wu, 2015) for two reasons. First, it supported the design of DVs in this study, such as the two orientations (i.e., career and civic). Furthermore, the excellent validity and reliability results ensured adequate consistency and precision of the scale.

Independent Variables of Students’ Cultural Capital Background

Students’ cultural capital background initially included 13 IVs distributed in three areas, such as personal and family background, educational background, and capital reproduction. Table 9 describes each item in detail. The reasons for the exclusion of GPA and English proficiency from IVs in this study are explained in Chapter 4.

Personal and Family Background. The four questions on personal family background originated from Y. Liu and Wu’s (2015) GCSU survey. The answers on gender question include categories, such as man, woman, nonbinary, prefer to self-describe, prefer not to answer (Jiang et al., 2022; Q. Meng et al., 2017a). The place of origin contains rural and city. Both the father’s and the mother’s highest degree were asked, and responses were detailed in five levels, ranging from middle school or secondary vocational school to doctor. The answer family income listed eight categories, ranging from lower than 1,000 to more than 30,000 (see Table 9, Appendices A and B).
Table 10

Survey Items in Cultural Capital Theory

<table>
<thead>
<tr>
<th>Categories/subcategories/citations</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal and family background</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Man/Woman/ Nonbinary / Prefer to self-describe/ Prefer not to answer</td>
</tr>
<tr>
<td>(Jiang et al., 2022; Q. Meng et al., 2017a)</td>
<td></td>
</tr>
<tr>
<td>Place of origin (Y. Liu &amp; Wu, 2015)</td>
<td>Rural/city</td>
</tr>
<tr>
<td>Family income (Y. Liu &amp; Wu, 2015)</td>
<td>Lower than 1,000/1,000/1,000–2,999/3,000–5,999/6,000–9,999/10,000–14,999 /15,000–19,999/20,000–29,999/More than 30,000</td>
</tr>
<tr>
<td>Parents’ highest degree (Y. Liu &amp; Wu, 2015)</td>
<td>Middle school or secondary vocational school/ High school or high vocational school/ Junior college/Bachelor/Master/ Doctor/not applicable</td>
</tr>
<tr>
<td>Educational Background</td>
<td></td>
</tr>
<tr>
<td>Degree (MOE, 2022b)</td>
<td>Three-year college degree/ 4-year bachelor’s degree</td>
</tr>
<tr>
<td>High school type (MOE, 2022b)</td>
<td>Leading high school/Normal school/ Vocational upper-secondary school or secondary specialized school or skill-workers’ school</td>
</tr>
<tr>
<td>Fields of study (Eight fields, Academic Affairs Office of Z University, April 2023)</td>
<td>Economics and Management/Foreign Languages/ Food and Drug/ Information Engineering/ Nursing and Health/Intelligent Manufacturing</td>
</tr>
<tr>
<td>GPA (Y. Liu &amp; Wu, 2015)</td>
<td>Below 2.00/2.00<del>2.49/2.50</del>2.99 /3.00~3.49/above 3.5/not sure</td>
</tr>
<tr>
<td>Capital Reproduction</td>
<td></td>
</tr>
<tr>
<td>English proficiency (Author designed)</td>
<td>CET 3/ CET 4/CET 6/none of above</td>
</tr>
<tr>
<td>Foreign language other than English (Butum et al., 2020)</td>
<td>Have you ever learned a second foreign language other than English? (Yes/No)</td>
</tr>
<tr>
<td>Employment expectation (L. Zhang &amp; Wen, 2018)</td>
<td>Public sectors/nonpublic sectors</td>
</tr>
<tr>
<td>Further study (Author hypothesized from L. Zhang &amp; Wen, 2018)</td>
<td>Have you ever planned to pursue further study after graduation (e.g., bachelor’s degree or graduate programs)? (Yes/No)</td>
</tr>
<tr>
<td>Further study abroad (Author hypothesized from L. Zhang &amp; Wen, 2018)</td>
<td>Have you ever planned to pursue further overseas study after graduation (e.g., bachelor’s degree or graduate programs)? (Yes/No)</td>
</tr>
</tbody>
</table>
**Educational Background.** The two questions (i.e., degree and high school type) in this domain were designed for participants in higher vocational education. The IV degree comprises a 3-year college degree and a 4-year bachelor’s degree, and the high school type consists of leading high school, normal high school, vocational upper-secondary school or secondary specialized school or skill-workers’ school, in line with China’s education system detailed in Chapter 2 (MOE, 2022b). The IV (i.e., fields of study) was designed based on the eight colleges of Z University (i.e., arts, architecture and engineering, economics and management, foreign languages, food and drug, information engineering, nursing and health, intelligent manufacturing). The GPA question was adapted from Y. Liu and Wu’s (2015) GCSU, and responses ranged from below 2.0 to above 3.5 (see Table 9, Appendices A and B).

**Capital Reproduction.** The two studies in the literature (Q. Meng et al., 2017b, 2018) assessed students’ English proficiency by three self-reported items. However, their participants were Chinese international students, different from my target sample. Moreover, a self-reported survey is subjective. Hence, this study assessed students’ English proficiency through their level of College English Test (CET), a national English as a foreign language test with high influence and authority in China (National Education Examinations Authority, 2023). CET evaluates the English proficiency of students in Chinese postsecondary education to guarantee students reach the required English levels defined in the National College English Teaching Syllabuses. Therefore, in this study, English proficiency was assessed by participants’ CET Band from low to high, level 3 to level 6. The item on the ability of foreign languages other than English was adapted from Butum et al. (2020). In the original GCSHVS survey, it was a yes or no question,
Have you ever learned a second foreign language other than English? (see Table 9, Appendices A and B).

The item employment expectation entailed public sectors and nonpublic sectors. The GCSHVS survey clarified the public sectors stand for the posts in government departments or state-owned enterprises, and nonpublic sectors include private enterprises and transnational corporations (L. Zhang & Wen, 2018). Inspired by the significant relationship between students’ future career expectation and their GC scores demonstrated in L. Zhang and Wen (2018), I hypothesized students’ future study intention may also influence their GC achievement. Hence, two items of future study intention and future overseas study intention were asked in yes or no questions, Have you ever planned to pursue further study after graduation (e.g., bachelor’s degree or graduate programs)? Have you ever planned to pursue further overseas study after graduation (e.g., bachelor’s degree or graduate programs)? (see Table 9, Appendices A and B).

**Independent Variables of Internationalization Abroad**

This subdimension includes two domains, student foreign mobility and faculty foreign mobility. Table 10 and Appendices A and B describe the survey questions.

**Table 11**

*Survey Items in Internationalization Abroad*

<table>
<thead>
<tr>
<th>Categories</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you been abroad?</td>
<td>J. Li and Eryong (2021)</td>
</tr>
<tr>
<td>Are there any professors or staff that you know who have experience in studying or attending training abroad?</td>
<td>Butum et al. (2020)</td>
</tr>
</tbody>
</table>
**Student Abroad Mobility.** Previous literature used either t-tests, interviews, or content analyses to demonstrate the positive relationship between short-term, semester, or long-term overseas programs (Alfaro & Paz-Albo, 2021; Chong et al., 2022; Doerr, 2018; Fang et al., 2018; Y. Hu & Jing, 2018; X. Liu & Cao, 2020; Schenker, 2019; X. Zhang, 2020). Therefore, no item or scale was presented in the systematic manuscripts. I adapted the overseas experience-related survey questions in J. Li and Eryong’s (2021), *Have you been abroad?* with the response of *yes* or *no*.

**Faculty Abroad Mobility.** The question item of this predictor was developed by Butum et al. (2020). The adapted *yes* or *no* question was, *Are there any professors or staff that you know have experience of studying or attending training abroad?*

**Independent Variables of Internationalization at Home Curriculum**

This subdimension refers to the internationalization curriculum. It includes curriculum, cocurriculum, and extracurriculum, with five yes-or-no questions in each category adapted from the findings in the systematic review. In the data analysis procedure, I applied the three 2-point Likert scale to assess Chinese higher vocational students’ involvement in internationalization at home curriculum.

**Curriculum.** The internationalization curriculum in this study is defined as courses that provide students with knowledge, skills, attitudes, and values related to internationalization (see Table 11, Appendices A and B). Items 1 and 2 were related to internationalization courses instilling foreign language and international employment, adapted from Butum et al. (2020). Items 3 and 4 originally referred to courses including textbooks and academic literature written
in foreign languages (Cen & Yang, 2022). Nevertheless, Cen and Yang (2022) addressed Chinese postgraduates specified in academic research. In line with the employment-oriented objective of the target sample, students in higher vocational education, the word *academic* was eliminated in the GCSHVS survey. Based on the international employment objective of higher vocational education (MOE, 2022b), Item 5 was supplemented, referring to the courses related to international vocational skills training.

**Table 12**

*Survey Items in Internationalization at Home Curriculum*

<table>
<thead>
<tr>
<th>No.</th>
<th>Curriculum</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Have you taken any foreign language courses related to your field of study (e.g., English, Japanese, Spanish, and French)?</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>2</td>
<td>Have you had any courses related to international employment?</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>3</td>
<td>Have you used any textbooks written in English or other foreign languages besides Foreign language courses?</td>
<td>Cen and Yang (2022)</td>
</tr>
<tr>
<td>4</td>
<td>Have you read any English literature or literature in other foreign languages related to your field of study?</td>
<td>Cen and Yang (2022)</td>
</tr>
<tr>
<td>5</td>
<td>Have you taken any courses related to international vocational skills training?</td>
<td>MOE (2022b)</td>
</tr>
</tbody>
</table>

**Cocurriculum.** In this study, international/cross-cultural activities provide in-person or online interaction with foreigners in courses or on campus (see Table 12, Appendices A and B). Items 1 and 2 were related to in-person contact with foreigners in class or on campus, adapted from Q. Meng et al. (2017a). Previous literature demonstrated the positive relationship between
GC level and virtual contact with foreign students and faculty in their courses (Commander et al., 2016; Kang et al., 2018; Leung et al., 2017; Y. Li, 2013; Ndubuisi et al., 2022). However, no item or scale was presented in the systematic manuscripts. I paraphrased Items 3 and 4 based on the previous findings. In line with the contribution of international activities on campus to GC development Song and Li (2020), Item 5 was adapted from H. Meng (2021).

Table 13

Survey Items in Internationalization at Home Cocurriculum

<table>
<thead>
<tr>
<th>No.</th>
<th>Cocurriculum</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In class, have you contacted any foreign tutors/professors in person?</td>
<td>Q. Meng et al. (2017a)</td>
</tr>
<tr>
<td>2</td>
<td>Have you contacted any foreigners through campus activities?</td>
<td>Q. Meng et al. (2017a)</td>
</tr>
<tr>
<td>3</td>
<td>In class, have you contacted any foreign tutors/professors online?</td>
<td>Cen and Yang (2022)</td>
</tr>
<tr>
<td>4</td>
<td>Have you had any online courses in which you collaborated/discussed with foreign students?</td>
<td>Cen and Yang (2022)</td>
</tr>
<tr>
<td>5</td>
<td>Have you participated in international activities (e.g., foreign language festivals, international lectures, and international discussions)?</td>
<td>H. Meng (2021)</td>
</tr>
</tbody>
</table>

**Extracurriculum.** This study regarded extracurriculum as internationalization activities outside campus that enhance students’ engagement in international partnerships, networks, organizations, and companies (see Table 13, Appendices A and B). Items 1, 2, and 3 were adapted from Butum et al. (2020), involving three extracurricular activities such as school-enterprise cooperation or internship opportunities with multinational corporations, joint/dual diplomas or credit transfers from foreign countries, and recruiting new international
cooperations. Item 4 was created based on J. Li and Xu’s (2016) finding the experience of intercultural training/internship promoted GC development.

Previous studies found a positive correlation between GC and global academic involvement (e.g., international publication and international conference engagement; Cen & Yang, 2022; Jiang et al., 2022). However, their samples were Chinese postgraduates needing international academic engagement. For the target sample in this study, I modified international academic activities into international volunteer involvement because Chinese higher vocational education has provided a number of volunteers in the international events held in China, and international events are good tunnels for higher vocational students to connect with globalization (Shanghai Education Commission, 2023). This modified item and the whole scales have been scrutinized by two experts in the Chinese higher vocational education.

**Independent Variables of Internationalization at Home Intergroup Contact**

The intergroup contact factors that surfaced from the systematic review were not included in the internationalization framework proposed by (ACE, 2023a). This study hypothesizes intergroup contact factors can be framed into internalization at home because social life is an integral part of embedding GC acquisition. The internationalization at home intergroup contact consists of direct contact, online contact, and mediated contact.
### Table 14

Survey Items in Internationalization at Home Extracurriculum

<table>
<thead>
<tr>
<th>No.</th>
<th>Extracurriculum</th>
<th>Citations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Does your university provide any school-enterprise cooperation or internship opportunities with multinational corporations?</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>2</td>
<td>In your university, are there any curricula offering joint/dual diplomas or credit transfers from different countries?</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>3</td>
<td>Do you know if your university is recruiting students, researchers, and developers of foreign educational programs and foreign companies to develop new programs?</td>
<td>Butum et al. (2020)</td>
</tr>
<tr>
<td>4</td>
<td>Have you participated in any school-enterprise cooperation program or internship at multinational corporations?</td>
<td>J. Li and Xu (2016)</td>
</tr>
<tr>
<td>5</td>
<td>Have you ever volunteered for an international event?</td>
<td>MOE (2022b)</td>
</tr>
</tbody>
</table>

**Direct Contact.** Direct contact refers to face-to-face contact with foreigners in the real world. Cao and Meng (2020b) applied a Likert scale from 1 to 5 to assess the intensity of such contact of Chinese International students in Belgium. To investigate the local higher vocational students, I deleted *in Belgium* in all three items (see Table 14). Item 1 measures the number of foreign friends in real life. Items 2 and 3 assessed the amount of direct contact: (a) how much do you have face-to-face chat with culturally different students and (b) how much do you do social things with culturally different students? Cronbach’s alpha of the scale was .84 in Cao and Meng (2020b).
Table 15

Survey Items in Internationalization at Home Direct Intergroup Contact

<table>
<thead>
<tr>
<th>No.</th>
<th>Items (Cronbach’s alpha = .84)</th>
<th>Likert Scale from 1 to 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How many foreign friends do you have in real life?</td>
<td>1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5 or more</td>
</tr>
<tr>
<td>2</td>
<td>How much do you have face-to-face chat with foreigners?</td>
<td>1 = never or almost never;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = several times a year;</td>
</tr>
<tr>
<td>3</td>
<td>How much do you do social things with foreigners?</td>
<td>3 = several times a season;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = several times a month;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 = once a week or more</td>
</tr>
</tbody>
</table>

**Online Contact.** To facilitate the participants’ understanding of the items of this scale, I explained in the questionnaire online contact referred to contact with culturally different students through any genre of social media, such as Facebook, Twitter, Snapchat, LinkedIn, and WeChat. Frequency and duration of online contact were assessed with three items of a 5-level Likert scale (Cao & Meng, 2020b). The same reason as in the direct contact scale, in Belgium were all deleted in three items. Item 1 investigated the respondents to indicate the number of days they had been online to contact with culturally different students for the past week, with response categories ranging from 1 (none), 2 (1–2 days), 3 (3–4 days), 4 (5–6 days), and 5 (everyday; see Table 15). Items 2 and 3 assessed the respondents’ duration of online contact with culturally different students, respectively, on an average weekday and on an average weekend, with response categories ranging from 1 (less than 15 minutes), 2 (between 15 minutes and 1 hour), 3 (1–2 hours), 4 (3–4 hours), and 5 (more than 4 hours). Cronbach’s alpha of the scale was .75 in Cao and Meng (2020b).
### Table 16

**Survey Items in Internationalization at Home Online Intergroup Contact**

<table>
<thead>
<tr>
<th>No.</th>
<th>Items (Cronbach’s alpha = .75)</th>
<th>Likert Scale from 1 to 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The number of days you have been online to contact with foreigners for the past week:</td>
<td>1 = none; 2 = 1<del>2 days; 3 = 3</del>4 days; 4 = 5~6 days; 5 = every day</td>
</tr>
<tr>
<td>2</td>
<td>The duration of online contact with foreigners on weekdays:</td>
<td>1 = less than 15 minutes; 2 = between 15 minutes and 1 hour;</td>
</tr>
<tr>
<td>3</td>
<td>The duration of online contact with foreigners on weekends:</td>
<td>3 = 1<del>2 hours; 4 = 3</del>4 hours; 5 = more than 4 hours</td>
</tr>
</tbody>
</table>

**Mediated Contact.** In this study, mediated contact refers to extensive exposure to foreign entertainment programs facilitated by widespread media, such as television, internet, and mobile phones. The 5-point Likert scale of three items is integrated from Cao and Meng (2020a; see Table 16). A higher score indicated more frequent mediated contact and acculturation. The reliability coefficient in Cao and Meng (2020a) was 0.87.
Table 17

*Survey Items in Internationalization at Home Mediated Intergroup Contact*

<table>
<thead>
<tr>
<th>No.</th>
<th>Items (Cronbach’s alpha = .87)</th>
<th>Likert Scale from 1 to 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How many foreign TV series or movies have you viewed?</td>
<td>1 = <em>none</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = 1~9;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = 10~19;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = 20~29;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 = 30 or more</td>
</tr>
<tr>
<td>2</td>
<td>How often do you view foreign TV series or movies?</td>
<td>1 = <em>never or almost never</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = <em>several times a year</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = <em>several times a season</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = <em>several times a month</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 = <em>once a week or more</em></td>
</tr>
<tr>
<td>3</td>
<td>How much do I like viewing foreign TV series or movies?</td>
<td>1 = <em>not at all</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = <em>not so much</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = <em>neutral</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 = <em>much</em>;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 = <em>very much</em></td>
</tr>
</tbody>
</table>

*Survey Translation*

The questions in the GCSU were derived from both English and Chinese literature (see Table 17). I translated original Chinese items into English and those original English into Chinese. I conducted the translation in two steps: (a) using one bilingual Chinese author, who studied in English-speaking countries, translated the survey with assistance from a native English editor and (b) two English experts to reverse translate the English version to Chinese. In this way, I further scrutinized the accuracy of the translation and modified any inappropriate wording. Once both the English and Chinese versions of GCSHVS Survey were ready, I continued to data collecting.
Table 18

The Original Languages of the Sections of GCSHVS Survey

<table>
<thead>
<tr>
<th>Sections</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informed consent</td>
<td>English</td>
</tr>
<tr>
<td>Screening questions</td>
<td>English</td>
</tr>
<tr>
<td>Cultural capital</td>
<td>Chinese</td>
</tr>
<tr>
<td>Global competence scale</td>
<td>Chinese</td>
</tr>
<tr>
<td>Internationalization abroad</td>
<td>Chinese</td>
</tr>
<tr>
<td>Internationalization at home curriculum</td>
<td>English/Chinese</td>
</tr>
<tr>
<td>Internationalization at home intergroup contact</td>
<td>English</td>
</tr>
</tbody>
</table>

This section details four stages of data collection procedures. What follows is a depiction of (a) the steps to obtaining site access, (b) administration of the pilot study, (c) the data collection procedures, and (d) selection of participants.

Site Access

Once the survey and procedure were approved by the Institutional Review Board (IRB) of Chapman University, I prepared an application of data collection detailing the research topic, purpose, and procedure to the Director of the Academic Research Office of Z University. Upon receiving the site entry permission, a similar email was written to one college’s dean to ask for permission to collect pilot data among students from the college. After obtaining permission from the dean, a third similar email was sent to one counselor at the college, searching for assistance in distributing the online survey to participants. In Z University, the counselor and students of each class have a WeChat group (i.e., a Chinese free messaging and calling application). The counselor sent the survey QR code to the WeChat class group. Students then
had the opportunity to access the survey voluntarily through Questionnaire Star platform (WJX, n.d.).

**Pilot Study**

I conducted one pilot test with 30 students in two classes at one college at Z University. All of them completed the survey online. I interviewed eight of them to collect feedback regarding problems in the survey through an online focus group. The feedback from the eight participants ensured (a) each item was clear to them, (b) each item was applicable and relevant to them, and (c) the length of the questionnaire was acceptable for them, i.e., not too long, or too overwhelming. Based on the pilot participants’ questionnaire completion duration, the survey was estimated to take approximately 5 minutes to finish.

**Data Collection Procedures**

After the pilot study, I wrote a fourth similar e-mail to the rest seven colleges’ deans for the site entry permission. Then I sent a fifth letter to all the counselors of eight colleges, looking for help in sending out the online survey through WeChat group. Participants could complete the questionnaires through different devices (e.g., mobile phones, tablets, or computers). All students had the same access to the survey, and students could voluntarily choose to quit the questionnaire if they refused to participate. Data collection started on June 3, 2023, and ended on June 17, 2023, lasting 2 weeks with a total of 1,800 initial responses received. A total of 263/1800 (14.61%) respondents were excluded from the data, of which 199/1800 (11.06%) rejected the informed consent, 11/1800 (0.6%) were below 18 years old, and 53/1800 (2.9%) were not enrolled in Chinese higher vocational education at that moment. I also excluded the 33 outliers
during the data analysis phase, discussed in the Multiple Regression section. Moreover, there was no missing data. Therefore, 1,504 participant samples were selected for data analysis which reached the target sample size of approximately 1,500.

**Participants**

The nature and composition of the participant sample is described in Table 18. Of the 1,504 participants, 41.5% \((n = 624)\) identified as men, and 58.5% \((n = 880)\) identified as women. The age of participants was distributed as 18 years old \((14.7%, n = 221)\), 19 years old \((36.2%, n = 545)\), 20 years old \((32.2%, n = 485)\), 21 years old \((11.8%, n = 177)\), 22 years old \((4.1%, n = 61)\), 23 years old or more \((1%, n = 15)\). The majority of participants were first-year students \((67.0%, n = 1,008)\), then sophomores \((29.0%, n = 436)\), junior students \((3.9%, n = 58)\), and senior students \((0.1%, n = 2)\).

The population of junior and senior students was tiny because of two reasons. First, the data collection began in June, when most junior and senior students had left campus and started internships. Moreover, seniors counted the smallest percentage of the total student population of Z University \((4.5%, n = 441)\). A total of 1,502 participants reported their fields of study and two of them refused to report their majors. The 1,502 respondents were distributed in eight fields of study, with 14.3% \((n = 216)\) in nursing and health, 5.1% \((n = 76)\) in architecture and engineering, 10.8% \((n = 163)\) in economics and management, 10.8% \((n = 164)\) in food and drug, 19.6% \((n = 294)\) in foreign languages, 21.4% \((n = 321)\) in information engineering, 11.7% \((n = 175)\) in arts, and 6.3% \((n = 95)\) in intelligent and manufacturing.
Table 19

Nature and Composition of the Participants

<table>
<thead>
<tr>
<th>Characteristics/categories</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>624</td>
<td>41.5%</td>
</tr>
<tr>
<td>Female</td>
<td>880</td>
<td>58.5%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>221</td>
<td>14.7%</td>
</tr>
<tr>
<td>19</td>
<td>545</td>
<td>36.2%</td>
</tr>
<tr>
<td>20</td>
<td>485</td>
<td>32.2%</td>
</tr>
<tr>
<td>21</td>
<td>177</td>
<td>11.8%</td>
</tr>
<tr>
<td>22</td>
<td>61</td>
<td>4.1%</td>
</tr>
<tr>
<td>23 or more</td>
<td>15</td>
<td>1.0%</td>
</tr>
<tr>
<td><strong>Grade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>1,008</td>
<td>67.0%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>436</td>
<td>29.0%</td>
</tr>
<tr>
<td>Junior</td>
<td>58</td>
<td>3.9%</td>
</tr>
<tr>
<td>Senior</td>
<td>2</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Fields of study</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing and Health</td>
<td>216</td>
<td>14.3%</td>
</tr>
<tr>
<td>Architecture and Engineering</td>
<td>76</td>
<td>5.1%</td>
</tr>
<tr>
<td>Economics and Management</td>
<td>163</td>
<td>10.8%</td>
</tr>
<tr>
<td>Food and Drug</td>
<td>164</td>
<td>10.8%</td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>294</td>
<td>19.6%</td>
</tr>
<tr>
<td>Information Engineering</td>
<td>321</td>
<td>21.4%</td>
</tr>
<tr>
<td>Arts</td>
<td>175</td>
<td>11.7%</td>
</tr>
<tr>
<td>Information Engineering</td>
<td>93</td>
<td>6.2%</td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Degree</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three-year college students</td>
<td>1,065</td>
<td>70.3%</td>
</tr>
<tr>
<td>Four-year undergraduates</td>
<td>450</td>
<td>29.7%</td>
</tr>
</tbody>
</table>
Reliability Statistics

Cronbach’s α was applied to evaluate the degree of internal consistency of the DV (i.e.,
global competence and each of the four subscales) and six IVs (i.e., curriculum, cocurriculum,
extracurriculum, direct contact, online contact, and mediated contact). Table 19 details the results
of Cronbach’s α, revealing a strong internal consistency reliability in this study.

Table 20

Cronbach’s Alpha Summary

<table>
<thead>
<tr>
<th>Scales</th>
<th>N of items</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variables (5-point Likert scale)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Global Competence</td>
<td>31</td>
<td>Cronbach’s α = 0.96</td>
</tr>
<tr>
<td>Knowledge</td>
<td>8</td>
<td>Cronbach’s α = 0.94</td>
</tr>
<tr>
<td>Skills</td>
<td>12</td>
<td>Cronbach’s α = 0.95</td>
</tr>
<tr>
<td>Attitudes</td>
<td>8</td>
<td>Cronbach’s α = 0.96</td>
</tr>
<tr>
<td>Values</td>
<td>3</td>
<td>Cronbach’s α = 0.93</td>
</tr>
<tr>
<td>Independent variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curriculum (2-point Likert scale)</td>
<td>3</td>
<td>Cronbach’s α = 0.75</td>
</tr>
<tr>
<td>Cocurriculum (2-point Likert scale)</td>
<td>3</td>
<td>Cronbach’s α = 0.82</td>
</tr>
<tr>
<td>Extracurriculum (3-point Likert scale)</td>
<td>3</td>
<td>Cronbach’s α = 0.77</td>
</tr>
<tr>
<td>Direct contact (5-point Likert scale)</td>
<td>3</td>
<td>Cronbach’s α = 0.91</td>
</tr>
<tr>
<td>Online contact (5-point Likert scale)</td>
<td>3</td>
<td>Cronbach’s α = 0.96</td>
</tr>
<tr>
<td>Mediated contact (5-point Likert scale)</td>
<td>3</td>
<td>Cronbach’s α = 0.83</td>
</tr>
</tbody>
</table>

Scales Reliability of Dependent Variables

Students’ self-reporting of global competence (GC) level was the only dependent variable
in this study. The GC scale aimed to assess how globally competent Chinese higher vocational
students were by means of self-perceived performance ratings. In line with Butler’s (1978) four
dimensions of competence, I regarded values as the foundation for attitudes, because attitudes
are the reactions (e.g., affection and behavior) to a particular value. Therefore, diverging from the previous literature, I separated attitudes and values when measuring participants’ GC scores. In this study, Chinese higher vocational students’ GC levels were evaluated through knowledge, skills, attitudes, values, and overall scores. Table 19 detailed reliability for the whole GC scale (Cronbach’s α = 0.96), and for the four subscales: knowledge level (11 items, Cronbach’s α = 0.94), the skills level (12 items, Cronbach’s α = 0.95), the attitudes level (8 items, Cronbach’s α = 0.96), and values level (3 items, Cronbach’s α = 0.93).

**Scales Reliability of Independent Variables**

A total of six independent variables (i.e., curriculum, cocurriculum, extracurriculum, direct contact, online contact, and mediated contact) in the study were assessed by means of the scale instrument. To ensure the validity and reliability of the independent scales applied to this research, the internal consistencies (Cronbach’s α) of all IVs exceeded 0.75 (see Table 19).

**Multiple Regression**

This study employed multiple regression statistical analyses techniques using IBM SPSS Statistics, version 28. Based on an analysis of 26 selected studies, 15 of the studies employed similar correlational methods. A total of nine studies applied regression models to explore the association between GC and its influencing predictors (see Table 20), with one employing standard multiple regression (Kang et al., 2018), three using hierarchical multiple regression (HMR; Jiang et al., 2022; Q. Meng et al., 2017a; 2017b), three applying logit regression (Cen & Yang, 2022; L. Zhang & Wen, 2018), and three using structural equation modeling (SEM; Cao & Meng, 2020a, 2020b; Q. Meng et al., 2018). Building on the wide usage of regression in the
studies of the systematic review and the theory-based hypotheses of this study, I regarded HMR as a versatile statistical tool and candidate technique to investigate GC predictors in Chinese higher vocational education. As a result, the following parts discuss the definition of a multiple regression, formulate a regression equation, detail the assumption test procedures, and discuss the evaluation of overall model fit.

Table 21

Regression Methods in the Literature

<table>
<thead>
<tr>
<th>Methods</th>
<th>Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard multiple regression</td>
<td>Kang et al. (2018)</td>
</tr>
<tr>
<td>Hierarchical multiple regression</td>
<td>Jiang et al. (2022); Q. Meng et al. (2017a, 2017b)</td>
</tr>
<tr>
<td>Logit regression</td>
<td>Cen and Yang (2022); L. Zhang and Wen (2018)</td>
</tr>
<tr>
<td>Structural equation modeling</td>
<td>Cao and Meng (2020a, 2020b); Q. Meng et al. (2018)</td>
</tr>
</tbody>
</table>

Definition of Multiple Regression

Regression analysis is a method to assess the nature and strength of the relationship between a sole dependent variable (DV) and one or more independent variables (IVs). Simple regression involves a single IV, whereas multiple regression investigates two or more IVs (Hair et al., 2014; Pallant, 2016; Tabachnick & Fidell, 2013; Urdan, 2017).

The words regression and correlation are often used interchangeably to name these quantitative techniques. However, regression analysis intends to use IVs to predict a DV, and correlations, on the other hand, merely examine the relationship between the DV and the IVs (Tabachnick & Fidell, 2013). In other words, a Pearson correlation coefficient does not
discriminate between the DV and IVs. Regression analysis aims to predict the value of DV given some IV values, alternatively called the predictor variables. Urdan (2017) identified four benefits to using multiple regression analysis compared to a correlation analysis. Specifically, a multiple regression analysis allows researchers to investigate (a) the extent to which a group of IVs related to DV, (b) the unique contribution of each IV to DV when controlling for the rest of the IVs, (c) the relative strength of each IV, and (d) the interaction effects between the IVs. In the social sciences, multiple regression allows researchers to examine an isolated cause-and-effect correlation between two variables even when not in a laboratory.

In summary, multiple regression aims to evaluate the relationship between a dependent variable (DV) and some predictors. If a relationship occurs, using the information in the independent variables (IVs) enhances precision in predicting values for the DV (Howitt & Cramer, 2014). Gauging separate correlations or t-tests between two variables is inappropriate for this study because it does not consider relationships among other IVs. For instance, some IVs in this research that might predict GC attainment (e.g., direct contact, online contact, and mediated contact) for higher vocational students may also be related to one another. If bivariate measures were calculated between achievement and each of these variables, the effect found for any variable on achievement would not have considered another variable influencing part of the relationship.
**Multiple Regression Equation**

To apply a multiple regression, one has to comprehend the simple linear regression equation with one DV (Y) and one IV (X). Urdan (2017, p. 185) described the equation as follows:

\[ Y' = bX + a \]

In this equation, \( Y' \) represents the predicted value of the \( Y \) variable (i.e., the DV, outcome, or criterion variable), \( b \) represents the slope or the unstandardized regression coefficient (i.e., the coefficients allocated to IV throughout regression), and \( X \) stands for a given value of the IV (i.e., predictor variable). The \( a \) signifies the \( Y \) intercept (i.e., the point where the regression line intercepts the \( Y \) axis or the value of \( Y \) when all the \( X \) values are zero). The two variables (\( Y \) and \( X \)) in a simple linear regression are assumed to be linearly related. Each time the \( X \) variable increases or decreases in value to a given extent, the \( Y \) variable correspondingly grows (positive correlation) or declines (negative correlation) to a given extent. For example, if the \( X \) value rises from 1 to 2 and \( Y \) grows by 2 points, then when \( X \) climbs from 2 to 3, the \( Y \) value is predicted to augment another 2 points (Urdan, 2017).

Multiple regression develops from simple linear regression, which explains variance in the DV value depending on a group of IVs other than a single one. Hence, \( X \) is replaced by \( X_1 \) to \( X_k \) and \( k \) stands for the number of IVs. The letter \( a \) is still the intercept and \( b_k \) are the unstandardized regression coefficients allotted to individuals of the IVs. A unique \( Y' \) value is predicted for each subject when inserting the subject’s particular \( X \) values into the equation, even if the same intercept and coefficients are applied to predict the values on the DV for all cases in
the sample. The multiple regression equation was listed as follows (Tabachnick & Fidell, 2013, p. 118; Urdan, 2017, p. 185):

\[ Y' = a + b_1 X_1 + b_2 X_2 + \ldots + b_k X_k + \epsilon \]

Multiple regression primarily attempts to estimate the group of \( b \) values (i.e., regression coefficients), with which IVs predict Y values from the equation, mostly approaching the Y values gained by calculation. The calculated regression coefficients contain two advantages: (a) minimalizing (i.e., the sum of the squared) deviations between predicted and attained Y values and (b) optimizing the association between the predicted and achieved Y values for the database.

Adapted from the equation of multiple regressions. In this study, I have five DVs and 19 IVs. The equations are written as follows:

\[ Y_1' = a + b_1 X_1 + b_2 X_2 + \ldots + b_{19} X_{19} + \epsilon \]
\[ Y_2' = a + b_1 X_1 + b_2 X_2 + \ldots + b_{19} X_{19} + \epsilon \]
\[ Y_3' = a + b_1 X_1 + b_2 X_2 + \ldots + b_{19} X_{19} + \epsilon \]
\[ Y_4' = a + b_1 X_1 + b_2 X_2 + \ldots + b_{19} X_{19} + \epsilon \]
\[ Y_5' = a + b_1 X_1 + b_2 X_2 + \ldots + b_{19} X_{19} + \epsilon \]

\( Y_1' \), \( Y_2' \), \( Y_3' \), \( Y_4' \), and \( Y_5' \) represent sequentially total global competence level, knowledge level, skills level, attitudes level, and values level. \( X_1 \) to \( X_{19} \) represent a given value of the 19 IVs. The coefficient, \( b \), represents the slope (i.e., unstandardized regression coefficient of each IV), \( a \) represents the intercept (i.e., the point where the regression line
intercepts the Y axis or the value of Y when all the X values are zero), $k$ represents the number of IVs, and $\varepsilon$ stands for errors.

**Hierarchical Multiple Regression**

Hierarchical Multiple Regression (HMR) has been regarded as a vigorous technique for segmenting variance (Cohen & Cohen, 1983). HMR adds more steps to the traditional standard and stepwise regression techniques. Moreover, standard and stepwise regressions attempt to examine and maximize prediction, and HMR aims to explore theory-based hypotheses (Aron & Aron, 1999; Cohen, 2001). Hence, IVs are added to the HMR model in a sequence guided by the research-based theoretical framework and assessed in steps or blocks. In this process, after controlling for the previously added IVs, the variance in DV can be evaluated with each newly added IV or set of IVs (Pallant, 2016).

Based on cultural capital theory (Bourdieu, 1973, 1974, 1984, 1986) and the internationalization framework (ACE, 2023a; Knight, 1994, 2004), this study aimed to examine the extent to which theoretical model (i.e., cultural capital, internationalization abroad, internationalization at home curriculum, and internationalization at home intergroup contact) predicted overall GC and its four dimensions level after controlling for the effect of variables in other models. First, I examined the relationship between overall GC score and its 19 predictors.

I entered the overall GC mean as the dependent variable and then added all Model 1 IVs (i.e., cultural capital [11 IVs]) in Block 1, Model 2 IVs (i.e., internationalization abroad [two IVs]) in Block 2, Model 3 IVs (i.e., internationalization at home curriculum [three IVs]) in Block 3, and Model 4 IVs (i.e., internationalization at home intergroup contact [three IVs]) in Block 4.
Once all the groups of variables were added, the statistics in the overall model demonstrated the percentage of each group accounted for the total variance in the overall GC mean score. To gauge the variance in the four GC dimensions explained by 19 predictors, I entered the mean scores of knowledges, skills, attitudes, and values successively in the DV box with nothing changed in the four IV blocks.

**Assumptions in Multiple Regression Analysis**

Multiple regression makes many assumptions, and the violation of assumptions causes unreliable and invalid findings (Pallant, 2016). To run a valid multiple regression, this section examines the following assumptions: (a) multicollinearity and singularity; (b) outliers; and (c) normality, linearity, homoscedasticity, and independence of residuals.

**Multicollinearity and Singularity**

Multicollinearity and singularity describe the relationship among the IVs. Multicollinearity refers to a high correlation \( r = .9 \) or more) among the IVs, and singularity exists when one IV is a combination of other IVs. To construct a suitable multiple regression model, multicollinearity and singularity assumptions must be checked and excluded before starting (Pallant, 2016; Tabachnick & Fidell, 2013). IBM SPSS version 28 regression results display multicollinearity in the table titled *Correlations*. It is preferable for the correlations among the variables to range from .3 to .7 (Pallant, 2016).

Furthermore, multicollinearity needs to be double-checked for the values of tolerance and the variance inflation factor (VIF) in the table named *Coefficients* in SPSS 28. According to Pallant (2016), tolerance indicates how much variance of one specified IV is not explained by the
rest of the IVs in the model based on the equation $1 - R^2$ for each variable. The likelihood of multicollinearity is diagnosed when the result is less than .10, indicating a high multiple correlation with the rest IVs. VIF is the inverse of the tolerance value ($1/\text{tolerance}$). Multicollinearity occurs when the VIF result is more than 10. Even though both tolerance and VIF values meet the criteria (tolerance $>.10$ and VIF $< 10$), a high correlation (above .9) among IVs still exists. Therefore, checking the correlation matrix ($0.3 < r < 0.7$) is necessary. When surpassing the suggested values, researchers need to exclude the highly related IVs (Pallant, 2016).

**Outliers**

Outliers refer to extreme cases (i.e., extremely high or extremely low scores) that strongly affect the regression outcome and distort the estimation of the regression weights (Tabachnick & Fidell, 2013). Thus, extreme scores of all the variables (DV and IVs) need to be checked during the initial data-cleaning process. Extreme cases can be directly excluded or replaced by a high score akin to the rest of the cases. Researchers can check outliers before running regression or analyze residuals afterward. Tabachnick and Fidell (2013) suggested researchers determine the solution fit after dealing with outliers to avoid forming an overfitting database.

SPSS 28 shows outliers in the scatterplot of the standardized residuals, a roughly rectangular distribution with a majority of the scores assembled in the center (i.e., around the 0 points). A clear systematic pattern in the residuals implies a violation. The presence of outliers can also be detected in the scatterplot. Tabachnick and Fidell (2013) described outliers as scores with standardized residual values beyond about 3.3 (or less than $-3.3$).
Mahalanobis distance values are also used to identify outliers and are presented in one of
the data file’s last columns (Mah_1) rather than in the output in SPSS. Tabachnick and Fidell
(2013) provided “critical values for evaluating Mahalanobis distance values” (p. 952; see Table
21). The critical values for outliers are checked according to the number of IVs. In other words,
if a study includes two IVs, outliers are the Mahalanobis distance values above 13.82. For this
study, 19 IVs with 26 categories, the Mahalanobis distance values above 54.05.

Table 22

Critical Values for Evaluating Mahalanobis Distance Values

<table>
<thead>
<tr>
<th>No. of independent variables</th>
<th>Critical value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>13.82</td>
</tr>
<tr>
<td>3</td>
<td>16.27</td>
</tr>
<tr>
<td>4</td>
<td>18.47</td>
</tr>
<tr>
<td>5</td>
<td>20.52</td>
</tr>
<tr>
<td>6</td>
<td>22.46</td>
</tr>
<tr>
<td>7</td>
<td>24.32</td>
</tr>
<tr>
<td>26</td>
<td>54.05</td>
</tr>
</tbody>
</table>

Education. Copyright 2016 by McGraw-Hill Education.

Another detail in IMB SPSS 28 output regarding outliers is the table labeled Casewise
Diagnostic, presenting extreme cases with standardized residual values higher than 3.0 or lower
than −3.0. In a sample with normal distribution, only 1% of cases are expected to exceed this
range. To diagnose whether the cases exceeding the capacity have an inappropriate impact on the
results for the overall model, the value for Cook’s distance at the end of the table titled Residuals Statistics needs to be inspected. Consistent with Tabachnick and Fidell (2013), potentially violated cases are those greater than 1. When values surpass 1, researchers need to return to the data file and remove outliers in the final column of the file (Cook’s Distance COO_1). The cases with potential problems do not need to be dealt with if the value for Cook’s distance is less than 1.

**Examination of Residuals**

Residuals are the critical measurements of the difference between the observed and predicted values of the DV. Residual scatterplots are practical tests for examining assumptions of normality, linearity, and homoscedasticity, referring to types of data distribution and the relationship among the variables (Hair et al., 2014; Pallant, 2016; Tabachnick & Fidell, 2013).

**Normality**

Normality assumes a normal distribution of the residual scores around the predicted DV scores (Pallant, 2016). The residual scatterplot is expected to symmetrically display a group of residuals near the center of the predicted DV. Besides scatterplots and histograms, a hypothesis test also examines normality. Skewness and kurtosis refer to the distribution of the scores around the mean. A variable can be defined as normal when skewness and kurtosis fall between −1.0 and 1.0 (Tabachnick & Fidell, 2013). SPSS 28 assesses normality through the Normal P-P Plot of the Regression Standardized Residual, presented at the bottom of the output. To avoid violation, a straight diagonal line from bottom left to top right is expected (Pallant, 2016).
**Linearity**

Linearity represents the straight-line relationship between the predicted DV scores and residuals. Graphical analysis of residuals displays the linear relationship in an almost straight line (Pallant, 2016; Tabachnick & Fidell, 2013).

**Homoscedasticity**

Homoscedasticity refers to the occurrence of similar variances. In other words, the variability of residuals is expected to be similar among the predicted DV scores. The variance of the residuals around the predicted DV scores is expected to be similar at all values for the other predicted scores. A scatterplot is used to determine homoscedasticity (Pallant, 2016; Tabachnick & Fidell, 2013).

**Evaluation of Overall Model Fit**

Having addressed the assumptions in multiple regression, the ANOVA table in SPSS 28 indicates whether the significance of the statistical findings. If the value in the Sig. column is less than .001 (p < .05), the model meets statistical significance (Pallant, 2016).

**Evaluating and Explaining Independent Variables**

SPSS 28 provides a model summary to estimate the overall fit of the multiple regression model. The $R^2$ value represents the DV’s total variance, which is explained by the model (all IVs; Pallant, 2016). For a small sample, the adjusted $R^2$ value provides a better estimation of the actual population value (Pallant, 2016; Tabachnick & Fidell, 2013).

SPSS 28 estimates the significance of each IV. The Sig. column illustrates the variable has a statistically significant unique contribution to the prediction of the DV when the value is
lower than .05 (e.g., .01, .0001). If the value of *Sig.* (p-value) is above .05, the variable is
determined to have no significant unique contribution to the prediction of the DV.

SPSS 28 details the contribution of each IV in the output table titled *Coefficients*. To
distinguish the contribution of each statistically significant IV, the standardized $\beta$ coefficients
count more than the unstandardized $B$ coefficients. According to Pallant (2016), unstandardized
coefficient values are meant for constructing a regression equation. *Standardized* signifies the
values of different IVs can be compared because they have been placed on the same scale
(Pallant, 2016). In addition, the standardized $\beta$ values can be interpreted not only for theoretical
purposes but also for practical objectives. Pallant (2016) defined standardized $\beta$ values as “the
number of standard deviations that scores in the dependent variable would change if there was a
one standard deviation unit change in the predictor” (p. 153).

Part correlation coefficients, also called “semi-partial correlation coefficients”
(Tabachnick & Fidell, 2013, p. 145), provide some potential statistical insight often neglected to
be explained in the literature. The square of this value indicates how much of the overall variance
in the DV is uniquely explained by the specific IV and how much value $R^2$ would lose if the IV
was excluded from the model. It is worth noting the overall $R^2$ value displayed in the model
summary table is not equal to the sum of the squared part correlation values. The reason is the
part correlation values merely denote the unique contribution of each IV without any shared
variance. Nevertheless, the overall $R^2$ value includes the unique variance explained by each IV
and the overlap. For the two IVs rationally strongly associated, the majority of shared variance is
statistically eliminated when they simultaneously exist in the model (Pallant, 2016).
Limitations

Through this study I planned to assess how much variance of 19 predictors explained Chinese higher vocational students’ GC. The survey instrument was useful in interpreting students’ GC at the sample from one private vocational university in China, using a questionnaire. Yet, several limitations could not be avoided in this research design.

The first limitation is purposive sampling, which is a non-random sampling procedure. This study recruited purposively participants from one of 32 higher vocational universities in China, which instilled a plethora of internationalization pedagogies consistent with the IV structure. Although the sample from this institution may not be representative of all students at Chinese vocational universities, the sample still has many characteristics similar to the larger population. Therefore, the result of my study indicated the relationship between Chinese higher vocational students’ GC and cultural capital/internationalization factors. Second, I adapted the findings from the systematic review and designed 15 items for the three scales of internationalization curriculum/cocurriculum/extracurriculum.

Although the three author-designed scales were 2-point Likert scale, Cronbach’s coefficient demonstrated a very high level of reliability ($\geq .75$) and very consistency of items to assess internationalization at home curriculum in Chinese higher vocational education. Moreover, the survey instrument in this study was a one-time depiction rather than a longitudinal investigation and its findings could not explain the causation between cultural capital/internationalization factors and GC. Lastly, I applied a modified version of the previous survey and combined new questions extracted from preexisting literature, which might decrease the
validity and reliability of the questionnaire (Leavy, 2017). Nevertheless, the validity and reliability of all the items in the Global Competence Survey on Higher Vocational Students (GCSHVS) have been rigorously measured.

**Ethical Considerations**

All respondents were informed of the purpose and potential risks of the research before responding to the survey. Hence, all the participation was voluntary. No questions about privacy, names of students, or emotional, or sensitive questions were inquired. Therefore, participants were anonymous during and after the study procedure. All data were reserved in a secure computer and merely applied for research purposes. The study obtained approval from the IRB before the research started and met all of the IRB requirements.

**Chapter Summary**

This chapter delineated the research methodology, including the data collection procedures and analysis methods for this study. A survey research design was employed with descriptive, comparison, and prediction analysis methods. The purpose of this study was to investigate the relationship between Chinese higher vocational students’ global competence level and 19 predictors distributed in the cultural capital theory and internationalization framework. I modified the Global Competence Survey on Higher Vocational Students (GCSHVS) survey and delivered the questionnaires through the web-based Questionnaire Star platform to collect data.
A purposive sample of 1,504 students at Z University was recruited to participate in the study.

IBM SPSS 28 was employed to descriptively analyze the data and conduct independent-samples $t$-test and hierarchy multiple regression to test the hypotheses. Upon completion of data analysis, the results are presented in the next chapter.
CHAPTER 4. RESULTS

This chapter presents the data analysis results for the study. Throughout the next several pages the results of the computation on Chinese higher vocational students’ global competence (GC) level and factors distributed in their cultural capital background and internationalization engagement are explained. Descriptive statistics are detailed in line with the genre of variables (i.e., continuous).

To address five research questions, this research employed independent samples \( t \)-tests and hierarchical multiple regressions (HMRs) in IBM SPSS Statistics 28. The analysis procedures in this chapter included: (a) a brief review of all the independent and dependent variables, (b) assumption checks before the running of data analysis, (c) a descriptive analysis concerning categorical and continuous independent variables respectively, and (d) the research questions through descriptive analysis regarding dependent variables, independent samples \( t \)-test, and HMR. Descriptive statistics of the DVs detailed the characteristics of Chinese higher vocational students’ levels of GC and its four dimensions (knowledge, skills, attitudes, and values). Independent-samples \( t \)-test were conducted to compare the average overall GC score and its four subdimensions between two different groups (i.e., higher vocational 3-year college students and 3-year undergraduates). Lastly, HMR was applied to investigate the ability of 19 predictors of participants’ GC scores. Throughout the course of the analysis procedures, no violations of assumptions emerged in these analyses.
**Dependent and Independent Variables**

The dependent variables (DVs) and independent variables (IVs) were acquired through the Global Competence Survey on Higher Vocational Students (GCSHVS). GPA scores and English level were initially included in the research. However, approximately 60% (900/1,504) of participants were unsure about the two questions. The two IVs (i.e., GPA scores and English level) were excluded from the data analysis because the valid sample was too small. Therefore, five DVs and 19 IVs were included in this study (see Table 22).
### Table 23

**Dependent and Independent Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total GC</td>
<td>Continuous (Y1)</td>
<td>The mean score of 31 items of the 5-point Likert GC scale</td>
</tr>
<tr>
<td>GC knowledge</td>
<td>Continuous (Y2)</td>
<td>The mean score of eight items of the 5-point Likert GC knowledge subscale</td>
</tr>
<tr>
<td>GC skills</td>
<td>Continuous (Y3)</td>
<td>The mean score of 12 items of the 5-point Likert GC skills subscale</td>
</tr>
<tr>
<td>GC attitudes</td>
<td>Continuous (Y4)</td>
<td>The mean score of eight items of the 5-point Likert GC attitudes subscale</td>
</tr>
<tr>
<td>GC values</td>
<td>Continuous (Y5)</td>
<td>The mean score of three items of the 5-point Likert GC values subscale</td>
</tr>
<tr>
<td><strong>Independent variables</strong></td>
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<td></td>
</tr>
<tr>
<td>Model 1: Cultural capital background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Categorical (X1)</td>
<td>0 = female</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = male</td>
</tr>
<tr>
<td>Place of origin</td>
<td>Categorical (X2)</td>
<td>0 = rural</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = city</td>
</tr>
<tr>
<td>Family income</td>
<td>Continuous (X3)</td>
<td>Scores of the monthly family income from low to high:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = low than 1,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = 1,000~2,999</td>
</tr>
<tr>
<td></td>
<td></td>
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</tr>
<tr>
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<td></td>
<td></td>
<td>5 = 10,000~14,999</td>
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<td>6 = 15,000~19,999</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>8 = More than 30,000</td>
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<td>First generation student</td>
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<td></td>
<td></td>
<td>1 = Yes</td>
</tr>
<tr>
<td>Degree</td>
<td>Categorical (X5)</td>
<td>0 = 3-year college student</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 = 4-year undergraduates</td>
</tr>
<tr>
<td>High school type</td>
<td>Categorical (X6)</td>
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<tr>
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<td>0 = No</td>
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<td>Type</td>
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<td>---------------------</td>
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</tr>
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<td></td>
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<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Architecture and Engineering</td>
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<td></td>
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<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Economics and Management</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Food and Drug</td>
<td>0 = No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Foreign Languages</td>
<td>0 = No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
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<tr>
<td>Information Engineering</td>
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<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Arts</td>
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<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Second foreign language</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Further study</td>
<td>Categorical (X9)</td>
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</tr>
<tr>
<td></td>
<td>0 = No</td>
<td></td>
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<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Further study abroad</td>
<td>Categorical (X10)</td>
<td></td>
</tr>
<tr>
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<td>0 = No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Future job</td>
<td>Categorical (X11)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0 = Nonpublic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = public</td>
<td></td>
</tr>
<tr>
<td>Model 2: Internationalization abroad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student mobility</td>
<td>Categorical (X12)</td>
<td></td>
</tr>
<tr>
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<td>0 = No</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Faculty mobility</td>
<td>Categorical (X13)</td>
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</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>1 = Yes</td>
<td></td>
</tr>
<tr>
<td>Model 3: Internationalization at home curriculum</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Curriculum</td>
<td>Continuous (X14)</td>
<td>The sum of five items of the 2-point Likert internationalization curriculum scale</td>
</tr>
<tr>
<td>Cocurriculum</td>
<td>Continuous (X15)</td>
<td>The sum of five items of the 2-point Likert internationalization cocurriculum scale</td>
</tr>
<tr>
<td>Extracurriculum</td>
<td>Continuous (X16)</td>
<td>The sum of five items of the 2-point Likert internationalization extracurriculum scale</td>
</tr>
<tr>
<td>Model 4: Internationalization at home intergroup contact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct contact</td>
<td>Continuous (X17)</td>
<td>The sum of three items of the 5-point Likert direct contact scale</td>
</tr>
</tbody>
</table>
Assumptions Check

As noted in Chapter 3, multiple linear regression needs a series of techniques to examine violations of the assumptions. To ensure the reliability and validity of findings, preliminary analyses were presented to check multicollinearity, outliers, independence of residuals, normality, linearity, and homoscedasticity (Pallant, 2016).

Multicollinearity and Singularity

Multicollinearity and singularity stand for the relationship among the IVs, which occurs when the correlation between the continuous variables is highly correlated ($r = .9$ or more; Pallant, 2016). The Pearson correlation coefficient across all 12 continuous variables was checked, and no pair of IVs was correlated equal to or higher than .9 (i.e., $r = .9$ or more).

All continuous variables investigated were significantly correlated with each other on a moderate level, implying there may not be a multicollinearity problem (Tabachnick & Fidell, 2013; see Table 23). Moreover, Table 24 detailed the Tolerance and Variance Inflation to ensure no multicollinearity occurred. The tolerance and VIF values of all the IVs meet the criteria (tolerance > .10 and VIF < 10), which means all the IVs contribute to a suitable regression model (Pallant, 2016).
Table 24

*Correlations Between All Variables*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total GC</td>
<td>.808**</td>
<td>.876**</td>
<td>.843**</td>
<td>.606**</td>
<td>.187**</td>
<td>.437**</td>
<td>.421**</td>
<td>.418**</td>
<td>.405**</td>
<td>.381**</td>
<td>.394**</td>
<td></td>
</tr>
<tr>
<td>2. Knowledge</td>
<td>.594**</td>
<td>.538**</td>
<td>.458**</td>
<td>.141**</td>
<td>.321**</td>
<td>.295**</td>
<td>.326**</td>
<td>.276**</td>
<td>.263**</td>
<td>.325**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Skills</td>
<td>.595**</td>
<td>.282**</td>
<td>.173**</td>
<td>.414**</td>
<td>.420**</td>
<td>.367**</td>
<td>.467**</td>
<td>.449**</td>
<td>.317*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Attitudes</td>
<td>.656**</td>
<td>.161**</td>
<td>.359**</td>
<td>.345**</td>
<td>.359**</td>
<td>.273**</td>
<td>.246**</td>
<td>.360**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Values</td>
<td>.096**</td>
<td>.243**</td>
<td>.192**</td>
<td>.263**</td>
<td>.113**</td>
<td>.092**</td>
<td>.260**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Family income</td>
<td></td>
<td>.157**</td>
<td>.214**</td>
<td>.144**</td>
<td>.116**</td>
<td>.080**</td>
<td>.205**</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7. Curriculum</td>
<td></td>
<td></td>
<td>.627**</td>
<td>.583**</td>
<td>.357**</td>
<td>.323**</td>
<td>.313**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Cocurriculum</td>
<td></td>
<td></td>
<td></td>
<td>.647**</td>
<td>.438**</td>
<td>.376**</td>
<td>.290**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Extracurriculum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.361**</td>
<td>.335**</td>
<td>.265**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Direct contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.884**</td>
<td>.278**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Indirect contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.248**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Mediated contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* **p < 0.01.

Table 25

*Multicollinearity Coefficients*

<table>
<thead>
<tr>
<th></th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total GC</td>
<td>Knowledge</td>
</tr>
<tr>
<td>Gender</td>
<td>.825</td>
<td>.830</td>
</tr>
<tr>
<td>Place of origin</td>
<td>.849</td>
<td>.844</td>
</tr>
<tr>
<td>Category</td>
<td>Total GC</td>
<td>Knowledge</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td>First generation student</td>
<td>.801</td>
<td>.797</td>
</tr>
<tr>
<td>Degree</td>
<td>.726</td>
<td>.724</td>
</tr>
<tr>
<td>High vocational school</td>
<td>.773</td>
<td>.772</td>
</tr>
<tr>
<td>Leading high school</td>
<td>.842</td>
<td>.842</td>
</tr>
<tr>
<td>Nursing and Health</td>
<td>.321</td>
<td>.318</td>
</tr>
<tr>
<td>Architecture and Engineering</td>
<td>.552</td>
<td>.566</td>
</tr>
<tr>
<td>Food and Drug</td>
<td>.381</td>
<td>.376</td>
</tr>
<tr>
<td>Information Engineering</td>
<td>.279</td>
<td>.276</td>
</tr>
<tr>
<td>Arts</td>
<td>.366</td>
<td>.362</td>
</tr>
<tr>
<td>Second foreign language</td>
<td>.665</td>
<td>.665</td>
</tr>
<tr>
<td>Further study</td>
<td>.784</td>
<td>.781</td>
</tr>
<tr>
<td>Further study abroad</td>
<td>.728</td>
<td>.724</td>
</tr>
<tr>
<td>Future job</td>
<td>.925</td>
<td>.925</td>
</tr>
<tr>
<td>Student mobility</td>
<td>.843</td>
<td>.843</td>
</tr>
<tr>
<td>Faculty mobility</td>
<td>.839</td>
<td>.838</td>
</tr>
<tr>
<td>Curriculum</td>
<td>.479</td>
<td>.480</td>
</tr>
<tr>
<td>Cocurriculum</td>
<td>.439</td>
<td>.437</td>
</tr>
<tr>
<td>Extracurriculum</td>
<td>.504</td>
<td>.504</td>
</tr>
<tr>
<td>Direct contact</td>
<td>.222</td>
<td>.197</td>
</tr>
<tr>
<td>Online contact</td>
<td>.240</td>
<td>.213</td>
</tr>
<tr>
<td>Mediated contact</td>
<td>.800</td>
<td>.800</td>
</tr>
</tbody>
</table>
Outliers

Outliers refer to extreme data, the exceptionally high and low scores (i.e., values above 3.3 or less than -3.3), that strongly affect the regression outcome and distorting the estimation of the regression weights (Tabachnick & Fidell, 2013). During the initial data-cleaning process, SPSS 28 was applied to check all the variables (DV and IVs) and delete 33 outliers from the dataset, which surpassed 3.3 or lower than -3.3, to avoid violating this assumption of outliers (Pallant, 2016).

Mahalanobis distance values were employed to check the outliers. The maximum score of the Mahalanobis distance values for five DVs was 53.39, which is less than 54.05 with 17 IVs adding nine dummy IVs guided by critical values for evaluating Mahalanobis distance values (Tabachnick & Fidell, 2013; Table C.4, p. 952). To diagnose whether the cases surpassing the capacity have an inappropriate impact on the results for the overall model, the value for Cook’s distance has been inspected at the end of the table titled Residuals Statistic. The maximum of Cook’s distance values for the five DVs are all below .019, which is far lower than 1. Therefore, no potential violation occurred, consistent with Tabachnick and Fidell (2013).

Outliers can also be perceived from the Scatterplot of the standardized residuals in SPSS 28. The standardized residual plot of overall GC is presented in Figure 21 (total GC). The standardized residual plot for knowledge, skills, attitudes, and values was similar to that for overall GC (see Appendix C). All the scores in the five figures are amassed in the center (i.e.,
around 0 points). No clear systematic pattern emerges, which implies no violation. With large samples, a small number of outlying residuals do not influence the reliability and validity of results in HMR.

**Figure 21**

*Standardized Residual Plot for Total GC*

![Standardized Residual Plot for Total GC](image)

**Independence of Residuals**

In this study, the independence of residuals for five DVs was measured by a Durbin-Watson statistic. The range of Durbin-Watson statistic is expected to be 0 to 4, but a value of approximately 2 indicates no correlation between residuals. As shown in Table 25, the Durbin-Watson values of five DVs of this study are close to 2, which can be accepted as independence of errors (Laerd Statistics, 2013).
Table 26

Durbin-Watson Statistics

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GC</td>
<td>2.03</td>
</tr>
<tr>
<td>Knowledge dimension</td>
<td>2.03</td>
</tr>
<tr>
<td>Skills dimension</td>
<td>1.95</td>
</tr>
<tr>
<td>Attitudes dimension</td>
<td>2.08</td>
</tr>
<tr>
<td>Values dimension</td>
<td>1.99</td>
</tr>
</tbody>
</table>

Normality, Linearity, and Homoscedasticity

Normality stands for the distribution of scores, and the residuals are expected to be normally distributed around the predicted DV scores. The standardized residuals of overall GC (see Figure 22) and its four dimensions (i.e., knowledge, skills, attitudes, and values; see Appendix D) appear to be approximately normally distributed based on the histogram.
A P-P Plot is a probability-probability used to determine if a given set of data follows a specified distribution. The P-P Plots of overall GC (see Figure 23) and its four dimensions (see Appendix E) also describe the relationship between a variable and a constant, which are related by their closeness to a straight line. For this research, linearity is also visible in graphs, demonstrated in approximately linear for five DVs.
Hoscedasticity stands for the variability in values for variables. The variance of the residuals around the predicted DV scores was similar at all values for the other predicted scores (i.e., cigar shape without fanning of the data), demonstrated in the scatterplots of five DVs (see Figure 21 and Appendix C).

No violations of the assumptions were detected in the HMR in this study. Therefore, the findings presented in the following sections are reliable and valid (Pallant, 2016).
Descriptive Analysis of Independent Variables

Descriptive statistics were analyzed after the data cleaning and violation assumption check procedures. Descriptive analysis is used to report the characteristics of variables and provide various information. This section first reports the frequency of each categorical variable to describe the distribution of 12 categorical IVs in this study. Then, frequencies, means, medians, and standard deviation statistics summarized the seven continuous IVs.

Frequencies of Categorical Independent Variables

This study comprised 12 categorical independent variables (IVs). Table 26 reports the frequencies of these categorical IVs of gender, place of origin, first-generation student, degree, high school type (i.e., high vocational school and leading high school), fields of study (i.e., nursing and health, architecture and engineering, economics, and management, food and drug, foreign languages, information engineering, arts), further study, further study abroad, future job, second foreign language, and student International mobility and faculty International mobility. After the data-cleaning process, 1,504 participants were included in the main analysis of the study. Overall, a total of 10 categorical IVs were distributed in cultural capital background, two of which were internationalization abroad factors. As two respondents refused to clarify their majors, there was 1,502 data in the fields of study.
Table 27

Descriptive Statistics of Categorical Independent Variables

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>n</th>
<th>%</th>
<th>Total population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>1,504</td>
</tr>
<tr>
<td>0 = Female</td>
<td>880</td>
<td>58.5%</td>
<td></td>
</tr>
<tr>
<td>1 = Male</td>
<td>624</td>
<td>41.5%</td>
<td></td>
</tr>
<tr>
<td>Place of origin</td>
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<td></td>
<td>1,504</td>
</tr>
<tr>
<td>0 = Rural</td>
<td>511</td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>1 = City</td>
<td>993</td>
<td>66%</td>
<td></td>
</tr>
<tr>
<td>First generation student</td>
<td></td>
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<td>1,504</td>
</tr>
<tr>
<td>0 = No</td>
<td>578</td>
<td>38.4%</td>
<td></td>
</tr>
<tr>
<td>1 = Yes</td>
<td>926</td>
<td>61.6%</td>
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</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
<td>1,504</td>
</tr>
<tr>
<td>0 = 3-year college student</td>
<td>1,057</td>
<td>70.3%</td>
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</tr>
<tr>
<td>One = 4-year undergraduates</td>
<td>447</td>
<td>29.3%</td>
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</tr>
<tr>
<td>High school type</td>
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</tr>
<tr>
<td>High vocational school</td>
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<tr>
<td>0 = No</td>
<td>1,048</td>
<td>69.7%</td>
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</tr>
<tr>
<td>1 = Yes</td>
<td>456</td>
<td>30.3%</td>
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<td>Leading high school</td>
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<td>0 = No</td>
<td>1,226</td>
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<td>1 = Yes</td>
<td>278</td>
<td>18.5%</td>
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<td>Second foreign language</td>
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<td>0 = No</td>
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<td>1,504</td>
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<td>0 = No</td>
<td>1,139</td>
<td>75.7%</td>
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<tr>
<td>1 = Yes</td>
<td>365</td>
<td>24.3%</td>
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</tr>
<tr>
<td>Future job</td>
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<td>1,504</td>
</tr>
<tr>
<td>0 = Nonpublic</td>
<td>679</td>
<td>45.1%</td>
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</tr>
<tr>
<td>1 = Public</td>
<td>825</td>
<td>54.9%</td>
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</tr>
<tr>
<td>Student mobility</td>
<td></td>
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<tr>
<td>0 = No</td>
<td>1,302</td>
<td>86.6%</td>
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</tr>
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<td>13.4%</td>
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</tr>
<tr>
<td>Independent Variables</td>
<td>n</td>
<td>%</td>
<td>Total population</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----</td>
<td>------</td>
<td>------------------</td>
</tr>
<tr>
<td>Faculty mobility</td>
<td></td>
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<td>1,504</td>
</tr>
<tr>
<td>0 = No</td>
<td>648</td>
<td>43.1%</td>
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</tr>
<tr>
<td>1 = Yes</td>
<td>856</td>
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</tr>
<tr>
<td>Fields of study</td>
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<td>1,502</td>
</tr>
<tr>
<td><em>Nursing and health</em></td>
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</tr>
<tr>
<td>0 = No</td>
<td>1,286</td>
<td>85.6%</td>
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<td>1 = Yes</td>
<td>216</td>
<td>14.4%</td>
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</tr>
<tr>
<td><em>Architecture and engineering</em></td>
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</tr>
<tr>
<td>0 = No</td>
<td>1,426</td>
<td>94.9%</td>
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</tr>
<tr>
<td>1 = Yes</td>
<td>76</td>
<td>5.1%</td>
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</tr>
<tr>
<td><em>Economics and management</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 = No</td>
<td>1,339</td>
<td>89.1%</td>
<td></td>
</tr>
<tr>
<td>1 = Yes</td>
<td>163</td>
<td>10.9%</td>
<td></td>
</tr>
<tr>
<td><em>Food and drug</em></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>0 = No</td>
<td>1,338</td>
<td>89.1%</td>
<td></td>
</tr>
<tr>
<td>1 = Yes</td>
<td>164</td>
<td>10.9%</td>
<td></td>
</tr>
<tr>
<td><em>Foreign languages</em></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>0 = No</td>
<td>1,208</td>
<td>80.4%</td>
<td></td>
</tr>
<tr>
<td>1 = Yes</td>
<td>294</td>
<td>19.6%</td>
<td></td>
</tr>
</tbody>
</table>

*Information engineering*  
| 0 = No                | 321 | 21.4%|                  |
| 1 = Yes               |     |      |                  |

*Arts*  
| 0 = No                | 175 | 11.7%|                  |
| 1 = Yes               |     |      |                  |

The variable of first-generation students was coded through the survey questions of the father’s and the mother’s highest degree, with responses ranging from *middle school* or *secondary vocational school* to doctor. Participants who had at least one parent with a higher education degree were considered non-first-generation students, coded as 0. The rest of the participants whose parents were never enrolled in higher education were regarded as first-generation students, coded as 1.
After the data-cleaning process, 1,504 participants were included in this study. A total of 10 categorical IVs were distributed in cultural capital background, two of which were internationalization abroad factors. For participants’ personal information, more female students (58.5%, \(n = 880\)) participated in the research than male students (41.5%, \(n = 624\)). As for family background, most participants came from cities (66%, \(n = 993\)) rather than rural places (34%, \(n = 511\)). This contradicted MOE (2022b), stating more than 70% of vocational students originated from rural families. One reason may be the sample was selected in Shanghai and city students may have more opportunities to access a university located in a metropolis. Most participants were first-generation students (61.6%, \(n = 629/1,504\)).

Concerning participants’ educational background, the percentage of undergraduates (29.3%, \(n = 447/1,504\)) in the sample was very close to undergraduates (28.24%, \(n = 2,798/9,908\)) at Z University, which showed a good sample to understand the characteristics of 4-year vocational bachelors. The IV of high school type entailed three categories and was split to two dummy variables (i.e., high vocational school and leading high school). Approximately one-third of the respondents (30.3%, \(n = 456\)) graduated from high vocational school and less than one-fifth of them (18.5%, \(n = 278\)) originated from leading high school. This was consistent with the literature indicating students who performed worse in zhongkao and gaokao had to shift to vocational education as a second alternative (D. Chen et al., 2019; G. Wang & Doyle, 2020; Woronov, 2015).

Most participants graduated from a normal high school (48.8%, \(n = 770\)) with a total of 1,502 respondents reported their fields of study, distributed into eight fields with two respondents
missing data. The IV, fields of study, was split into seven dummy variables, with 14.3% \((n = 216)\) of the participants in nursing and health disciplines, 5.1% \((n = 76)\) in architecture and engineering, 10.8% \((n = 163)\) in economics and management, 10.8% \((n = 164)\) in food and drug, 19.6% \((n = 294)\) in foreign languages, 21.4% \((n = 321)\) in information engineering, and 11.7% \((n = 175)\) in arts.

Regarding capital reproduction, merely one-fifth of participants \((19.6\%, n = 474)\) had learned a second foreign language other than English. Two thirds of participants \((65.2\%, n = 980)\) planned to pursue further studies such as postgraduation, but less than one third \((24.3\%, n = 365)\) were willing to continue studying abroad. Over half of the respondents \((54.9\%, n = 825)\) preferred working in a public position, such as a government department or a state-owned enterprise, rather than a private enterprise or a transnational corporation.

As for internationalization abroad experience, only 13.4% \((n = 202)\) of participants had international mobility experience. Nevertheless, more than half of them \((56.9\%, n = 856)\) reported having connections with professors or staff who had studied or attended training abroad.

**Descriptions of Continuous Independent Variables**

A total of seven IVs are continuous variables, with one IV (i.e., family income) in the cultural capital background model, three IVs (i.e., curriculum, cocurriculum, and extracurriculum) in the internationalization at home curriculum model, and three IVs (i.e., direct contact, online contact, and mediated contact) in the internationalization at home intergroup contact model. Table 27 reports the mean, median, and standard deviation of each continuous IV. Table 28 details the frequency of the continuous IV of family income. Table 29 describes the
frequency of internationalization at home curriculum scale. Table 30 portrays the frequency percentage of internationalization at home intergroup contact scale.

Table 28

*Descriptive Statistics of Continuous Variables*

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family income</td>
<td>1</td>
<td>8</td>
<td>4.58</td>
<td>1.70</td>
</tr>
<tr>
<td>Curriculum</td>
<td>1</td>
<td>2</td>
<td>1.35</td>
<td>.32</td>
</tr>
<tr>
<td>Cocurriculum</td>
<td>1</td>
<td>2</td>
<td>1.29</td>
<td>.34</td>
</tr>
<tr>
<td>Extracurriculum</td>
<td>1</td>
<td>2</td>
<td>1.27</td>
<td>.31</td>
</tr>
<tr>
<td>Direct contact</td>
<td>1</td>
<td>5</td>
<td>1.60</td>
<td>1.01</td>
</tr>
<tr>
<td>Online contact</td>
<td>1</td>
<td>5</td>
<td>1.53</td>
<td>1.01</td>
</tr>
<tr>
<td>Mediated contact</td>
<td>1</td>
<td>5</td>
<td>3.41</td>
<td>.93</td>
</tr>
</tbody>
</table>

Table 29

*Frequency of Continuous Independent Variables*

<table>
<thead>
<tr>
<th>Family income</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 = low than 1,000</td>
<td>49</td>
<td>3.3%</td>
</tr>
<tr>
<td>2 = 1,000~2,999</td>
<td>78</td>
<td>5.2%</td>
</tr>
<tr>
<td>3 = 3,000~5,999</td>
<td>262</td>
<td>17.4%</td>
</tr>
<tr>
<td>4 = 6,000~9,999</td>
<td>393</td>
<td>26.1%</td>
</tr>
<tr>
<td>5 = 10,000~14,999</td>
<td>337</td>
<td>22.4%</td>
</tr>
<tr>
<td>6 = 15,000~19,999</td>
<td>177</td>
<td>11.8%</td>
</tr>
<tr>
<td>7 = 20,000~29,999</td>
<td>79</td>
<td>5.3%</td>
</tr>
<tr>
<td>8 = More than 30,000</td>
<td>129</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

*Note.* Total population = 1,504.
Table 30

*Frequency Percentage of Internationalization at Home Curriculum Scale*

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>1 = No</th>
<th>2 = Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internationalization curriculum</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Have you taken any courses related to your field of study taught in</td>
<td>555</td>
<td>949</td>
</tr>
<tr>
<td>foreign languages (e.g., English, Japanese, Spanish, and French)?</td>
<td>36.9%</td>
<td>63.1%</td>
</tr>
<tr>
<td>2. Have you read any English literature or literature in other foreign</td>
<td>908</td>
<td>596</td>
</tr>
<tr>
<td>languages related to your field of study?</td>
<td>60.4%</td>
<td>39.6%</td>
</tr>
<tr>
<td>3. Have you used any textbooks written in English or other foreign</td>
<td>890</td>
<td>614</td>
</tr>
<tr>
<td>languages besides Foreign language courses?</td>
<td>59.2%</td>
<td>40.8%</td>
</tr>
<tr>
<td>4. Have you had any courses related to international employment?</td>
<td>1,225</td>
<td>279</td>
</tr>
<tr>
<td>5. Have you taken any courses related to international vocational skills</td>
<td>1,276</td>
<td>228</td>
</tr>
<tr>
<td>training?</td>
<td>84.8%</td>
<td>15.2%</td>
</tr>
<tr>
<td><strong>Internationalization cocurriculum</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. In class, have you contacted any foreign tutors/professors in person?</td>
<td>1,019</td>
<td>485</td>
</tr>
<tr>
<td>2. In class, have you contacted any foreign tutors/professors online?</td>
<td>899</td>
<td>605</td>
</tr>
<tr>
<td>3. Have you had any online courses in which you collaborated/discussed</td>
<td>1,216</td>
<td>288</td>
</tr>
<tr>
<td>with foreign student?</td>
<td>80.9%</td>
<td>19.1%</td>
</tr>
<tr>
<td>4. Have you contacted any foreigners through campus activities?</td>
<td>1,146</td>
<td>358</td>
</tr>
<tr>
<td>5. Have you participated in international activities (e.g., foreign</td>
<td>1,050</td>
<td>454</td>
</tr>
<tr>
<td>language festivals, lectures, and discussions)?</td>
<td>69.8%</td>
<td>30.2%</td>
</tr>
<tr>
<td><strong>Internationalization extracurriculum</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. In your university, are there any curricula offering joint/dual</td>
<td>965</td>
<td>539</td>
</tr>
<tr>
<td>diplomas or credit transfers from different countries?</td>
<td>64.2%</td>
<td>35.8%</td>
</tr>
<tr>
<td>2. Does your university provide any school-enterprise cooperation or</td>
<td>960</td>
<td>544</td>
</tr>
<tr>
<td>internship opportunities with multinational corporations?</td>
<td>63.8%</td>
<td>36.2%</td>
</tr>
<tr>
<td>3. Have you participated in any school-enterprise cooperation program or</td>
<td>1,283</td>
<td>221</td>
</tr>
<tr>
<td>internship at multinational corporations?</td>
<td>85.3%</td>
<td>14.7%</td>
</tr>
<tr>
<td>4. Have you ever volunteered for an international event?</td>
<td>1,318</td>
<td>186</td>
</tr>
<tr>
<td>5. Do you know if your university is recruiting students, researchers,</td>
<td>934</td>
<td>570</td>
</tr>
<tr>
<td>and developers of foreign educational programs and companies to develop</td>
<td>62.1%</td>
<td>37.9%</td>
</tr>
<tr>
<td>new programs?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 31

Frequency Percentage of Internationalization at Home Intergroup Contact Scale

<table>
<thead>
<tr>
<th>Direct contact/ Five-point Likert</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>72.5%</td>
<td>6.5%</td>
<td>12.2%</td>
<td>3.1%</td>
<td>5.7%</td>
</tr>
<tr>
<td>Never or rarely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Several times a year</td>
<td>69.2%</td>
<td>11.5%</td>
<td>11.8%</td>
<td>3.7%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Several times a season</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Several times a month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once a week or more</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. How many foreign friends do you have in real life?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How much do you have face-to-face chats with foreigners in your social life?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. How much do you do social things with foreigners in social life?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect contact</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>74.3%</td>
<td>8.8%</td>
<td>10.4%</td>
<td>2.9%</td>
<td>3.7%</td>
</tr>
<tr>
<td>1~2 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3~4 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5~6 days</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Every day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. The number of days you have been online to contact with foreigners in social life for the past week:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 15 minutes</td>
<td>76%</td>
<td>5.4%</td>
<td>11.8%</td>
<td>3.1%</td>
<td>3.7%</td>
</tr>
<tr>
<td>15 minutes to 1 hour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 2 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 to 4 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than 4 hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The duration of online contact with foreigners in social life on weekdays:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The duration of online contact with foreigners in social life on weekends:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mediated contact</td>
<td>75.9%</td>
<td>5.5%</td>
<td>12.2%</td>
<td>2.9%</td>
<td>3.5%</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 to 19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 to 29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 or more</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Direct contact/ Five-point Likert

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. How many foreign TV series or movies have you viewed?</strong></td>
<td>2.4%</td>
<td>21.0%</td>
<td>30.2%</td>
<td>14.2%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Never or almost never</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Several times a year</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Several times a season</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Several times a month</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once a week or more</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. How often do you view foreign TV series or movies?</strong></td>
<td>6.1%</td>
<td>21.4%</td>
<td>34.0%</td>
<td>24.3%</td>
<td>14.1%</td>
</tr>
<tr>
<td>Not at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not so much</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Much</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very much</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. How much do I like viewing foreign TV series or movies?</strong></td>
<td>2.5%</td>
<td>2.9%</td>
<td>49.9%</td>
<td>30.0%</td>
<td>14.8%</td>
</tr>
</tbody>
</table>
For the only continuous IV in the cultural capital dimension, family monthly income spanned from 1 (i.e., lower than 1,000) to 8 (i.e., more than 30,000; \( M = 4.58, SD = 1.70 \); see Table 27). As shown in Table 28, approximately half of the participants had a monthly family income ranging from 6,000 to 14,999 RMB.

The internationalization at home curriculum consisted of three scales. Participants were investigated their experience of the internationalization curriculum by responding on a 2-point Likert-type scale ranging from 1 = no to 2= = yes (see Table 29). The corresponding items were then added up for the three scales, such as the internationalization curriculum (\( M = 1.35, SD = 0.32 \)), cocurriculum (\( M = 1.29, SD = 0.34 \); see Table 27), and extracurriculum (\( M = 1.27, SD = 0.31 \)). Table 29 demonstrates the majority of participants were not involved in any internationalization curriculum. Concerning the content of internationalization courses, approximately two-thirds (63.1%, \( n = 949 \)) of respondents had participated in foreign language classes related to their major. However, nearly 40% of respondents had read literature or textbooks written in foreign languages, and less than 20% were engaged in international employment and vocational skill training courses.

Regarding the opportunities for in-person or online interaction with foreigners designed in the cocurriculum, approximately one third of participants had connections directly or virtually with foreign teachers, but less than 20% of them cooperated online with foreign student. About 30% of the respondents participated in international activities, such as foreign language festivals, international lectures, and international discussions, during which nearly one-fourth communicated with foreigners. As for the internationalization activities outside campus,
approximately one-third of the participants reported their university collaborated with international universities and multinational corporations and was developing new international programs. Nevertheless, less than 15% of the respondents had practical experience in those internationalization activities, such as being an intern at multinational corporations or volunteering at global events.

The internationalization at home intergroup contact comprised three scales. Participants were asked about their experience of direct, online contact with foreigners and engagement in foreign entertainment by responding on a 5-point Likert-type scale ranging from 1 to 5 (see Table 30). The corresponding items were then added up for the three scales, such as the direct contact ($M = 1.60, SD = 1.01$), online contact ($M = 1.53, SD = 1.01$), and mediated contact ($M = 3.41, SD = 0.93$; see Table 27). Table 30 revealed nearly three quarters of participants had no direct or online connections with foreign friends in their social lives. Approximately 75% of them watched foreign films or TV series more than several times a season. Almost half of them showed great interest in foreign entertainment in their daily lives.

**Results of Research Questions**

This section presents the results of five research questions. Descriptive data and independent samples *t*-tests were used to address Research Question 1, and hierarchical multiple regression was applied to answer Research Questions 2 to 5.
Research Question 1

Research Question 1.1.

What are the characteristics of students’ global competence in a Chinese private vocational university?

The descriptive analysis of the DVs partially answered Research Question 1. A 5-point Likert scale was employed to examine participants’ self-perception of their global competence (GC) level, containing global knowledge, skills, attitudes, and values. The Likert scale ranged from 5 = strongly agree, 4 = agree, 3 = not sure, 2 = disagree, and 1 = strongly disagree. Table 31 displayed the mean score of total GC of Chinese higher vocational students was at a moderate level (3.43 out of 5, SD = .55). The results demonstrated Chinese vocational students’ values level was the highest (M = 3.79, SD = .73), the score of the skills level was the lowest (M = 3.20, SD = .67). The students’ knowledge (M = 3.50, SD = .63) and attitudes (M = 3.55, SD = .66) level took the intermediate position.

The three dimensions (i.e., knowledge, skills, attitudes) of GC were further categorized as six factors, and the values dimension was not divided. Therefore, the seven factors consisted of world knowledge, understanding globalization, use of tools, cross-cultural communication, intent to interact, open attitude, and values. The mean score of students’ global open attitudes factor was the highest (M = 3.65, SD = 0.71), which was followed by the understanding globalization factor (M = 3.55, SD = .66). The intent to interact factor had the third-highest mean score (M = 3.50, SD = 0.70), and then world knowledge factor (M = 3.45, SD = 0.69). Both use of tools factors (M = 3.23, SD = 0.71) and cross-cultural communication factors (M = 3.18, SD = 0.71),
distributed in the dimension of skills, displayed the lowest mean scores. Table 31 depicts the descriptive statistics for each item of seven subscales in four dimensions.

Table 32

*Descriptive Analysis of Global Competence*

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Factors</th>
<th>Minimum</th>
<th>Maximum</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GG</td>
<td></td>
<td>1</td>
<td>5</td>
<td>3.43</td>
<td>.55</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td>1</td>
<td>5</td>
<td>3.50</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>World knowledge</td>
<td>1</td>
<td>5</td>
<td>3.45</td>
<td>.69</td>
</tr>
<tr>
<td></td>
<td>Understanding globalization</td>
<td>1</td>
<td>5</td>
<td>3.55</td>
<td>.66</td>
</tr>
<tr>
<td>Skills</td>
<td></td>
<td>1</td>
<td>5</td>
<td>3.20</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>Use of tools</td>
<td>1</td>
<td>5</td>
<td>3.23</td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>Cross-cultural communication</td>
<td>1</td>
<td>5</td>
<td>3.18</td>
<td>.71</td>
</tr>
<tr>
<td>Attitudes</td>
<td></td>
<td>1</td>
<td>5</td>
<td>3.55</td>
<td>.66</td>
</tr>
<tr>
<td></td>
<td>Intent to interact</td>
<td>1</td>
<td>5</td>
<td>3.50</td>
<td>.70</td>
</tr>
<tr>
<td></td>
<td>Open attitude</td>
<td>1</td>
<td>5</td>
<td>3.65</td>
<td>.71</td>
</tr>
<tr>
<td>Values</td>
<td></td>
<td>1</td>
<td>5</td>
<td>3.79</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>Value identity</td>
<td>1</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*World Knowledge*

Items 1 to 4 measured respondents’ global knowledge ($M = 3.45$, $SD = .69$; see Table 31), showing most respondents thought they had a basic knowledge of other countries’ languages, cultures, histories, and geographies. As shown in Table 32, nearly half of the participants agreed or strongly agreed they had a basic understanding of world knowledge. At the same time, less than 10% disagreed or strongly disagreed.
Table 33

Global Competence Frequency Percentage and Descriptive Data

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Sub-dimensions and items</th>
<th>1: Strongly disagree</th>
<th>2: Disagree</th>
<th>3: Not sure</th>
<th>4: Agree</th>
<th>5: Strongly agree</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>World Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>I have a basic understanding of the geography of other countries, including climate, topography, resource distribution, etc.</td>
<td>1.26</td>
<td>6.52</td>
<td>46.81</td>
<td>37.37</td>
<td>8.05</td>
<td>3.44</td>
<td>.784</td>
</tr>
<tr>
<td>2.</td>
<td>I have historical knowledge of other countries, including the historical development, transformation, revolution, and significant international historical events of major countries in the world.</td>
<td>.80</td>
<td>6.05</td>
<td>44.81</td>
<td>40.16</td>
<td>8.18</td>
<td>3.49</td>
<td>.763</td>
</tr>
<tr>
<td>3.</td>
<td>Other than my own country, I know about the political and economic systems of at least one other country.</td>
<td>1.20</td>
<td>6.32</td>
<td>46.81</td>
<td>37.57</td>
<td>8.11</td>
<td>3.45</td>
<td>.780</td>
</tr>
<tr>
<td>4.</td>
<td>Other than my own country, I know about the language, cultural norms, religions, beliefs, and customs of at least one.</td>
<td>.86</td>
<td>7.31</td>
<td>46.61</td>
<td>37.83</td>
<td>7.38</td>
<td>3.44</td>
<td>.769</td>
</tr>
<tr>
<td></td>
<td><strong>Knowledge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Understanding globalization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>I understand the concept of globalization and its development trends.</td>
<td>.40</td>
<td>3.92</td>
<td>44.02</td>
<td>43.62</td>
<td>8.05</td>
<td>3.55</td>
<td>.715</td>
</tr>
<tr>
<td>6.</td>
<td>I understand the effect of globalization on a country’s development, individual learning, working, and lifestyles.</td>
<td>.33</td>
<td>3.72</td>
<td>43.88</td>
<td>43.88</td>
<td>8.18</td>
<td>3.56</td>
<td>.711</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Sub-dimensions and items</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Not sure</td>
<td>Agree</td>
<td>Strongly agree</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------------------------------------------------------------------------------------------</td>
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<td>------</td>
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</tr>
<tr>
<td></td>
<td>7. I understand the roles of international organizations and institutions in today’s world and society.</td>
<td>.40</td>
<td>3.72</td>
<td>44.02</td>
<td>43.75</td>
<td>8.11</td>
<td>3.55</td>
<td>.713</td>
</tr>
<tr>
<td></td>
<td>8. I often follow current global affairs and significant world events.</td>
<td>.33</td>
<td>3.99</td>
<td>44.61</td>
<td>42.75</td>
<td>8.31</td>
<td>3.55</td>
<td>.717</td>
</tr>
<tr>
<td></td>
<td><strong>Use of Tools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. I can fluently use at least one foreign language, including listening, speaking, reading, and writing</td>
<td>2.06</td>
<td>10.37</td>
<td>47.67</td>
<td>33.64</td>
<td>6.25</td>
<td>3.32</td>
<td>.820</td>
</tr>
<tr>
<td></td>
<td>10. I can easily use MS Office, PDF Reader, and other common international software.</td>
<td>.93</td>
<td>6.85</td>
<td>46.74</td>
<td>38.23</td>
<td>7.25</td>
<td>3.44</td>
<td>.765</td>
</tr>
<tr>
<td></td>
<td>11. I can easily browse foreign language websites to obtain knowledge and the requisite information.</td>
<td>1.99</td>
<td>11.30</td>
<td>49.00</td>
<td>31.38</td>
<td>6.32</td>
<td>3.29</td>
<td>.823</td>
</tr>
<tr>
<td></td>
<td>12. I can easily comprehend foreign literature.</td>
<td>3.32</td>
<td>17.02</td>
<td>50.40</td>
<td>24.07</td>
<td>5.19</td>
<td>3.11</td>
<td>.860</td>
</tr>
<tr>
<td></td>
<td>13. I can communicate with foreigners for more than 1 hour.</td>
<td>5.92</td>
<td>18.82</td>
<td>49.53</td>
<td>21.08</td>
<td>4.65</td>
<td>3.00</td>
<td>.907</td>
</tr>
<tr>
<td></td>
<td><strong>Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Cross-cultural communication</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14. I can analyze and evaluate issues from the perspective of a foreign culture.</td>
<td>2.06</td>
<td>10.64</td>
<td>50.73</td>
<td>31.18</td>
<td>5.39</td>
<td>3.27</td>
<td>.802</td>
</tr>
<tr>
<td></td>
<td>15. I have made efforts to understand foreigners so that we can work or live together.</td>
<td>1.80</td>
<td>9.71</td>
<td>49.53</td>
<td>33.84</td>
<td>5.12</td>
<td>3.31</td>
<td>.786</td>
</tr>
<tr>
<td></td>
<td>16. I can be aware of cultural differences in my interactions with people from different cultures.</td>
<td>1.53</td>
<td>7.11</td>
<td>46.81</td>
<td>38.56</td>
<td>5.98</td>
<td>3.40</td>
<td>.771</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Sub-dimensions and items</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Not sure</td>
<td>Agree</td>
<td>Strongly agree</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
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<td>------</td>
</tr>
<tr>
<td>17. I am able to quickly communicate in a common language in my interactions with people from different cultures.</td>
<td>2.26</td>
<td>10.84</td>
<td>54.26</td>
<td>27.73</td>
<td>4.92</td>
<td>3.22</td>
<td>.790</td>
<td></td>
</tr>
<tr>
<td>18. I used to successfully participate in project or work with people from other countries.</td>
<td>10.51</td>
<td>22.74</td>
<td>42.09</td>
<td>20.88</td>
<td>3.79</td>
<td>2.85</td>
<td>.993</td>
<td></td>
</tr>
<tr>
<td>19. I have the ability to adjust to language and communication outside of my own culture.</td>
<td>4.65</td>
<td>14.23</td>
<td>50.40</td>
<td>26.20</td>
<td>4.52</td>
<td>3.12</td>
<td>.871</td>
<td></td>
</tr>
<tr>
<td>20. I can learn, work, and live outside of my own culture.</td>
<td>5.32</td>
<td>14.30</td>
<td>53.06</td>
<td>22.94</td>
<td>4.39</td>
<td>3.07</td>
<td>.870</td>
<td></td>
</tr>
<tr>
<td><strong>Intent to interact</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. I would like to expose myself to other cultures and customs rather than avoid them</td>
<td>.73</td>
<td>4.06</td>
<td>43.55</td>
<td>43.28</td>
<td>8.38</td>
<td>3.55</td>
<td>.735</td>
<td></td>
</tr>
<tr>
<td>22. I would like to experience life and culture in other countries.</td>
<td>1.06</td>
<td>2.93</td>
<td>41.02</td>
<td>45.81</td>
<td>9.18</td>
<td>3.59</td>
<td>.740</td>
<td></td>
</tr>
<tr>
<td>23. I would like to take the risk to experience cross-cultural learning and personal development (such as through short-term exchange program).</td>
<td>2.13</td>
<td>5.39</td>
<td>48.80</td>
<td>36.17</td>
<td>7.51</td>
<td>3.43</td>
<td>.795</td>
<td></td>
</tr>
<tr>
<td>24. I would like to take the risk to experience cross-cultural learning and personal development (such as through overseas study and work).</td>
<td>2.06</td>
<td>5.39</td>
<td>48.01</td>
<td>36.77</td>
<td>7.78</td>
<td>3.42</td>
<td>.793</td>
<td></td>
</tr>
<tr>
<td>25. I am willing to communicate and study with foreigners, and set up some connections with them.</td>
<td>1.26</td>
<td>3.72</td>
<td>45.08</td>
<td>42.09</td>
<td>7.85</td>
<td>3.52</td>
<td>.747</td>
<td></td>
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<tr>
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<td>Sub-dimensions and items</td>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Not sure</td>
<td>Agree</td>
<td>Strongly agree</td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------------------</td>
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<td>----------</td>
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<td>------</td>
<td>------</td>
</tr>
<tr>
<td><strong>Attitudes</strong></td>
<td>Open attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26. When communicating with foreigners, I try to <strong>understand</strong> their cultures and values.</td>
<td>.86</td>
<td>2.59</td>
<td>38.96</td>
<td>48.20</td>
<td>9.38</td>
<td>3.63</td>
<td>.725</td>
</tr>
<tr>
<td></td>
<td>27. When communicating with foreigners, I try to <strong>respect</strong> their cultures and values.</td>
<td>.73</td>
<td>2.33</td>
<td>37.57</td>
<td>48.74</td>
<td>10.64</td>
<td>3.66</td>
<td>.726</td>
</tr>
<tr>
<td></td>
<td>28. When communicating with foreigners, I try to <strong>appreciate</strong> their cultures and values.</td>
<td>.93</td>
<td>2.39</td>
<td>37.63</td>
<td>48.74</td>
<td>10.31</td>
<td>3.65</td>
<td>.733</td>
</tr>
<tr>
<td><strong>Values</strong></td>
<td>Value Identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>29. I identify with my own country’s culture and values.</td>
<td>.53</td>
<td>1.20</td>
<td>32.71</td>
<td>42.29</td>
<td>23.27</td>
<td>3.87</td>
<td>.799</td>
</tr>
<tr>
<td></td>
<td>30. I believe that my worldview is one of many equally valid worldviews.</td>
<td>.40</td>
<td>1.26</td>
<td>34.97</td>
<td>44.61</td>
<td>18.75</td>
<td>3.80</td>
<td>.764</td>
</tr>
<tr>
<td></td>
<td>31. I consider myself valuable to my country and society.</td>
<td>.66</td>
<td>1.60</td>
<td>39.23</td>
<td>43.02</td>
<td>15.49</td>
<td>3.71</td>
<td>.767</td>
</tr>
</tbody>
</table>
Table 34

*Independent-Samples t Tests Results and Effect Sizes*

<table>
<thead>
<tr>
<th>Variables</th>
<th>3-year college students</th>
<th>4-year bachelors</th>
<th>Levene’s Test for Equality of Variances</th>
<th>$t$ test for Equality of Means</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M \pm SD$</td>
<td>$M \pm SD$</td>
<td>$F$</td>
<td>Sig.</td>
<td>$t$</td>
</tr>
<tr>
<td>Total GC</td>
<td>3.42 ± 0.54</td>
<td>3.44 ± 0.54</td>
<td>.427</td>
<td>.513</td>
<td>-.597</td>
</tr>
<tr>
<td>Knowledge</td>
<td>3.49 ± .62</td>
<td>3.55 ± .63</td>
<td>.001</td>
<td>.979</td>
<td>-1.674</td>
</tr>
<tr>
<td>Skills</td>
<td>3.20 ± .66</td>
<td>3.20 ± .67</td>
<td>.751</td>
<td>.386</td>
<td>.138</td>
</tr>
<tr>
<td>Attitudes</td>
<td>3.56 ± .67</td>
<td>3.55 ± .66</td>
<td>.840</td>
<td>.359</td>
<td>.121</td>
</tr>
<tr>
<td>Values</td>
<td>3.77 ± .73</td>
<td>3.84 ± .72</td>
<td>1.971</td>
<td>.161</td>
<td>-1.589</td>
</tr>
</tbody>
</table>

*Note.* 3-year college student $N = 1,057$; 4-year bachelors $N = 447$. 

Understanding Globalization

Items 5 to 8 assessed respondents’ understanding of globalization. The mean for this subscale was 3.55 ($SD = .66$; see Table 31), which implied participants had a slightly better understanding of globalization and its development, trends, and impacts than world knowledge. Precisely, more than half of the participants agreed or strongly agreed they understood the concept of globalization and its development trend, the effect of globalization, the roles of international organizations, and world events. Less than 5% of participants disagreed or strongly disagreed (see Table 32).

Use of Tools

Participants were asked to rate their perspective of skills in using language and technology tools, ranging from items 9 to 13. The mean for this subscale was 3.23 ($SD = .71$; see Table 31), the second lowest mean score among the seven factors. Table 33 demonstrated participants had a moderately good master of international software, and only approximately 8% of them did not think they could use technology tools, such as MS Office and PDF Reader. Nevertheless, respondents demonstrated a lower ability to use a foreign language. More than 20% of them could not comprehend foreign literature or communicate with foreigners for more than 1 hour (see Table 32).

Cross-Cultural Communication

The skills dimension of global competence also included cross-cultural communication, consisting of items 14 to 20. The mean of this subscale was 3.18 ($SD = .71$; see Table 31), the lowest mean score among the seven factors. It indicated most participants lacked the skills to
collaborate with people from foreigners. Specifically, only one-quarter of participants stated they used to participate in projects or work with foreigners successfully, but one-third of them denied it (see Table 32).

**Intent to Interact**

Intent to interact was one of the factors in the attitudes dimension, consisting of items 21 through 25. The mean of 3.50 ($SD = .70$; see Table 31) in this subscale indicated most students sought cross-cultural learning opportunities and experiences. For instance, more than half of respondents showed their willingness to experience life/culture in other countries, communicate/study with foreigners, and establish connections with them, with only 4% of denial (see Table 32).

**Open Attitude**

Open attitude was another factor in the attitudes dimension. Participants’ responses for items 26 to 28 yielded a mean of 3.65 ($SD = .71$; see Table 31), the second-highest score among all factors. The findings demonstrated most participants were open to understanding, respecting, and appreciating people outside one’s own culture. Nearly 60% of students tried to understand/respect/appreciate foreign cultures and values, and less than 4% were unwilling to (see Table 32).

**Value Identity**

Value identity was the fourth dimension of GC with no subfactor, including 29 to 31. The mean of this subscale was 3.79 ($SD = .73$; see Table 31), demonstrating most students identified with their own country’s culture and recognized their readiness to uphold those values for the
good of the community. Approximately three quarters of the participants agreed or strongly agreed with the three items, and less than 2% of them disagreed or strongly disagreed (see Table 32).

The descriptive data detailed the characteristics of students’ GC in a Chinese private vocational university. The mean scores of the total GC and its four subscales answered Research Question 1. The mean score of total GC of Chinese higher vocational students was at a moderate level (3.43 out of 5, SD = .55; see Table 31). Overall, the Chinese vocational student sample inherited good values (M = 3.79, SD = 0.73), open attitudes (M = 3.65, SD = 0.71), a pretty good understanding of globalization (M = 3.55, SD = 0.66), and adequate intent to interact (M = 3.50, SD = 0.70). However, these vocational students lacked slightly in world knowledge (M = 3.45, SD = 0.69) and need more training in global skills such as the use of tools (M = 3.23, SD = 0.71) and cross-cultural communication (M = 3.18, SD = 0.71).

Research Question 1.2.

Is there any difference in the overall GC score and its four subdimensions score between higher vocational 3-year college students and 4-year undergraduates?

Five independent-sample t-tests were conducted to compare the scores of total GC (H1-1), knowledge (H1-2), skills (H1-3), attitudes (H1-4), and values (H1-5) of two groups of students (i.e., Chinese vocational 3-year college students and 4-year undergraduates). Levene’s test examined the assumption of homogeneity of variance for equality of variances, which tested the hypothesis that the two population variances were equal. For the five independent-samples t-tests, the Levene statistic was sequentially $F = .427, p = .513, F = .001, p = .979$ (H1-2), $F$
= .751, \( p = .386 \) (H1-3), \( F = .840, p = .359 \) (H1-4), and \( F = 1.971, p = .161 \) (H1-5). All the corresponding level of significance was large (i.e., \( p > 0.05 \); see Table 3), which referred to equal variances assumed (Pallant, 2016).

There was no significant difference in scores for vocational 3-year college students and 4-year undergraduates in total GC (H1-1), knowledge (H1-2), skills (H1-3), attitudes (H1-4), and values (H1-5), all \( p > 0.05 \). The mean values of total GC (H1-1), knowledge (H1-2), skills (H1-3), attitudes (H1-4), and values (H1-5) of the two groups are shown in Table 3. Therefore, the null hypothesis (H1-1, H1-2, H1-3, H1-4, H1-5) of equality of means cannot be rejected.

**Research Questions 2 to 5**

Hierarchical multiple regressions were used to assess the ability of 19 predictors of the levels of students’ overall GC score and its four subdimensions score. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. To address Research Questions 2 to 5, I designed four models for data analysis procedures, such as Model 1 (i.e., cultural capital, Research Question 2), Model 2 (i.e., internationalization abroad, Research Question 3), Model 3 (i.e., internationalization at home curriculum, Research Question 4), and Model 4 (internationalization at home intergroup contact, Research Question 5).

**Research Question 2**

How much variance in the overall GC score and its four subdimensions score of Chinese higher vocational students is explained by cultural capital factors? What cultural capital factors
predict the likelihood of Chinese higher vocational students’ GC overall score and its four subdimensions score?

To investigate how much variance cultural capital factors predict the likelihood of Chinese higher vocational students’ GC overall score, the overall GC mean was first put in the dependent variable block. Then, a total of 11 predictors in the cultural capital dimension were simultaneously entered into the first model: gender, family location, family income, first-generation student, degree, high school type, fields of study, further study, further study abroad, future job, and second foreign language. As stated in Chapter 3, before the execution of multiple regression, categorical variables (high school type and fields of study) were dummy-coded. These comparison groups were selectively left out. The mean score of knowledge, skills, attitudes, and values was successfully placed into the DV block to address the relationship between the four subdimensions of GC score and the cultural capital factors.

A total of 11 cultural capital predictors were entered at Model 1, explaining 17.3% of the variance in students’ overall GC score (see Table 34), $F (18, 1483) = 17.22, p < .001$ (see Table 35), indicating each coefficient is effective. For the knowledge subdimension, 10.1% of the variance in students’ GC knowledge score (see Table 34), $F (18, 1483) = 9.29, p < .001$ (see Table 35), demonstrating each coefficient is effective. Regarding the skills subdimension, 15.9% of the variance in the score of students’ GC skills (see Table 35), $F (18, 1483) = 15.56, p < .001$ (see Table 35), showing each coefficient is effective. As for attitudes, 13.8% of the variance in the score of students’ GC attitudes (see Table 34), $F (18, 1483) = 13.14, p < .001$ (see Table 35), indicating each coefficient is effective. Concerning values, 5.7% of the variance in the score of
students’ GC values (see Table 34), $F(18, 1483) = 5.02, p < .001$ (see Table 35), indicating each coefficient is effective.

**Table 35**

*Model 1 Summary*

<table>
<thead>
<tr>
<th>Model</th>
<th>DVs</th>
<th>$R$</th>
<th>$R$ square</th>
<th>Adjusted $R$ square</th>
<th>Std. error of the estimate</th>
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<td>.046</td>
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**Table 36**

*Model 1 ANOVA*

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<th>DVs</th>
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<th>Mean square</th>
<th>$F$</th>
<th>Sig.</th>
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<td>1501</td>
<td></td>
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<tr>
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<td></td>
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<tr>
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According to the results of the HMR analysis, Table 36 demonstrated all 11 predictors significantly influenced overall GC, knowledge, skills, attitudes, or values. The contribution of each independent variable on the prediction of learners’ overall GC level and its four subdimensions are elaborated on in the following section.
Table 37

Coefficients for Model 1

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<th>Step 1: Cultural Capital</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
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<th>Sig.</th>
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<td>Beta</td>
<td>t</td>
<td>Sig.</td>
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Knowledge

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<th>t</th>
<th>Sig.</th>
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Values

**Cultural Capital**

(Constant) 3.284 .113 29.067 <.001 3.062 3.505

Gender -.076 .040 -.051 -1.888 .059 -.154 .003

Family location .086 .042 .056 2.047 .041 .004 .168

Family income .032 .011 .075 2.825 .005 .010 .055
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<th>Sig.</th>
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<td>.998</td>
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<td>-.118</td>
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<td>.911</td>
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<td>.132 - .309</td>
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</table>
Gender. In line with Table 3, gender was a significant predictor of two subdimensions (i.e., GC knowledge and attitudes score), but not significantly related to overall GC, skills, or values. Gender ($\beta = .083, p < .01$) were significantly positively related to knowledge score and significantly negatively related to attitude level ($\beta = -.064, p < .05$). Therefore, H2-1 was partially supported. Male higher vocational students inherited better global knowledge and understanding, and female participants were more willing to seek cross-cultural experiences and appreciate foreign cultures.

Family Background. Family background contained three predictors, such as family location, family income, first-generation student. All the predictors in the family background made significant unique contributions to explaining the dependent variable of the overall GC score and its four subdimensions score. Family income was the strongest predictor of all five DVs.

Family location ($\beta = .083, p < .01$), family income ($\beta = .134, p < .001$), and first-generation student ($\beta = .076, p < .01$) significantly influenced overall GC. Family location ($\beta = .075, p < .01$), family income ($\beta = .108, p < .001$), and first-generation student ($\beta = .071, p < .05$) also made uniquely significant contributions to increase GC knowledge. Family location ($\beta = .066, p < .05$), family income ($\beta = .117, p < .001$), and first-generation student ($\beta = .054, p < .05$) positively impacted GC skills. Family location ($\beta = .072, p < .01$), family income ($\beta = .114, p < .001$), and first-generation student ($\beta = .068, p < .05$) made significant unique contributions to enhance GC attitudes. Family location ($\beta = .056, p < .05$), family income ($\beta
= .075, p < .01), and first-generation student (β = .058, p < .05) significantly strengthen participants’ GC values. Hence, H2-2 was fully supported (see Table 3).

Higher vocational students from rich families were more likely to have better GC. City students performed higher GC scores than those from rural places. Surprisingly, first-generation students, regarded as processing less cultural capital resources, displayed slightly higher GC scores than those from more educated families.

**Educational Background.** All three predictors (i.e., high school type, degree type, major in university) in educational background significantly impacted the overall GC score or its four subdimensions score of Chinese higher vocational students. As for overall GC score, leading high school (β = .072, p < .01) and the field of study of economics and management (β = .113, p < .01) made significant unique contributions. High vocational school (β = -.059, p < .05) negatively predicted GC knowledge, and the field of study of economics and management (β = .139, p < .001), nursing and health (β = .123, p < .01), and food and drug (β = .82, p < .05) had a significantly positive relationship with GC knowledge. Concerning GC skills, leading high school (β = .074, p < .01) and the field of study of economics and management (β = .103, p < .01) once again made significant unique contributions. Regarding GC attitudes, merely leading high school (β = .066, p < .05) made significant unique contributions. Remarkably, after controlling all the other 10 IVs, only degree (β = .060, p < .05) significantly catalyzed GC values (see Table 3). Consequently, H2-3 was partially supported.

Students who graduated from leading high schools or specialized in economics and management exhibited higher scores of overall GC and GC skills. Students who graduated from
high vocational school learned less global knowledge, and those who specialized in economics and management, nursing and health, and food and drug displayed better GC knowledge. Moreover, students who graduated from leading high schools performed better in GC attitudes. Vocational bachelors had stronger values than 3-year vocational college students.

**Capital Reproduction.** All four predictors in capital reproduction (i.e., further study, further study abroad, future job, and second foreign language) significantly influenced the overall GC score or its four subdimensions score of Chinese higher vocational students. Second foreign language was the strongest predictor of all five DVs.

Regarding overall GC score, all four predictors made significant unique contributions, with further study ($\beta = .093, p < .001$), further study abroad ($\beta = .160, p < .001$), future job ($\beta = .054, p < .05$), and second foreign language ($\beta = .225, p < .001$). Further study ($\beta = .070, p < .05$), further study abroad ($\beta = .080, p < .01$), and second foreign language ($\beta = .182, p < .001$) had a significantly positive relationship with GC knowledge. As for GC skills, further study abroad ($\beta = .199, p < .001$), future job ($\beta = .056, p < .05$), and second foreign language ($\beta = .200, p < .001$) made significant unique contributions. For GC attitudes, further study ($\beta = .118, p < .001$), further study abroad ($\beta = .121, p < .001$), and second foreign language ($\beta = .182, p < .001$) made significant unique contributions once more. Further study ($\beta = .102, p < .001$), and second foreign language ($\beta = .141, p < .001$) increased GC values (see Table 36). Hence, H2-4 was partially supported.

Students who had learned a second foreign language or planned to further study, further study abroad, or work in public sectors inherited better overall GC scores. Students who had
learned a second foreign language or planned to further study or further study abroad reported better GC knowledge and attitudes. Participants who had learned a second foreign language or planned to further study abroad or work in public sectors showed better ability for cross-cultural communication and use of international information technology. Participants who had learned a second foreign language or intended to continue studying displayed solid GC values.

**Research Question 3**

How much variance in the overall GC score and its four subdimensions score is explained by internationalization abroad factors? What internationalization abroad factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

Two predictors in internationalization abroad were entered in Step 2 to answer the third research question. Adding internationalization abroad factors, the overall explanatory power of Model 2 for all five DVs (i.e., overall GC, knowledge, skills, attitudes, and values) was increased, demonstrating internationalization abroad had an impact on the cultivation of GC, exemplified in the student international mobility and faculty global mobility.

For overall GC score, Model 2 explained 18.9% of the variance in students’ overall GC score, increased by 1.6% to Model 1 (see Table 37), \( F(20, 1481) = 18.28, p < .001 \), (see Table 38), indicating that each coefficient is effective. For the knowledge subdimension, 12.1% of the variance in students’ GC knowledge score, augmented by 2% than Model 1 (see Table 37), \( F(20, 1481) = 10.16, p < .001 \) (see Table 38), demonstrating each coefficient is effective. Regarding the skills subdimension, 16.7% of the variance in the score of students’ GC skills, enhanced by .9% than Model 1 (see Table 37), \( F(20, 1481) = 14.83, p < .001 \) (see Table 38), showing each
coefficient is effective. As for attitudes, 15% of the variance in the score of students’ GC attitudes, improved by 1.2% than Model 1 (see Table 37), $F(20, 1481) = 13.05, p < .001$ (see Table 38), indicating each coefficient is effective. Concerning values, 7.1% of the variance in the score of students’ GC values increased by 1.4% than Model 1 (see Table 37), $F(20, 1481) = 5.67, p < .001$ (see Table 38), indicating each coefficient is effective.

### Table 38

**Model 2 Summary**

<table>
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<tr>
<th>Model</th>
<th>DVs</th>
<th>$R$</th>
<th>$R$ square</th>
<th>Adjusted $R$ square</th>
<th>Std. error of the estimate</th>
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When adding two predictors of internationalization abroad, 12 out of 13 predictors significantly impacted overall GC, knowledge, skills, attitudes, or values, except for degree (see Table 39). Students and faculty international mobility partially influenced the five DVs.

Therefore, H3 was partly supported. What follows elaborate (a) the change of contribution of the 11 IVs in cultural capital theory to the five DVs, and (b) the variance in the overall GC score and
its four subdimensions score that was explained by the two predictors in internationalization abroad.

**Table 39**

*Model 2 ANOVA*

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Table 40

Coefficients for Model 2

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Contribution Change of Independent Variables in Model 1. The majority of IVs performed similarly to those in Model 1. What follows depicts the contribution modification of IVs in cultural capital domain.

**Gender.** In line with Table 39, gender repeated the contribution to knowledge and attitudes with a tiny change in statistics. Gender ($\beta = .086, p < .01$) were significantly positively related to knowledge score, but it ($\beta = -.062, p < .05$) negatively impacted attitudes level (see Table 39).

**Family Background.** Compared to Model 1, almost all the predictors in the family background (i.e., family location, family income, first-generation student) mirrored significant unique contributions to explaining the dependent variable of the overall GC score and its four subdimensions score. Family location shifted to no significant contribution to GC values (see Table 39).

The contribution of each predictor was slightly modified. Family location ($\beta = .075, p < .01$), family income ($\beta = .113, p < .001$), and first-generation student ($\beta = .082, p < .01$) significantly influence overall GC. Family location ($\beta = .067, p < .05$), family income ($\beta = .087, p < .001$), and first-generation student ($\beta = .075, p < .01$) made significant unique contributions to increase GC knowledge. Family location ($\beta = .057, p < .05$), family income ($\beta = .103, p < .001$), and first-generation student ($\beta = .063, p < .05$) positively impacted GC skills. Family location ($\beta = .066, p < .05$), family income ($\beta = .098, p < .001$), and first-generation student ($\beta = .072, p < .01$) made significant unique contributions to enhance GC attitudes. Family income ($\beta = .059, p < .05$), and first-generation student ($\beta = .058, p < .05$) significantly strengthen
participants’ GC values. Family location was no longer significantly related to GC values (see Table 39).

**Educational Background.** In comparison to Model 1, most predictors duplicated the performance. Markedly, high vocational school no longer predicted GC knowledge, and degree had no significant relationship with GC values. Moreover, the field of study of information engineering shifted to significantly impact GC knowledge.

A total of two predictors (i.e., high school type and major in university) in educational background significantly impacted the overall GC score or its four subdimensions score of Chinese higher vocational students. As for overall GC score, leading high school ($\beta = .060, p < .05$) and the field of study of economics and management ($\beta = .110, p < .01$) made significant unique contributions. High vocational school no longer predicted GC knowledge, but the field of study of economics and management ($\beta = .136, p < .001$), nursing and health ($\beta = .123, p < .01$), and food and drug ($\beta = .83, p < .05$) had a significantly positive relationship with GC knowledge.

Noteworthily, the field of study of information engineering ($\beta = .100, p < .05$) significantly predicted GC knowledge. Concerning GC skills, leading high school ($\beta = .065, p < .05$) and the field of study of economics and management ($\beta = .099, p < .05$) once again made significant unique contributions as in Model 1. Regarding GC attitudes, leading high school ($\beta = .055, p < .05$) made significant unique contributions as in Model 1. Remarkably, degree had no significant contribution to GC values in Model 2 (see Table 39).

**Capital Reproduction.** All four predictors in capital reproduction (i.e., further study, further study abroad, future job, and second foreign language) repeated the significant unique
contributions to the five DVs, with minor differences in statistics. Regarding overall GC score, all four predictors made significant unique contributions, with further study \((\beta = .084, p < .01)\), further study abroad \((\beta = .150, p < .001)\), future job \((\beta = .054, p < .05)\), and second foreign language \((\beta = .206, p < .001)\). Further study \((\beta = .059, p < .05)\), further study abroad \((\beta = .072, p < .05)\), and second foreign language \((\beta = .164, p < .001)\) had a significantly positive relationship with GC knowledge. As for GC skills, further study abroad \((\beta = .188, p < .001)\), future job \((\beta = .057, p < .05)\), and second foreign language \((\beta = .186, p < .001)\) made significant unique contributions. For GC attitudes, further study \((\beta = .118, p < .001)\), further study abroad \((\beta = .121, p < .001)\), and second foreign language \((\beta = .182, p < .001)\) made significant unique contributions once more. Further study \((\beta = .092, p < .01)\), and second foreign language \((\beta = .128, p < .001)\) increased GC values.

**Internationalization Abroad.** According to the results of HMR analysis, Table 39 demonstrated student mobility and faculty mobility significantly influenced overall GC, knowledge, skills, attitudes, or values. Student mobility \((\beta = .072, p < .01; \beta = .053, p < .05; \beta = .080, p < .01)\) and faculty mobility \((\beta = .114, p < .001; \beta = .136, p < .001; \beta = .051, p < .05)\) positively influenced respectively overall GC, knowledge, and skills. As for attitudes and values, student mobility had no significant impact, but faculty mobility \((\beta = .106, p < .001; \beta = .121, p < .001)\) still made significant unique contributions (see Table 39).

Therefore, H3-1 was partially supported. Student mobility significantly influenced Chinese higher vocational students’ overall GC, knowledge, and skills. H3-2 was fully supported. Faculty mobility significantly impacted the overall GC score and its four
subdimensions score of Chinese higher vocational students. Concerning internationalization abroad pedagogies for students in higher vocational universities, student mobility contributed the most to developing GC skills, and faculty mobility promoted GC knowledge the most.

**Research Question 4**

How much variance in the overall GC score and its four subdimensions score is explained by internationalization at home curriculum factors? What internationalization at home curriculum factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

To answer the fourth research question, three predictors (i.e., curriculum, cocurriculum, extracurriculum) in internationalization at home curriculum were entered in Step 3. With the addition of internationalization at home curriculum factors, the overall explanatory power of Model 3 for all five DVs (i.e., overall GC, knowledge, skills, attitudes, and values) boosted, demonstrating internationalization at home curriculum made huge contributions to GC acquisition.

For overall GC score, Model 3 explained 28.8% of the variance in students’ overall GC score, increased by 9.9% to Model 2 (see Table 40), $F(23, 1478) = 26.05, p < .001$ (see Table 41), indicating each coefficient is effective. For the knowledge subdimension, 17.9% of the variance in students’ GC knowledge score, augmented by 5.8% than Model 2 (see Table 40), $F(23, 1478) = 14.00, p < .001$ (see Table 41), demonstrating each coefficient is effective.

Regarding the skills subdimension, 26.0% of the variance in the score of students’ GC skills, enhanced by 9.3% than Model 2 (see Table 40), $F(23, 1478) = 22.55, p < .001$ (see Table 41),
showing each coefficient is effective. As for attitudes, 21.2% of the variance in the score of students’ GC attitudes, improved by 6.2% than Model 2 (see Table 40), $F (23, 1478) = 17.29, p < .001$ (see Table 41), indicating each coefficient is effective. Concerning values, 11% of the variance in the score of students’ GC values increased by 3.9% than Model 2 (see Table 40), $F (23, 1478) = 7.93, p < .001$ (see Table 41), indicating each coefficient is effective.

Table 41

Model 3 Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>DVs</th>
<th>$R$</th>
<th>$R$ square</th>
<th>Adjusted $R$ square</th>
<th>Std. error of the estimate</th>
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<td>3</td>
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<td>.288</td>
<td>.277</td>
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<td>2</td>
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<td>.109</td>
<td>.589</td>
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<td>3</td>
<td></td>
<td>.423</td>
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<td>.166</td>
<td>.569</td>
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<td>.149</td>
<td>.617</td>
</tr>
<tr>
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<td>3</td>
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<td>.138</td>
<td>.127</td>
<td>.621</td>
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<tr>
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<td>.387</td>
<td>.150</td>
<td>.138</td>
<td>.617</td>
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<tr>
<td>3</td>
<td></td>
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<td>.267</td>
<td>.071</td>
<td>.059</td>
<td>.706</td>
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<tr>
<td>3</td>
<td></td>
<td>.331</td>
<td>.110</td>
<td>.096</td>
<td>.692</td>
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</table>
With the participation of three IVs in internationalization at home curriculum, 12 out of 16 predictors (i.e., gender, family location, family income, first generation, fields of study, further study, further study abroad, second foreign language, faculty mobility, curriculum, cocurriculum, and extracurriculum) made significant contributions to overall GC, knowledge, skills, attitudes, or values (see Table 42). Internationalization curriculum was partially significantly related to the five DVs. Thus, H4 was partly supported. I elaborate on (a) the change of contribution of the 13 IVs in Model 3 compared to Model 2, and (b) the variance in the overall GC score and its four subdimensions score explained by the three predictors in internationalization at home curriculum.

### Table 42

**Model 3 ANOVA**

<table>
<thead>
<tr>
<th>DVs</th>
<th>Regression</th>
<th>$df$</th>
<th>Mean square</th>
<th>$F$</th>
<th>Sig.</th>
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<td>23</td>
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<td>Residuals</td>
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<td>1478</td>
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<td></td>
<td>Total</td>
<td>444.228</td>
<td>1501</td>
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<tr>
<td>Knowledge</td>
<td>Regression</td>
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<td>23</td>
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<td>Regression</td>
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<td>23</td>
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<tr>
<td></td>
<td>Total</td>
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<td>1501</td>
<td></td>
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<td>Values</td>
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<tr>
<td></td>
<td>Total</td>
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<td>1501</td>
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</table>
Table 43

Coefficients for Model 3

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<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95.0% Confidence Interval for B</th>
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<td>Std. Error</td>
<td>Beta</td>
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<td>Lower Bound</td>
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<td></td>
<td></td>
<td></td>
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<td>.062</td>
<td>.025</td>
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Overall GC

Cultural Capital

(Constant) 2.734 .074 36.914 < .001 2.588 2.879

Gender

Family location

Family income

First-generation student

Degree

High vocational school

Leading high school

Nursing and health

Architecture and engineering

Economics and management

Food and drug

Foreign languages

Information engineering

Arts
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<th></th>
<th>$B$</th>
<th>Std. Error</th>
<th>Beta</th>
<th>$t$</th>
<th>Sig.</th>
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<th>Upper Bound</th>
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<td>.047</td>
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**Internationalization at Home Curriculum**

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<th>Std. Error</th>
<th>Beta</th>
<th>$t$</th>
<th>Sig.</th>
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<td>-0.004</td>
<td>0.180</td>
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</table>

**Internationalization abroad**

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<th>Std. Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student mobility</td>
<td>0.020</td>
<td>0.057</td>
<td>0.009</td>
<td>0.345</td>
<td>0.730</td>
<td>-0.092</td>
<td>0.131</td>
</tr>
<tr>
<td>Faculty mobility</td>
<td>0.115</td>
<td>0.039</td>
<td>0.078</td>
<td>2.949</td>
<td>0.003</td>
<td>0.038</td>
<td>0.191</td>
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</table>

**Internationalization at Home Curriculum**

<table>
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<th>Beta</th>
<th>t</th>
<th>Sig.</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum</td>
<td>0.061</td>
<td>0.016</td>
<td>0.132</td>
<td>3.755</td>
<td>&lt;.001</td>
<td>0.029</td>
<td>0.093</td>
</tr>
<tr>
<td>Cocurriculum</td>
<td>-0.019</td>
<td>0.015</td>
<td>-0.044</td>
<td>-1.210</td>
<td>0.227</td>
<td>-0.049</td>
<td>0.012</td>
</tr>
<tr>
<td>Extracurriculum</td>
<td>0.078</td>
<td>0.016</td>
<td>0.166</td>
<td>4.819</td>
<td>&lt;.001</td>
<td>0.046</td>
<td>0.110</td>
</tr>
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</table>
**Contribution Change of Independent Variables in Model 2.** When augmenting three IVs in Model 3, four out of 13 predictors (i.e., degree, high school type, future job, student mobility) had no significant relationship with the five DVs. Furthermore, the standardized Beta coefficients of some predictors (e.g., further study abroad, second foreign language, and faculty mobility) declined impressively, indicating internationalization at home curriculum might make up for GC cultivation of students from lower cultural capital families or having no opportunities for International mobility. Sections in this chapter depict the contribution modification of IVs in the domains of cultural capital and internationalization abroad.

**Gender.** In line with Table 42, gender repeated the contribution to knowledge and attitudes as in Model 1 and Model 2, with a tiny difference in statistics. Gender ($\beta = .085, p < .001$) had a positive relationship with knowledge score, but it ($\beta = -.062, p < .05$) negatively impact attitudes level.

**Family Background.** Compared to Model 2, almost all the predictors in the family background (i.e., family location, family income, first-generation student) mirrored significant unique contributions to explaining the dependent variable of the overall GC score and its four subdimensions score. Family income made no significant contribution to GC values (see Table 42).

Family location ($\beta = .074, p < .01$), family income ($\beta = .081, p < .001$), and first-generation student ($\beta = .084, p < .001$) significantly influence overall GC. Family location ($\beta = .067, p < .01$), family income ($\beta = .065, p < .05$), and first-generation student ($\beta = .075, p < .01$) made significant unique contributions to increase GC knowledge. Family location ($\beta$
family income ($\beta = .069$, $p < .01$), and first-generation student ($\beta = .067$, $p < .01$) positively impacted GC skills. Family location ($\beta = .065$, $p < .05$), family income ($\beta = .073$, $p < .01$), and first-generation student ($\beta = .073$, $p < .01$) made significant unique contributions to enhance GC attitudes. First-generation students ($\beta = .056$, $p < .05$) significantly strengthen participants’ GC values. Family income was no longer significantly related to GC values (see Table 4).

**Educational Background.** Compared to Model 2, most predictors shifted to have no significant unique contribution to the five DVs. Markedly, high school type (i.e., high vocational school and leading high school) no longer predicted overall GC and its four dimensions. Moreover, some fields of study (e.g., food and drug, information engineering) shifted to not significantly impact GC knowledge. Remarkably, no predictor in the educational background made significant unique contributions to GC attitudes and values.

Merely one predictor (i.e., fields of study) in educational background still significantly impacted the overall GC score or its four subdimensions score of Chinese higher vocational students. As for the overall GC score, the field of study of economics and management ($\beta = .082$, $p < .05$) made significant unique contributions. The fields of study of economics and management ($\beta = .115$, $p < .01$), nursing and health ($\beta = .099$, $p < .05$) were significantly positively related to GC knowledge, but two fields of study (e.g., food and drug, and information engineering) had no more significant relationship with GC knowledge. Concerning GC skills, the field of study of economics and management ($\beta = .073$, $p < .05$) once again made significant unique contributions as in Model 1 and 2 (see Table 4).
Capital Reproduction. A total of three predictors in capital reproduction (i.e., further study, further study abroad, and second foreign language) repeated the significant unique contributions to the five DVs, except for future job. However, further study, further study abroad, and second foreign language quit their significant contribution to some of the five DVs at different stages. Noteworthily, the standardized coefficients Beta of second foreign language and further study abroad dropped dramatically after controlling internationalization curriculum, cocurriculum, and extracurriculum. For instance, the standardized coefficients Beta of second foreign language fell from .206 to .083 ($p < .01$) to overall GC. The significant unique contribution of further study abroad decreased from ($\beta = .114, p < .05$) to ($\beta = .032, p < .001$) in GC skills. This is a sign internationalization at home curriculum might make up for the deficiency of capital reproduction.

Regarding overall GC score, further study abroad ($\beta = .087, p < .001$) and second foreign language ($\beta = .083, p < .01$) made significant unique contributions. Further study and future jobs had no more significant impact on overall GC. Only second foreign language ($\beta = .069, p < .05$) had a significantly positive relationship with GC knowledge, but further study and further study abroad made no significant contributions. As for GC skills, further study abroad ($\beta = .127, p < .001$) and second foreign language ($\beta = .069, p < .05$) made significant unique contributions, and future job had no significant impact. For GC attitudes, further study ($\beta = .078, p < .01$), further study abroad ($\beta = .032, p < .05$), and second foreign language ($\beta = .070, p < .05$) made significant unique contributions again as in Model 1 and 2. Merely further study ($\beta = .068, p$...
< .05) increased GC values, and second foreign language shifted to have no significant relationship with GC values (see Table 42).

**Internationalization Abroad.** After controlling the predictors of internationalization at home curriculum, student mobility had no unique contribution to overall GC and its four dimensions. Faculty mobility ($\beta = .082, p < .001; \beta = .050, p < .05; \beta = .078, p < .01$) still positively influenced respectively knowledge, attitudes, and values but made no significant unique contributions to overall GC and skills (see Table 42). Remarkably, the standardized coefficients Beta of faculty mobility declined as well.

**Internationalization at Home Curriculum.** Consistent with the results of HMR analysis, Table 42 demonstrated all three predictors in internationalization at home curriculum partly significantly influenced overall GC, knowledge, skills, attitudes, or values. As a result, H4 was partially supported. Different genres of curriculum promoted four dimensions of GC to various degrees. Curriculum and cocurriculum enhanced skills the most. Curriculum made a relatively big contribution to knowledge as well. Extracurriculum increased attitudes and values more obviously.

**Curriculum.** Curriculum positively influenced overall GC, knowledge, skills, attitudes, and values with the Standardized Coefficients Beta respectively ($\beta = .196, p < .001; \beta = .157, p < .001; \beta = .189, p < .001; \beta = .136, p < .001; \beta = .132, p < .001$; see Table 42). In the four dimensions of GC, curriculum contributed to skills the most, then knowledge, followed by attitudes and values. Therefore, H4-1 was fully supported. internationalization at home
Cocurriculum. Cocurriculum made significant unique contribution to overall GC, skills, and attitudes, with the Standardized Coefficients Beta respectively ($\beta = .115$, $p < .001$; $\beta = .175$, $p < .001$; $\beta = .075$, $p < .05$; see Table 4). In the four dimensions of GC, cocurriculum were significantly positively related to skills and attitudes, but had no impact on knowledge and values. Therefore, H4-2 was partially supported.

Extracurriculum. Extracurriculum had a positive relationship with overall GC, knowledge and skills, attitudes, and values, with the Standardized Coefficients Beta respectively ($\beta = .142$, $p < .001$; $\beta = .139$, $p < .001$; $\beta = .070$, $p < .05$; $\beta = .146$, $p < .001$; $\beta = .166$, $p < .001$; see Table 4). In the four dimensions of GC, extracurricular activities contributed to values the most, then attitudes, followed by knowledge and skills. Therefore, H4-3 was fully supported. Internationalization at home extracurriculum significantly influenced the overall GC score and its four subdimensions score of Chinese higher vocational students.

Research Question 5

How much variance in the overall GC score and its four subdimensions score is explained by internationalization at home intergroup contact factors? What internationalization at home intergroup contact factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

To address the last research question, three predictors (i.e., direct contact, online contact, and mediated contact) in internationalization at home intergroup contact were put in Step 4. With
the addition of the three IVs, the overall explanatory power of Model 4 for all five DVs (i.e., overall GC, knowledge, skills, attitudes, and values) increased dramatically again, demonstrating that internationalization at home intergroup contact made great contributions to GC achievement.

For overall GC score, Model 4 explained 36.5% of the variance in students’ overall GC score, augmented by 7.7% to Model 3 (see Table 43), $F(26, 1475) = 32.68, p < .001$ (see Table 44), indicating each coefficient is effective. For the knowledge subdimension, 22.4% of the variance in students’ GC knowledge score, augmented by 4.5% than Model 3 (see Table 43), $F(26, 1475) = 16.41, p < .001$ (see Table 44), demonstrating each coefficient is effective. Regarding the skills subdimension, 34.6% of the variance in the score of students’ GC skills, enhanced by 8.6% than Model 3 (see Table 43), $F(26, 1475) = 22.55 (26, 1475), p < .001$ (see Table 44), showing each coefficient is effective. As for attitudes, 26.6% of the variance in the score of students’ GC attitudes, improved by 5.4% than Model 3 (see Table 43), $F(26, 1475) = 20.57, p < .001$ (see Table 44), indicating each coefficient is effective. Concerning values, 14% of the variance in the score of students’ GC values increased by 3.0% than Model 2 (see Table 43), $F(26, 1475) = 9.25 (26, 1475), p < .001$ (see Table 44), indicating each coefficient is effective.
### Table 44

**Model 4 Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>DVs</th>
<th>$R$</th>
<th>$R$ square</th>
<th>Adjusted $R$ square</th>
<th>Std. error of the estimate</th>
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</thead>
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<td>.173</td>
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<td>2</td>
<td>Knowledge</td>
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<td>.189</td>
<td>.178</td>
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<td>3</td>
<td>Knowledge</td>
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<td>.277</td>
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</tr>
<tr>
<td>4</td>
<td>Knowledge</td>
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<td>.365</td>
<td>.354</td>
<td>.437</td>
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<tr>
<td>1</td>
<td>Skills</td>
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<td>.101</td>
<td>.090</td>
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<td>Skills</td>
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<td>.109</td>
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<tr>
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<tr>
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<td>.159</td>
<td>.149</td>
<td>.617</td>
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<tr>
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<td>Attitudes</td>
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<td>.156</td>
<td>.615</td>
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<td>Attitudes</td>
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<td>.260</td>
<td>.248</td>
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<td>Attitudes</td>
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<td>.346</td>
<td>.335</td>
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<td>.621</td>
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<td>Values</td>
<td>.387</td>
<td>.150</td>
<td>.138</td>
<td>.617</td>
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<td>Values</td>
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<td>.200</td>
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<td>Values</td>
<td>.374</td>
<td>.140</td>
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</table>

### Table 45

**Model 4 ANOVA**

<table>
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<tr>
<th>DVs</th>
<th>$R$</th>
<th>$df$</th>
<th>Mean square</th>
<th>$F$</th>
<th>Sig.</th>
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<tr>
<td>Overall GC</td>
<td>Regression</td>
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<td>444.228</td>
<td>1501</td>
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<tr>
<td>Knowledge</td>
<td>Regression</td>
<td>130.970</td>
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<td>5.037</td>
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<td>Residuals</td>
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<td>Regression</td>
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</tr>
<tr>
<td>DVs</td>
<td></td>
<td>$R$</td>
<td>$df$</td>
<td>Mean square</td>
<td>$F$</td>
</tr>
<tr>
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<td>----------</td>
<td>---------</td>
<td>------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td>Residuals</td>
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<td>1475</td>
<td>.298</td>
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<tr>
<td></td>
<td>Total</td>
<td>672.136</td>
<td>1501</td>
<td></td>
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<tr>
<td>Attitudes</td>
<td>Regression</td>
<td>176.216</td>
<td>26</td>
<td>6.778</td>
<td>20.574</td>
</tr>
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<td>1475</td>
<td>.329</td>
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<tr>
<td></td>
<td>Total</td>
<td>662.112</td>
<td>1501</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Values</td>
<td>Regression</td>
<td>111.461</td>
<td>26</td>
<td>4.287</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>795.301</td>
<td>1501</td>
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</table>

By adding predictors of intergroup contact in social life, the overall explanatory power of Model 4 for overall GC, knowledge, skills, attitudes, and values all boosted. It made clear participation in direct, online, and mediated contact significantly impacted the relationship between Chinese higher vocational students’ GC scores. With the participation of three IVs in internationalization at home intergroup contact, 12 out of 19 predictors (i.e., gender, family location, family income, first generation, fields of study, further study, further study abroad, second foreign language, faculty mobility, curriculum, cocurriculum, and extracurriculum, direct contact, online contact, and mediated contact) made significant contributions to overall GC, knowledge, skills, attitudes, or values (see Table 45).
Table 46

**Coefficients for Model 4**

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>95.0% Confidence Interval for B</th>
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<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Step 1: Cultural Capital</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.306</td>
<td>.078</td>
<td>29.467</td>
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<td>2.152</td>
</tr>
<tr>
<td>Gender</td>
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<td>.025</td>
<td>-.046</td>
<td>-2.009</td>
<td>.045</td>
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<tr>
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<td>.001</td>
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<td>.084</td>
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<td>-.001</td>
<td>-.050</td>
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<td>.883</td>
<td>.377</td>
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<td>.056</td>
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<td>.052</td>
<td>.040</td>
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Overall GC

Cultural Capital
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<tr>
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<th>Std. Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
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<td>.058</td>
<td>.001</td>
<td>.028</td>
<td>.978</td>
<td>-.113</td>
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<td>.058</td>
<td>2.452</td>
<td>.014</td>
<td>.013</td>
<td>.118</td>
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<tr>
<td>Further study abroad</td>
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<td>.031</td>
<td>.049</td>
<td>2.003</td>
<td>.045</td>
<td>.001</td>
<td>.123</td>
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<tr>
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<td>.024</td>
<td>.031</td>
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<td>.149</td>
<td>-.012</td>
<td>.080</td>
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<td>Second foreign</td>
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<td>.030</td>
<td>.049</td>
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<td>.053</td>
<td>-.001</td>
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<td></td>
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</tr>
<tr>
<td>Student mobility</td>
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<td>.007</td>
<td>.293</td>
<td>.770</td>
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<td>.081</td>
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I depict first the contribution of each IV of Model 1, 2, and 3 on predicting learners’ overall GC level and its four subdimensions after controlling all the other 18 predictors in this study. To Research Question 5, I elaborate on the contribution of each predictor in Model 4.

**Gender.** Corresponding to Table 45, Gender ($\beta = -0.046, p < 0.05; \beta = -0.105, p < 0.001; \beta = -0.073, p < 0.01$) negatively predicted respectively overall GC, attitudes, and values, but it turned no significant contribution to knowledge as in previous three models, after controlling all the other 18 IVs. Female higher vocational students inherited an open attitude toward foreign cultures/people and identified more with their own culture.

**Family Background.** Compared to previous models, almost all the predictors in the family background (i.e., family location, family income, first-generation student) repeated significant unique contributions to explaining the DVs of the overall GC score or its four subdimensions score. Students from rural places displayed a lower score of overall GC, knowledge, skills, and attitudes. Learners from families with inferior income performed worse overall GC, skills, and attitudes. Nevertheless, first-generation students achieved better overall GC knowledge, skills, and attitudes.

Family location ($\beta = 0.074, p < 0.01$), family income ($\beta = 0.060, p < 0.01$), and first-generation student ($\beta = 0.084, p < 0.001$) significantly influence overall GC. Family location ($\beta = 0.066, p < 0.01$) and first-generation student ($\beta = 0.073, p < 0.01$) made significant unique contributions to increase GC knowledge, except for family income ($p > 0.05$). Family location ($\beta = 0.060, p < 0.01$), family income ($\beta = 0.059, p < 0.01$), and first-generation student ($\beta = 0.071, p < 0.01$) positively impacted GC skills. Family location ($\beta = 0.062, p < 0.05$), family income ($\beta
= .049, p < .05), and first-generation student (β = .070, p < .01) made significant unique contributions to enhance GC attitudes. No predictor of family background significantly influenced GC values (see Table 45).

**Educational Background.** Similar to the previous three models, most predictors of educational background had no significant unique contribution to the five DVs. Merely one predictor (i.e., fields of study) still significantly impacted GC knowledge, exemplified in nursing and health (β = .099, p < .05) and economics and management (β = .098, p < .01; see Table 45).

**Capital Reproduction.** A total of two predictors in capital reproduction (i.e., further study and further study abroad) repeated the significant unique contributions to the five DVs. However, second foreign language made no significant contribution to the five DVs after controlling direct contact, online contact, and mediated contact.

Regarding overall GC score, further study (β = .058, p < .05) and further study abroad (β = .049, p < .05) made significant unique contributions. No predictor of capital reproduction significantly influenced GC knowledge (p > .05). As for GC skills, further study abroad (β = .076, p < .01) made significant unique contributions to overall GC and skills. Further study (β = .082, p < .01; β = .065, p < .05) significantly affected GC attitudes and values (see Table 45).

**Internationalization Abroad.** After controlling the predictors of internationalization at home intergroup contact, student mobility had no unique contribution to overall GC and its four dimensions as in Model 3. Faculty mobility (β = .049, p < .05; β = .079, p < .01; β = .059, p < .05) still positively influenced respectively overall GC, knowledge, and values, but made no significant unique contributions to GC skills and attitudes (see Table 45).
**Internationalization at Home Curriculum.** Despite the decrease of the Standardized Coefficients Beta, three genres of curriculum performed similarly as in Model 3, after controlling three more predictors of internationalization at home intergroup contact. Curriculum and cocurriculum enhanced skills the most. Curriculum made a relatively big contribution to knowledge as well. Extracurriculum increased attitudes and values more obviously.

**Curriculum.** Curriculum positively influenced overall GC, knowledge, skills, attitudes, and values with the Standardized Coefficients Beta respectively (β = .142, p < .001; β = .115, p < .001; β = .138, p < .001; β = .092, p < .01; β = .105, p < .01; see Table 4). Similar to Model 3, curriculum still contributed to skills the most, then knowledge, and followed by values and attitudes.

**Cocurriculum.** Compared to Model 3, cocurriculum turned to merely significant impacted GC skills (β = .095, p < .01). Cocurriculum turned not to be significantly positively related to attitudes.

**Extracurriculum.** Extracurriculum positively influenced overall GC, knowledge, attitudes, and values, with the Standardized Coefficients Beta respectively (β = .108, p < .001; β = .116, p < .001; β = .124, p < .001; β = .159, p < .001; see Table 45). In the four dimensions of GC, extracurriculum contributed to values the most, then attitudes, followed by knowledge. Extracurriculum did not significantly promote GC skills.

**Internationalization at Home Intergroup Contact.** In line with the results of HMR analysis, Table 45 showed all three predictors in internationalization at home intergroup contact partly significantly influenced overall GC, knowledge, skills, attitudes, or values. As a result, H5
was partially supported. Different genres of intergroup contact enhanced four dimensions of GC in various degrees. Direct and online contact promoted GC skills, and mediated contact made significant unique contributions to the overall GC score and its four subdimensions score. Noteworthily, mediated contact negatively affected GC attainment of Chinese higher vocational students.

**Direct Contact.** Direct contact positively influenced overall GC and skills, with the Standardized Coefficients Beta respectively ($\beta = .103, p < .05; \beta = .138, p < .01$; see Table 45). Direct contact had no significant unique contribution to GC knowledge, attitudes, and values. Therefore, H5-1 was partly supported.

**Online Contact.** Online contact significantly contributed uniquely to overall GC and skills, with the Standardized Coefficients Beta respectively ($\beta = .110, p < .05; \beta = .095, p < .01$; see Table 45). Online contact did not significantly influence knowledge, attitudes, or values. Hence, H5-2 was partially supported.

**Mediated Contact.** Mediated contact positively predicted overall GC, knowledge and skills, attitudes, and values, with the Standardized Coefficients Beta respectively ($\beta = .214, p < .001; \beta = .194, p < .001; \beta = .124, p < .001; \beta = .230, p < .001; \beta = .193, p < .001$; see Table 45). In the four dimensions of GC, mediated contact contributed to attitudes the most, then knowledge, followed by values and skills. Therefore, H5-3 was fully supported. Internationalization at home intergroup contact significantly influenced the overall GC score and its four subdimensions score of Chinese higher vocational students.
Chapter Summary

This study used a sample size of 1,504 participants for all research questions and hypotheses. The descriptive data described in this chapter detailed the characteristics of students’ GC in a Chinese private vocational university. Overall, Chinese vocational students’ values level was the highest, and their skills level was the lowest. The students’ knowledge and attitudes level took the intermediate position. Five independent-sample t-tests were conducted to address hypothesis one and results showed no significant difference in the overall GC score, knowledge, skills, attitudes, and values between Chinese vocational 3-year college students and 4-year undergraduates.

Hierarchical multiple regression analyses showed statistically significant results for Hypotheses 2, 3, 4, 5. Cultural capital, internationalization abroad, internationalization at home curriculum, and internationalization at home intergroup contact made significant contributions to global competence achievement. Table 46 summarizes the standardized coefficients beta of all the 19 predictors to overall GC, knowledge, skills, attitudes, and values in the final model. An interpretation of these findings and the discussion of the limitations of this dissertation and future considerations are discussed in Chapter 5.
Table 47

*Standardized Coefficients Beta*

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<tr>
<td>Student mobility</td>
<td>.007</td>
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<td>Faculty mobility</td>
<td><strong>.049</strong></td>
<td><strong>.079</strong></td>
<td>.011</td>
<td>.041</td>
<td><strong>.059</strong></td>
</tr>
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</table>
| Step 3: Internationalization at Home Curriculum | $R^2 = .288$ | $R^2 = .179$ | $R^2 = .260$ | $R^2 = .212$ | $R^2 = .110$
| Curriculum                     | .142***    | .115***   | .138*** | .092**    | .105** |
| Cocurriculum                   | .051       | .006      | .095**  | .035      | -.055  |
| Extracurriculum                | **.108*****| **.116*****| .030    | **.124*****| **.159*****|
| Step 4: Internationalization at Home Intergroup Contact | $R^2 = .365$ | $R^2 = .224$ | $R^2 = .346$ | $R^2 = .266$ | $R^2 = .140$
| Direct contact                 | **.103***  | .039      | .138**  | .070      | .026   |
| Online contact                 | **.110***  | .083      | .173*** | .027      | -.043  |
| Mediated contact               | **.214*****| **.194*****| **.124***** | **.230*****| **.193*****|

Note. * $p < .05$, ** $p < 0.01$, *** $p < 0.001$. 
The primary purpose of this study was to investigate the influences of cultural capital factors and internationalization pedagogies on Chinese higher vocational students’ global competence (GC) at a private vocational university in eastern China. The secondary purpose was to explore the characteristics of Chinese higher vocational students’ GC achievement and the difference in mean scores of overall GC and its four subdimensions between two groups (i.e., higher vocational 3-year college students and 4-year undergraduates). Drawing from the findings, the research provided policy implications to policymakers, researchers, and practitioners in higher vocational institutions, urging them to assess the effectiveness of internationalization pedagogies in enhancing GC and fostering globally competent students. Additionally, this study yielded practical implications for identifying the most effective and efficient genres of internationalization activities to prepare higher vocational students for the challenges of the global workforce and intercultural environments. This chapter initiates a discussion of the findings from this study and previous research. Subsequent sections delve into practical implications for implementation, the strengths and limitations of this study, and recommendations for future research endeavors.

Findings of the Study and Discussion

Data were collected through an anonymous online survey instrument from 1,504 participants at a private university in eastern China to address the research questions. Five research questions and 17 subquestions were then analyzed using descriptive statistics,
independent sample t-tests, and hierarchical multiple regression. No violations of the assumptions were detected in the HMR, and the findings presented in this study were reliable and valid. The discussion of the results aligns with the research questions and hypothesis.

Research Question 1

Research Question 1.1.

What are the characteristics of students’ global competence in a Chinese private vocational university?

The results of this study indicated higher vocational students from Z University had a moderate global competence (GC) level \( (M = 3.43, SD = 0.55) \). Adapted from W. D. Hunter’s (2004) scale, it showed a moderate level compared to student samples assessed in different genres of Chinese higher education. These samples include undergraduates in a private university in Shanghai \( (M = 3.48, SD = 0.59; \text{H. Meng, 2021}) \), graduates in Beijing \( (M = 3.40, SD = 0.52, \text{Y. Liu et al., 2020}) \), and medical graduates \( (M = 3.52, SD = 0.49; \text{Jiang et al., 2022; see Appendix F}) \). Y. Liu et al.’s (2015) findings showed the GC level of Chinese students from 985 Project universities was significantly higher than that of 211 Project universities and general universities. However, there were no significant difference between Chinese students from the 211 Project and general universities.

In this study, findings echoed no large differences between students at vocational universities and most of their counterparts at general universities concerning GC self-reported scores. Except for the postgraduate sample in an eastern Chinese academic university \( (M = 3.83, SD = 0.53; \text{see Ceng & Yang, 2022}) \), the participants reported an obviously high level of GC.
Appendix F). This outcome can be attributed to the timing of different research studies. For instance, H. Meng (2021) conducted her empirical research in 2020. Chinese vocational undergraduates may have improved their overall GC in the past 4 years. Overall, the Chinese higher vocational student sample had open attitudes and world knowledge but lacked cross-cultural communication skills, consistent with previous literature (Jiang et al., 2022; Y. Liu et al., 2020; H. Meng, 2021; Q. Meng et al., 2017a; see Appendix F).

Regarding the scores of seven subfactors, higher vocational students displayed a similar performance as their counterparts at a private general university in Shanghai, the only previous research having detailed the mean score of each subfactor (H. Meng, 2021; see Appendix G). Higher vocational students reported the highest scores in value identity ($M = 3.79$, $SD = .73$), higher than their private undergraduate peers ($M = 3.59$, $SD = .53$). This indicated that higher vocational students had a well understanding of their own culture and considered themselves valuable to society

In line with Butler (1978), values are the foundation for attitudes, which are comprised of affection (emotion and ways of thinking) and behavior (personality and motivation) to react to a particular value. Higher vocational students’ open attitudes placed after values ($M = 3.65$, $SD = 0.71$). However, it was lower than private general undergraduates ($M = 4.09$, $SD = .72$). This implied a solid foundation of values provided higher vocational students an openness to understand/respect/appreciate foreign cultures when communicating with foreign people.

Understanding globalization ($M = 3.55$, $SD = .66$) was located at the third highest score, slightly lower than private general university students ($M = 3.69$, $SD = .77$). This demonstrated higher
vocational students had an average level of understanding of the developmental trends and influence of globalization. Even though higher vocational students’ understanding of globalization was third of the highest scores in the seven subfactors, it was still slightly lower than their compatriots in higher general education systems. Therefore, pedagogical efforts to improve these two aspects cannot be ignored.

Another subfactor in the knowledge dimension was higher vocational participants displayed a low score in world knowledge ($M = 3.45, SD = 0.69$; see Appendix G), indicating they had insufficient basic knowledge of other countries’ languages, cultures, histories, and geographies. Consistent with H. Meng (2021) and previous studies (Jiang et al., 2022; Y. Liu et al., 2020; Q. Meng et al., 2017a), students from higher vocational education institutions reported the lowest mean score in the dimension of global skills, cross-cultural communication factors ($M = 3.18, SD = 0.71$) and use of tools factors ($M = 3.23, SD = 0.71$; see Appendix G).

Overall, the results mirrored that higher vocational education students featured higher global attitudes and values, reflecting the strong identification of their own culture and values and willingness to be involved in cultural differences and discrepancies in global issues (Meng et al., 2017a). In line with Han (2013), Chinese students inherited Chinese cultural traditions displaying cultural tolerance and compatibility, respect for diversity, and willingness for inclusion. However, they had lower scores in the global knowledge dimension.

Based on Butler (1978), knowledge is the basic information and strategies for the skills dimension, which refers to abilities to accomplish a task proficiently. Therefore, with a lower level of GC knowledge, it is reasonable to understand that Chinese higher vocational students
reported the lowest scores in skills. They had less confidence in using international software, browsing foreign language websites, understanding foreign literature, and communicating with foreign people for a long time (e.g., 1 hour). They conveyed a lower level of cross-cultural cooperative skills, including the ability to analyze issues from a foreign perspective and adapt language for effective communication, collaboration, or cohabitation with foreign individuals. It underscored Chinese higher vocational students have not adequately fulfilled the requisites of intercultural communication in the ambit of foreign languages, predominantly English as a lingua franca (ELF).

**Research Question 1.2.**

Is there any difference in the overall GC score and its four subdimensions score between higher vocational 3-year college students and 4-year undergraduates?

Based on the results of five independent-sample t-tests, no significant difference was found between vocational 3-year college students and 4-year undergraduates in total GC (H1-1), knowledge (H1-2), skills (H1-3), attitudes (H1-4), and values (H1-5), all p > 0.05 (see Table 33). The two groups of participants shared similar scores in overall GC and its four dimensions. Vocational undergraduates ($M = 3.55, SD = .63$) scored slightly higher in global knowledge than 3-year college peers ($M = 3.55, SD = .63$; see Table 33). One potential reason may be vocational undergraduates performed better in gaokao, which consists of assessing global political, history, geographic, and foreign language knowledge.
Research Question 2

Research Question 2: How much variance in the overall GC score and its four subdimensions score of Chinese higher vocational students is explained by cultural capital factors? What cultural capital factors predict the likelihood of Chinese higher vocational students’ GC overall score and its four subdimensions score?

In the final model, the results indicated the cultural capital variables could account for 17.3% of the total variance to overall GC, 10.1% to knowledge, 15.9% to skills, 13.8% attitudes, and 5.7% to values. The examination of the Beta weights indicated that seven out of 11 predictors of cultural capital emerged as significant for overall GC and its four dimensions. Gender, family background, educational background, and capital reproduction were important factors that affected GC of Chinese higher vocational students. This section explains the growth path of GC among Chinese higher vocational students from cultural capital perspectives. It analyzes and discusses the seven significant predictors (i.e., gender, family location, family income, first-generation students, fields of study, further study abroad) and the three other IVs (i.e., high school type, future job, and second foreign language) once significantly influenced the five DVs in the previous three models and turned insignificant in the final model.

Gender

In the final model, the examination of the Beta weights demonstrated that gender negatively impacted overall GC ($\beta = -0.046, p < .05$), attitudes ($\beta = -0.105, p < .001$), and values ($\beta = -0.073, p < .01$; see Table 4). Consistent with the scores of undergraduates in a general university (L. Zhang & Wen, 2018), Chinese higher vocational female students had better GC,
specifically in attitudes and values. However, some previous literature indicated that male students outperformed female students in overall GC (Jiang et al., 2022; Q. Meng et al., 2017a), which did not assess the difference in GC scores in the four dimensions.

In this study’s previous three HMR models, findings all showed male higher vocational students exceeded their female counterparts in global knowledge. Therefore, this mirrored in the Chinese higher vocational system, this study showed male students also had better knowledge of foreign countries’ languages, cultures, histories, and geographies, and a broader understanding of developmental trends and influence of globalization than their female peers. Meanwhile, female higher vocational students were more willing to understand, respect, and appreciate foreign people and sought more opportunities for cross-cultural communication, learning, and research. Female students could better identify with their own culture and consider themselves more valuable to the country and society than their male counterparts (Y. Liu et al., 2015; H. Meng, 2021), consistent with previous studies (Y. Liu et al., 2015; H. Meng, 2021).

**Family Background**

This study included three predictors in family background, such as family location, family income, and first-generation students. The three predictors remained significant unique contributions to overall GC and its three dimensions (i.e., knowledge, skills, and attitudes) in all four models, except for values (p > .05).

**Family Location.** In the final HMR model, urban students rated a higher score of overall GC (β = .074, p < .01), knowledge (β = .066, p < .01), skills (β = .060, p < .01), and attitudes (β = .062, p < .05; see Table 46). The results were consistent with previous studies (Y. Liu et al.,
revealing Chinese urban students may have benefited from access to higher quality educational resources (e.g., libraries and museums) to enrich their global knowledge. Moreover, urban participants had more opportunities to engage in international activities to enhance their abilities of cross-cultural communication and became open to constructing overseas networks through high-quality and diverse educational resources (Y. Liu et al., 2015; L. Zhang & Wen, 2018).

**Family Income.** Although Y. Liu et al. (2015) reported no significant relationship between GC and family income, in this study, participants from wealthy families outperformed in overall GC ($\beta = .060, p < .01$), skills ($\beta = .059, p < .01$), and attitudes ($\beta = .049, p < .05$; see Table 46), except for knowledge ($p > .05$). The reason may be global knowledge could be accessed in the school curriculum. However, global skills and attitudes might be influenced subtly and unconsciously. Wealthy families are more likely to afford overseas exchanges and provide opportunities to communicate with people from different cultures. Therefore, students from wealthy families inherited better abilities in cross-cultural communication and willingness to develop intercultural connections (L. Zhang & Wen, 2018).

**First-Generation Students.** Previous literature indicated students’ GC level had a positive relationship with the highest degree of their parents (Jiang et al., 2022; J. Li & Xu, 2016; Y. Liu et al., 2015; L. Zhang & Wen, 2018). It is believed parents with higher education backgrounds tend to be more involved in students’ academic development, and GC cultivation (L. Zhang & Wen, 2018). Concerning the details of the GC levels of the two groups, the mean scores of GC were consistent with previous literature (see Appendix H).
First-generation students rated a slightly lower overall GC, knowledge, skills, and attitudes than their non-first-generation peers. Although both groups rated the same score in GC values, the results of the Beta weights of this study showed that first-generation students positively predicted overall GC ($\beta = .084, p < .001$), knowledge ($\beta = .073, p < .01$), skills ($\beta = .070, p < .01$), and attitudes ($\beta = .070, p < .01$; see Table 4). This finding implied even first-generation students rated lower GC scores. However, they were predicted to have better global knowledge, skills, and attitudes after controlling for all the other 18 IVs in this study.

Based on the interview of 22 first-generation college students in Central China, Green (2018) revealed that they were inclined to be attracted by foreign cultures and people because they had few opportunities for prior cross-cultural experiences in higher education. Moreover, first-generation students conveyed a deep sense of gratitude for being the inaugural members of their families to pursue higher education. Consequently, their predominant concerns centered around future prospects, as they grappled with endeavors aimed at enhancing employability and achieving social mobility. Subsequent research endeavors could delve into the specific nuances of first-generation students’ acquisition of GC.

**Educational Background**

This study incorporated three predictors related to educational background: high school type, degree type, and fields of study. In the final model, only the predictor of fields of study made significant unique contributions to global knowledge. High school type showed significant unique contributions to GC in the first model but turned insignificant in the subsequent models.
The predictor Degree in HMR mirrored the result of the independent samples of the t-test; no significant difference was found between Chinese 3-year college and 4-year undergraduates.

**Fields of Study.** In this sample, Chinese vocational students who majored in nursing and health (β = .099, p < .01), economics and management (β = .098, p < .01) disciplines displayed higher GC knowledge than students from other fields of study. A possible explanation is the different curricular contents. Students in the field of economics and management experience a curriculum that incorporates more extensive coverage of global history, culture, geography, economics, and politics, encompassing both their own country and foreign nations (Q. Meng et al., 2017a). For nursing and health majors at Z University, students had more specialized courses taught in a foreign language. Hence, it is easy to understand that the participants who majored in nursing and health majors outperformed GC.

Contrary to expectation, participants in foreign languages who traditionally show greater interest in mobility abroad and possess a higher sense of global citizenship (Cao et al., 2016; Q. Meng et al., 2017a) did not yield higher scores in GC across knowledge, skills, and even attitudes in this study. Future studies are encouraged to delve into the underlying reasons for the observed gap between foreign language majors and GC in the context of Chinese higher vocational education.

**High School Type.** In the first model, participants who graduated from leading high school showed better performance in overall GC (β = .072, p < .01), skills (β = .074, p < .01), and attitudes (β = .066, p < .05), after controlling the rest 10 predictors distributed in cultural capital background. In contrast, participants who graduated from high vocational school
displayed lower performance in GC knowledge (β = -.059, p < .05; see Table 36). Corresponding to L. Zhang and Wen (2018), the results of this study echoed students’ high school experiences influenced students’ GC.

The high school period holds significant importance in shaping adolescents’ worldviews and values, serving as a pivotal stage for the cultivation of a preliminary understanding of diverse cultures and global development trends. It is during this phase individuals enhance their foreign language communication skills, fostering the development of global awareness and an open attitude toward cultural diversity. In line with L. Zhang and Wen (2018), Chinese leading high schools generally offer a more extensive array of internationalization educational resources compared to normal high schools and high vocational schools. These resources may include foreign faculty and internationalization curriculum. A 5-day immersion in the excellent international education and cross-cultural resources provided by high school plays a formative and catalytic role in shaping adolescents’ GC performance (L. Zhang & Wen, 2018). Consequently, more consideration is called for enhancing the internationalization resources in normal high schools and high vocational schools, with the aim of fostering the cultivation of GC.

**Capital Reproduction**

Two of four predictors (i.e., further study and further study abroad) demonstrated unique significant contributions to GC. The other two predictors (i.e., future job and second foreign language) significantly influenced GC in the previous model but were not significant in the final model.
**Future Job, Further Study, and Further Study Abroad.** Existing literature suggested the career expectations of first-year students from a Chinese 985 university significantly influenced their GC. Students aspiring to work in the public sector exhibited lower GC than their counterparts aiming for employment in nonpublic sectors. However, the findings from this study revealed no significant relationship between GC and future job expectations (L. Zhang & Wen, 2018). Inspired by future job expectations, this study investigated students’ willingness to study further and further study abroad.

Participants expressing a desire to pursue further studies demonstrated a better overall GC ($\beta = .058, p < .05$), attitudes ($\beta = .082, p < .01$), and values ($\beta = .065, p < .05$). Participants with aspirations to study abroad displayed a higher overall GC ($\beta = .049, p < .05$) and skills ($\beta = .076, p < .01$; see Table 46). Students who intend to study further abroad consciously improve their GC skills (e.g., foreign language, cross-cultural communication) through various means and channels. Based on the vigorous development of the Belt and Road Initiatives (BRI), China is continuously enlarging networks of international cooperation/exchanges with foreign countries and promoting high-quality employment and prosperous international activities/exchanges/competitions/collaborations (MOE, 2022b). Globalization opportunities continue to extend from abroad to domestic. Students who intend to stay domestically also need to have a global perspective and mindset, global leadership, critical analysis of global issues, and the ability to communicate with people from different cultural backgrounds (L. Zhang & Wen, 2018). In light of the integration of world-class industry into vocational education and the extensive collaborations with international organizations, Chinese higher vocational educators
must focus on cultivating high-skilled technician talents endowed with the competence to communicate and collaborate effectively with foreign individuals or groups both domestically and internationally (MOE, 2022b).

**Second Foreign Language.** In this Chinese higher vocational university, participants who learned one or more second foreign languages reported higher levels of overall GC ($\beta = .206, p < .001$), knowledge ($\beta = .164, p < .001$), skills ($\beta = .186, p < .001$), attitudes ($\beta = .182, p < .001$), and values ($\beta = .128, p < .001$) in the first two models. Nevertheless, it made no significant contribution when adding predictors of internationalization curriculum at the stage of Model 3. But the impact of learning a second foreign language could not be overlooked, aligning with the consistent findings in previous international (Alfaro & Paz-Albo, 2021) and Chinese context (Q. Meng et al., 2017b).

It is reasonable to infer students acquiring proficiency in one or more second languages demonstrated heightened interest and curiosity about foreign cultures, displaying a stronger inclination to broaden their understanding of diverse cultural backgrounds (Q. Meng et al., 2017b). Exposure to multilingual environments can improve students’ abilities to understand foreign perspectives and communicate in cross-cultural settings (S. P. Fan et al., 2015; Soria & Troisi, 2013).

**Summary of Cultural Capital Model**

The results of this study mirrored Bourdieu’s (1973, 1974, 1984, 1986) cultural capital theory. Students originating from higher cultural capital gain increased educational opportunities and achieve more favorable outcomes in terms of GC. The university is an ideal venue where
students accumulate cultural capital. Educators and stakeholders must consider students’ cultural identity when designing global competence-based pedagogies. The following section discusses and analyzes how the experience of internationalization abroad (Research Question 3) reaps the potential benefits of GC attainment global competence-based pedagogies in line with the findings of this study.

**Research Question 3**

How much variance in the overall GC score and its four subdimensions score is explained by internationalization abroad factors? What internationalization abroad factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

In the final model, the results revealed the two predictors (i.e., student abroad mobility and faculty abroad mobility) of internationalization abroad increased by 1.6% of the total variance to overall GC, 2.0% to knowledge, 1.6% to skills, 1.2% to attitudes, and 1.4% to values. The examination of the Beta weights demonstrated that merely faculty international mobility made unique significant contributions to Chinese higher vocational students’ GC acquisition. This section discusses the GC development among Chinese higher vocational students from the perspective of internationalization abroad. It analyzes the significant predictor (i.e., faculty mobility) and the other IV (student mobility) once significantly impacted GC attainment in Model 2 but shifted to not significant after adding the predictors of internationalization at home curriculum in Model 3.
Student Mobility

Student overseas mobility became nonsignificant when adding predictors of Internationalization at home (Model 3). One potential reason can explain the results. The opportunities for overseas mobility were limited. Concerning the expensive fee of traveling (Shaftel et al., 2007), the COVID-19 global pandemic crisis situation had put a temporary stop to international mobility (Chong et al., 2022), only 202/1504 (13.4%) of participants in this sample reported their overseas experience.

However, in the second model, higher vocational participants who had overseas experience reported a better overall GC (β = .072, \( p < .01 \)), knowledge (β = .053, \( p < .05 \)), and skills (β = .080, \( p < .01 \)), compared to their counterparts without international mobility.

Consistent with previous literature in Chinese and International contexts (Alfaro and Paz-Albo, 2021; Cen & Yang, 2022; Chong et al., 2022; Doerr, 2018; Fang et al., 2018; Y. Hu & Jing, 2018; X. Liu & Cao, 2020; Y. Liu et al., 2015; H. Meng, 2021; Q. Meng et al., 2017b; Schenker 2019; X. Zhang, 2020), this study demonstrated evidence of supporting the ongoing encouragement for higher vocational students to be involved in overseas mobility programs as a means of fostering GC. Even in the post-COVID-19 global pandemic era, such mobility remains an effective pedagogical approach, offering students extended immersion in diverse environments rich with linguistic, social, and cultural opportunities, corresponding to the internationalization framework (ACE, 2023a). Future studies may investigate the influence of different durations and genres of abroad experience on Chinese higher vocational students (H. Meng, 2021).
**Faculty Mobility**

In the final model, respondents who knew faculty with overseas experience reported higher overall GC ($\beta = .049$, $p < .05$), knowledge ($\beta = .079$, $p < .01$), and values ($\beta = .059$, $p < .05$; see Table 4). The finding provides evidence to the internalization framework (ACE, 2023a) international professional experiences are inspiring and affirming for educators and promote students’ global knowledge in tertiary education. Consistent with Butum et al. (2020), faculty who had overseas educational backgrounds tended to prepare more internationalization curricula (e.g., curricula in foreign languages, cocurricula including contact with foreign people, and extracurricula containing collaboration with multinational organizations).

These internalization curricula would further catalyze students’ global knowledge and international employability. The growth of students’ GC requires faculty and staff support (ACE, 2023a). In the postparamedic era, the Chinese higher vocational education system has suggested a plethora of overseas training programs for faculty so they can optimize their support to students’ global learning, research, and service. However, this study only investigated the impact of faculty mobility on students’ GC. Future research is called for examining the relationship between students’ GC and faculty’s on-campus professional training, incentives, and rewards toward internationalization (ACE, 2023a).

**Summary of Internationalization Abroad Model**

Under the internationalization abroad framework, the findings of this study partially echoed that internationalization abroad pedagogies promoted Chinese higher vocational students’ GC. However, the scarcity of overseas opportunities limited the contribution of abroad
experience to GC attainment. Hence, educators and stakeholders may find the pedagogies of internationalization at home to be a viable alternative. The subsequent section delves into the discussion and analysis of the impact of the internationalization at home curriculum (Research Question 4) on the development of GC, drawing insights from the findings of this study.

**Research Question 4**

How much variance in the overall GC score and its four subdimensions score is explained by internationalization at home curriculum factors? What internationalization at home curriculum factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

In the final model, the findings indicated the three predictors (i.e., curriculum, cocurriculum, and extracurriculum) of internationalization at home curriculum augmented by 9.9% of the total variance to overall GC, 6.8% to knowledge, 9.3% to skills, 6.2% to attitudes, and 3.9% to values. The examination of the Beta weights showed all three genres of the internationalization curriculum made unique significant contributions to Chinese higher vocational students’ GC growth. This section discusses the GC attainment among Chinese higher vocational students from the internationalization at home curriculum perspective. It analyzes all three significant IVs in the final model.

**Curriculum**

In this study, the internationalization at home curriculum encompassed in-class courses incorporating textbooks and literature written in a foreign language, content related to international employment, and training of international vocational skills. The results in the final
model showed students engaged in internationalization courses demonstrated elevated levels of overall GC ($\beta = .142, p < .001$), knowledge ($\beta = .115, p < .001$), skills ($\beta = .138, p < .001$), attitudes ($\beta = .092, p < .01$), and values ($\beta = .105, p < .01$; see Table 46), same as documented in previous literature (Butum et al., 2020; Cen & Yang, 2022; Q. Meng et al., 2017a; Song & Li, 2020).

It is recommended Chinese higher vocational institutions enhance their curriculum optimization in three key areas. Firstly, educators should augment the inclusion of specialized courses taught in foreign languages. Additionally, international content, such as textbooks and literature written in foreign languages, can be seamlessly integrated into regular courses, aligning with the specific characteristics of the field of study. Lastly, educators are encouraged to play an active leadership role in connecting curriculum design to both national and international labor markets by incorporating information on international employment trends and providing skill practice relevant to global employment (Deardorff, 2006; Q. Meng et al., 2017a; MOE, 2022b).

**Cocurriculum**

This study defined cocurriculum as in-class or on-campus cross-cultural activities provided in-person or online interaction with foreign students/professors. In the final model, students involved in cocurriculum outperformed GC skills ($\beta = .095, p < .01$) than those who were absent (see Table 46). Consistent with previous studies (Commander et al., 2016; Kang et al., 2018; Leung et al., 2017; Y. Li, 2013; Q. Meng et al., 2017b; Ndubuisi et al., 2022), direct and virtual contact with foreign people in courses creates more opportunities for students to practice the cross-communication skills. However, cocurriculum was not significantly related to
GC knowledge, attitudes, and values, probably because of barriers that students may face during the courses.

A barrier is inadequate foreign language limiting students’ understanding of the content of communication and increasing anxiety in foreign language settings and decrease openness to the cross-cultural world (Kang et al., 2018). Moreover, online contact in courses might have physical environmental difficulties. The technology challenges influence clear virtual communication, and the variances in time zones caused the rearrangement of class hours in both countries (Kang et al., 2018; Ndubuisi et al., 2022). Therefore, higher vocational educators are encouraged to design plenty of internationalization cocurriculum to cultivate students’ GC while considering the methods to mitigate the impacts of course barriers.

**Extracurriculum**

The extracurricular activities in this study were regarded as internationalization engagement in various international or multinational organizations off-campus. In the final model, participants who were exposed to extracurriculum had higher scores of overall GC (β = .108, p < .001), knowledge (β = .116, p < .001), attitudes (β = .124, p < .001), and values (β = .159, p < .001; see Table 4).

The results mirrored international communicative activities or connections in multinational organizations as practical off-campus global competence-base pedagogies (ACE, 2023a) such as school-enterprise internships in multinational organizations (Butum et al., 2020; J. Li & Xu, 2016), joint/dual diplomas or foreign educational programs from different countries (Butum et al., 2020; J. Li & Xu, 2016), and volunteer experience in international events (MOE,
From a policy-implementing perspective, constructing a sustainable extracurricular system to increase global experience and opportunities is essential in contemporary China’s higher vocational education system (J. Li & Xu, 2016).

**Summary of Internationalization at Home Curriculum Model**

These findings revealed positive relationships offered theoretical implications for the internationalization at home curriculum framework hypothesis guiding this study. Internationalization curriculum provides fundamental pedagogies to foster globally competent students in China’s higher vocational system. Nevertheless, the sample in this study reported low participation in internationalization courses (see Table 29). Therefore, the priority of Chinese higher vocational educators and policymakers is to integrate international perspectives into various genres of curriculum to cultivate all students’ global/intercultural and workforce-ready competence domestically, no matter their specialized discipline. Moreover, educators must promote campus-wide global engagement and full student participation (ACE, 2023a).

Time spent at domestic universities is limited, and researchers struggled to supplement international involvement in students’ social lives (Cao & Meng, 2020b). The following section discusses and analyzes the relationship between Chinese higher vocational students’ GC attainment and the internationalization intergroup contact (i.e., Research Question 5) off-campus, grounded on the findings of this study.

**Research Question 5**

How much variance in the overall GC score and its four subdimensions score is explained by internationalization at home intergroup contact factors? What internationalization at home
intergroup contact factors predict the likelihood of Chinese students’ GC overall score and its four subdimensions score?

In the final model, the results revealed the three IVs, direct contact, online contact, and mediated contact, in the internationalization at home intergroup contact contributed an additional 7.7% to the overall GC, 4.5% to knowledge, 8.6% to skills, 5.4% to attitudes, and 3.0% to values. Analyzing the Beta weights indicated each of the three categories of internationalization intergroup contacts significantly influenced the development of GC among Chinese higher vocational students. This section explores the attainment of GC among Chinese higher vocational students through the lens of the internationalization at home intergroup contact, delving into the analysis of all three noteworthy IVs in the final model.

**Direct Contact**

Direct contact involves in-person interactions with individuals from other countries in the physical environment off-campus. In the final model, individuals who engaged in direct contact off-campus exhibited elevated scores in overall GC ($\beta = .103, p < .05$) and skills ($\beta = .138, p < .01$) as indicated in Table 46. In alignment with previous research (Cao & Meng, 2020b; Kang et al., 2018; Q. Meng et al., 2017b), the findings affirm the positive impact of direct contact on Chinese higher vocational students’ GC. Specifically, direct contact positively correlated with GC skills. This suggests Chinese higher vocational students engaged in more direct interactions with culturally diverse people demonstrated greater proficiency in intercultural involvement and collaboration. The findings underscore the importance for educators to actively create
connections between higher vocational students and people from diverse cultural backgrounds, outside classroom settings (Q. Meng et al., 2017b).

**Online Contact**

Online contact pertains to interactions with culturally diverse people through various social media platforms, including Facebook, Twitter, Snapchat, LinkedIn, and WeChat. In the final model, participants involved in online contact off-campus demonstrated higher scores in overall GC ($\beta = .110, p < .05$) and skills ($\beta = .173, p < .001$), as detailed in Table 46. The findings offer empirical evidence online contact, functioning similarly to extended contact, can compensate for the absence of direct face-to-face interactions, and enhance intergroup attitudes and relations particularly among individuals with limited or no direct contact experiences (Cao & Meng, 2020b; Christ et al., 2010; Dhont & Van Hiel, 2011; Vezzali et al., 2016). In this context, this study suggests Chinese higher vocational students with limited direct contact may rely on online communication through social media as a primary means for developing GC skills and establishing robust intercultural connections as sources of support.

**Mediated Contact**

Mediated contact involves exposure to foreign entertainment programs facilitated by prevalent media platforms, including television, the Internet, and cell phones. Corresponding to previous studies (Cao & Meng, 2020a; Kang et al., 2018; Q. Meng et al., 2017b), this study indicated global mass media was the most influential factor in Chinese higher vocational students’ acquisition of GC ($\beta = .214, p < .001$), knowledge ($\beta = .194, p < .001$), skills ($\beta = .124, p < .001$), attitudes ($\beta = .230, p < .001$), and values ($\beta = .193, p < .001$).
Aligning with Cao and Meng (2020a), several potential reasons may explain the strong positive relationships between the two constructs. First, mediated contact, such as TV series and movies, often communicates messages about the behavioral characteristics, traditions, and lifestyles of outgroup members, embedded with cultural codes. It is readily accessible and frequently features positive portrayals of media characters. These fundamental cultural elements have been shown to enhance students’ motivation for intercultural engagement and their understanding of cultural differences (Truong & Tran, 2013). Second, the leisurely nature of consuming foreign entertainment programs has significant potential to facilitate the cultural learning process by allowing individuals to observe media characters and their cultures in a relaxed and comfortable setting. Third, the higher the number of people in a specific country who watch entertainment programs from a foreign country, the more likely they are to perceive the foreign country and its cultures positively (Cao & Meng, 2020d; Yoo et al., 2014). Fourth, mediated contact was found to decrease intergroup anxiety and increase GC acquisition. Individuals’ positive perceptions of an outgroup, such as finding them socially attractive and experiencing less communicative anxiety, can stimulate their willingness to communicate with the outgroup and acquire culture-specific knowledge about them (Cao & Meng, 2020a).

**Summary of Internationalization at Home Intergroup Contact Model**

These findings provide evidence intergroup contact off-campus reinforce the limited time in school. All three forms of contacting foreign cultures and people positively influence GC attainment. However, the data showed a low frequency of face-to-face or online contact with culturally different people in Chinese higher vocational students’ social lives (see Table 30).
Potential reasons could include students facing challenges with either in-person or virtual contact (i.e., experiencing intergroup avoidance and anxiety), or having limited opportunities for both types of contact (Cao & Meng, 2020a).

The data showed a low frequency of face-to-face or online contact with culturally different people in Chinese higher vocational students’ social lives (see Table 3). Potential reasons could include students facing challenges with either in-person or virtual contact (i.e., experiencing intergroup avoidance and anxiety), or having limited opportunities for both types of contact (Cao & Meng, 2020a). Moving beyond the internationalization framework (ACE, 2023a), the results of this study recommend intergroup contact off-campus can be an effective pedagogy educators leverage to promote higher vocational students’ GC.

**Implications for Policy and Practice**

The primary objective of this dissertation study was to investigate students’ GC at Chinese higher vocational colleges. Derived from the results from HMR, several implications emerge based on the cultural capital theory and internationalization framework, suggesting specific actions and educational interventions to implement to nurture the GC of Chinese higher vocational students.

**Implications Based on the Characteristics of Global Competence**

This study uncovered the overall GC level of students at higher vocational institutions was not inferior to students at higher general students, except for counterparts from top Chinese universities (e.g., 985 Project universities, Y. Liu et al., 2015). This advantageous position can be emphasized by Chinese higher vocational institutions in their recruitment efforts to attract
prospective students and their parents. Chinese higher vocational students maintained a lower level of knowledge, aligning with their counterparts in higher general universities. Consequently, Chinese educators and policymakers of higher vocational institutions need to supplement extensive knowledge of other countries’ languages, cultures, histories, and geographies. With China’s fruitful achievement of the Belt and Road Initiative, cross-cultural communication and collaboration have been created to integrate world-class industry into China’s higher vocational education.

Educators and policymakers need to comprehend the GC level of students in China’s higher vocational education and then design internationalized pedagogies to promote global knowledge, especially foreign language knowledge. Then, supplementary pedagogies are needed to equip higher vocational students with skills of cross-cultural communication and international workforce-ready competence, regardless of their disciplinary specialization (ACE, 2023a). Given the shared GC characteristics, educators and policymakers can employ pedagogical transferable and applicable approaches across 3-year college students and 4-year undergraduates to enhance their GC. Because of the relatively lower level of knowledge among 3-year college students compared to their vocational undergraduate peers, more consideration is called for enhancing the cultivation of global knowledge for the former group.

**Implications Based on Cultural Capital Theory**

The majority of predictors in Model 1 mirrored Bourdieu’s (1973, 1974, 1984, 1986) cultural capital theory. Students originating from lower cultural capital backgrounds experienced limited cultural capital resources, resulting in inferior outcomes in terms of GC. From the
cultural capital perspective, several practical implementations are suggested. Government and policymakers should continue to enhance the educational resources of rural cities, constructing cultural and artistic venues such as libraries and museums to enrich rural students’ cultural life beyond school.

Through high-quality and diverse educational resources, rural students can gain more opportunities to engage with international affairs, which can help them broaden their global perspectives, establish overseas networks, and enhance their GC. Moreover, educators and policymakers need to provide corresponding educational resource support for children with insufficient family resources, such as providing opportunities for cross-cultural communication through online platforms so students can experience cultures from different countries authentically.

Concerning the fields of studies in universities, educators and policymakers are recommended to diversify the curriculum provision for higher vocational students in other majors (e.g., arts, food and drugs, engineering) to encompass a broader range of globalization knowledge. Additionally, educators and policymakers need to optimize internationalization resources in normal high schools and high vocational schools, such as foreign teachers and internationalized curricula. Furthermore, the current globalization background calls for being multilingual (MOE, 2022b). Chinese higher vocational educators need to enact and support policies providing multilingual studies or even courses taught in a foreign language, which empowers students to be qualified with the competencies required for a highly interconnected world.
Implications Based on Internationalization Framework

This study provided evidence the internationalization framework was an effective pedagogy to promote Chinese higher vocational students’ GC. Internationalization should take precedence in an institution’s strategic plan. It necessitates a clear commitment from institutional leaders or, in systems with centralized governance, managers. The following section proposed precise internationalization strategies in the Chinese higher vocational system, encompassing provisions for iterative improvement, assessment, and implementation.

Implications Based on Internationalization Abroad

Internationalization abroad refers to the global mobility of both students and faculty. Concerning the limited opportunities for international mobility among Chinese higher vocational students, educators and policymakers need to provide them with more opportunities for global education. Funding and financial aid need to be structured to support learners across a broad spectrum of academic disciplines, with resources available to assist students in finding additional funding. Support for funding is available, or assistance with applications for external financing is provided for faculty and staff mobility as well.

It is crucial to establish partnerships with institutions, organizations, governments, and communities abroad. These partnerships include student exchanges, education abroad arrangements, and various forms of curricular collaboration (e.g., 2+2 programs, binational student cohorts traveling together, Collaborative Online International Learning - COIL classrooms). Additionally, they involve research collaborations, joint development, and capacity-building projects. Managing these relationships effectively requires robust long-distance
communication plans, adherence to legal compliance, in-depth understanding of the partner institution and nation, and adept navigation of diverse cultural, national, and academic structures (ACE, 2023a).

**Implications Based on Internationalization at Home Curriculum**

As the fundamental mission of higher education, student learning plays a pivotal role in internationalization. The curriculum serves as the central venue for this learning, catering to students of diverse backgrounds, goals, abilities, and institutional affiliations. An internationalized curriculum ensures all students, irrespective of their study focus, are exposed to international perspectives, fostering global and intercultural competence in their domestic learning environment. Workforce-ready GC is integrated into institution or system-wide learning outcomes and assessments. Cocurricular programs and activities provide high-quality learning experiences that complement course-based instruction, aligning with knowledge and skills essential for thriving in a diverse postgraduate environment. Chinese higher vocational educators and policymakers need to consider elements contributing to realizing this vision, grounded on the internationalization framework (ACE, 2023a).

**Curriculum.** As for internationalization curriculum, Chinese higher vocational education necessitates a concentration on multiple foreign language proficiencies, regional studies, and global issues. Additionally, intentional opportunities for self-reflection, intercultural interaction, and identity exploration should be incorporated. It is imperative that all students actively engage with global and national issues, including historical and contemporary aspects of racism, colonialism, and systemic injustice. Furthermore, curricula in each major, program of study,
discipline, or research area are suggested to be internationalized through the inclusion of global perspectives and the highlighting of global issues in the field. Educators are recommended to design these curricula with a comprehensive view by providing a global and historical context, along with resources and scholarship relevant to the field of study. At the same time, curricula need to incorporate innovative technological applications to ensure that students can adapt flexibly in future international work environments.

**Cocurriculum.** Educators and policymakers are recommended to design cocurricular programs and activities. The cocurriculum is suggested to assist students in tackling global issues, reinforcing the international and intercultural aspects of the curriculum, fostering discussion and interaction among learners from diverse backgrounds, and aiding the integration and success of a diverse range of students, faculty, and staff. Moreover, educators and policymakers need to augment online cocurricular activities, such as collaborative online international learning (COIL, ACE, 2023a). COIL initiative has experienced a surge in popularity during the COVID-19 pandemic. This phenomenon can be attributed to its potential for offering significant benefits, which may surpass those of costly traditional study abroad programs, thus presenting a compelling return on investment, particularly when implemented on a large scale.

**Extracurriculum.** Extracurricular activities involve global partnerships and networks. These relationships, crucial for comprehensive internationalization, bring together diverse viewpoints, resources, activities, and agendas to address and act on global issues. They offer global and intercultural experiences for faculty, staff, and students, expand research capacity, enhance the curriculum, generate revenue, diversify knowledge production, and elevate the
visibility of institutions domestically and globally. Based on the fruitful benefits, Chinese higher vocational educators and policymakers are recommended to collaborate with international organizations, governments, and individuals in the local community, which possess profound international or cross-cultural connections, backgrounds, and knowledge. They can serve as research partners for faculty and offer experiential learning opportunities for students. Individuals from these groups and organizations are welcomed to institution-hosted initiatives and invited to be partners in knowledge production, learner development, and civic engagement programs. Learners are provided with opportunities to engage with culturally diverse individuals and organizations in the local community through projects and partnerships that emphasize just reciprocity and collaborative development.

**Implications Based on Internationalization at Home Intergroup Contact**

The internationalization framework from ACE (2023a) does not include pedagogies on intergroup contact. Nevertheless, off-campus intergroup contact supplements the limited time spent in school, and all three forms of engaging with foreign cultures and people positively contribute to the attainment of GC. Chinese higher vocational educators and policymakers should initially strive to generate increased on-campus interaction opportunities and motivate students to extend these connections beyond school hours. Furthermore, the results of this study emphasize the pedagogical influence of mediated contact on GC.

Educators in higher vocational institutions should incorporate mediated contact strategies to encourage students to gain insights into outgroup members, thereby assisting in alleviating the anxiety associated with anticipating and engaging in interactions with the outgroup (Cao &
Meng, 2020a). In the implementation of this strategy, prioritization is recommended for students facing challenges in direct contact (e.g., pronounced intergroup avoidance or limited opportunities). This strategy can assist students with few or no direct contact experiences in acquiring global resources through mediated contact. Following the viewing, educators are advised to arrange group discussions and panel sessions to disseminate insights into the cultural norms and behavioral characteristics of the target outgroup acquired through media programs.

During the discussion process, educators should be mindful of their responsibilities in promoting active participation, facilitating sense-making activities, encouraging diverse perspectives on intercultural issues, and providing feedback and comments as needed. In essence, teachers should adopt a facilitative role, offering assistance and guidance, rather than adopting an instructive stance of dictating students’ actions and thoughts. Over time, university management may explore the establishment of face-to-face contact opportunities for these students. This is driven by the belief the enhanced competence and diminished anxiety resulting from the mediated contact strategy can facilitate the development of friendships and connections with culturally diverse peers in real-world contexts (Cao & Meng, 2020a; Q. Meng et al., 2018; Stephan, 2014).

**Strengths of the Study**

This study makes contributions to the existing literature on global competence (GC) education and educators. One notable strength of this study lies in its contribution to the limited body of research on GC among Chinese higher vocational students, accounting for approximately half of the entire population of the Chinese regular higher education system.
By investigating the GC level of higher vocational students in China, the study fills a significant gap in the existing quantitative research landscape. Also, it included comprehensive analyses and provided empirical evidence to enrich the understanding of Chinese higher vocational students’ GC.

Furthermore, this study investigated undergraduate students in Chinese higher vocational education who initiated their enrollment in 2021. It has made a significant contribution to offer substantial insights for researchers and educators to comprehend the characteristics and dynamics of this emerging population in the realm of Chinese higher vocational education.

In addition, this study derived the GC predictors from a systematic review of 26 international and Chinese manuscripts. The principal strength inherent in systematic reviews lies in their methodological rigor, grounded in exhaustive and systematic literature searches across diverse resources. This meticulous approach serves to mitigate selection bias by preemptively averting subjective influences in the study selection process. The systematic aggregation and scrutiny of pertinent studies afford systematic reviews the capacity to yield a comprehensive, unbiased synthesis of extant evidence, thereby augmenting the reliability of the findings of this study.

Owing to the absence of literature on higher vocational students’ GC, no instruments have been developed and empirically tested to measure the GC of this population. This study first provided empirical proof for the reliability and validity of the Global Competence Survey on Undergraduates (GCSU; Y. Liu & Wu, 2015). Reliable and valid scales are urgently needed in
the field of GC studies in the Chinese higher vocational system. The GCSU had previously been used for Chinese public undergraduates.

Through this study, the GC scale in GCSU was proved to be applicable to Chinese higher vocational students as well. Developed from GCSU, this study designed a survey measurement tool, the Global Competence Survey on Higher Vocational Students (GCSHVS). The usage of the GCSHVS measurement tool opens avenues for further research to explore both Chinese and international populations in higher vocational systems. Additionally, it facilitates an in-depth examination of the relationship between students’ GC and the cultural capital theory and internationalization framework.

Another strength of this study pertains to the survey administration methodology. The usage of an online survey approach afforded participants the opportunity to voluntarily engage in the research, enabling them to complete the questionnaire at their convenience. The implementation of anonymous responses further incentivized participants to provide reliable and valid evidence.

The other strength is related to the number of participants surveyed in this study. A total of 1,504 valid responses was collected, yielding an impressive response rate of 83.56%. The substantial number of participants and the high response rate enhance the reliability and validity of the study’s findings. Moreover, this study used hierarchical multiple regression to investigate the effects of two theoretical frameworks (i.e., cultural capital background and international activities) on three subscales of GC. Previously, researchers seldom paid attention to the impacts of internationalization experiences on the dimensions of GC. Cultural capital theory guided this
research to inform researchers and educators to comprehend the influence of cultural capital background on the development of GC in Chinese higher vocational students, as approximately 70% of them originated from rural areas (MOE, 2022b). Grounded upon the western theoretical framework of internationalization (ACE, 2023a), this study offered evidence internationalization-related pedagogies were pragmatic and efficacious for GC acquisition among Chinese higher vocational students.

Last but not least, this study considers social life as a pivotal component in fostering Internalization accumulation. The results of this study provide strong evidence that intergroup contact off-campus significantly enhances the GC of higher vocational students, especially mediated contact. Therefore, this study calls for more evidence from worldwide samples to shed light on the impact of intergroup contact off-campus on students’ GC, designated as Internationalization at home intergroup contact.

**Study Limitations and Future Research Directions**

This study has several limitations. First, this study recruited purposively participants from only one of 32 higher vocational universities in China, which instilled a plethora of internationalization pedagogies consistent with the internationalization framework (ACE, 2023a). Although the sample from this institution may not be representative of all students at Chinese vocational universities, the sample still has many characteristics like the larger population. To enhance the generalizability of findings, future research endeavors are recommended to collect data from both public and private vocational universities across various
geographical regions in China, aiming to capture a more comprehensive representation of the entire student body in Chinese higher vocational education.

Furthermore, the methodology of this study involved the usage of findings derived from a systematic review. These were then used in the formulation of 15 items distributed across three scales representing internationalization in curriculum, cocurriculum, and extracurriculum contexts. Despite the 2-point Likert scale employed for the three author-designed scales, the obtained Cronbach’s coefficient indicated a remarkably high level of reliability (≥ .75). This underscores the robust consistency of the items used to evaluate the internationalization-at-home curriculum in the context of Chinese higher vocational education. Future studies are suggested to design the scales of internationalization curriculum/cocurriculum/extracurriculum through four or more Likert scale styles.

Moreover, the survey instrument in this study was a one-time depiction and its findings could not explain the causation between cultural capital/internationalization factors and GC. Future studies are called to conduct a longitudinal investigation to fill this research gap. Additionally, this study aimed to examine the relationship between GC and GPA/English proficiency among Chinese higher vocational students. However, two-thirds of participants provided uncertain responses regarding their scores, resulting in the inability to conduct a meaningful Hierarchical Multiple Regression (HMR) analysis with the intended 19 predictors. Subsequent research endeavors are recommended to further investigate the association between students’ GC and their academic/English proficiency levels in the Chinese higher vocational system.
In contrast to previous studies, this study revealed first-generation students exhibited greater levels of global competence compared to their non-first-generation counterparts in Chinese higher vocational education. Future research is suggested to investigate the factors influencing the development of GC in first-generation students. This study examined the impact of traveling abroad or not on GC. Future research could investigate the relationship between the purposes and duration of overseas experiences and GC acquisition among higher vocational students.

Most participants reported no involvement in internationalization curriculum, cocurriculum, or extracurriculum activities, leading to reduced variability. To enhance the comprehensiveness of insights into the role of the internationalization curriculum, future studies are advised to consider a sample with a broader spectrum of participation levels in internationalization-related courses. This study only characterizes mediated contact as exposure to foreign movies and TV series facilitated by prevalent media platforms, such as television, the Internet, and cell phones. However, new genres of mediated contact pop up, such as social media. As stated by Datareportal (2023), over 4.8 billion individuals globally use social media for sharing emotions, ideas, and content, and engaging in interpersonal communication and obtaining information through technological means. Social media made positive contributions to higher education (Gencel et al., 2023). Future studies can regard social media as a mediated contact and investigate its impact on GC attain.
Conclusion

Along with the Belt and Road Initiative (BRI) in China, higher vocational education bears the responsibility of nurturing highly skilled technician talents who possess the capability to communicate and collaborate effectively with individuals or groups from foreign backgrounds (MOE, 2022b). Inspired by Butler’s (1978) competence-based education, this study seeks for global competence-based education to support students’ GC development with the goal of global civic and international employment.

Previous studies have investigated students’ GC at higher general universities. However, little research has addressed students’ GC assessment at higher vocational institutions. To fill the gap, this dissertation study delved into global competence-based pedagogies guided by the internationalization framework (ACE, 2023a). Depending on the evidence indicating the majority of higher vocational students come from families with low social backgrounds (Jia & Ericson, 2017), this study employed cultural capital as its second theoretical framework. The aim was to explore the influence of cultural capital background on the GC achievement of Chinese higher vocational students. To derive the factors under the umbrella of two theoretical frameworks, this study first conducted a systematic review and selected 26 manuscripts from the last decade (2013–2022).

Based on the results from the systematic review, the research applied the Global Competence Survey on Undergraduates (GCSU; Y. Liu & Wu, 2015) and developed the Global Competence Survey on Higher Vocational Students (GCSHVS) to delve into the characteristics
of Chinese higher vocational students’ GC, evaluating its four dimensions. The overall GC level of the 1,504 participants resembled students in higher general universities overall.

In the four dimensions, vocational students exhibited the highest scores in values and the lowest in skills, with knowledge and attitudes falling in intermediate positions. This implies educators can refer to the GC-related pedagogies employed in higher general education when designing higher vocational GC curricula. Simultaneously, greater emphasis should be placed on developing global knowledge and skills for higher vocational students in China. Furthermore, newcomers (i.e., 4-year undergraduates) in the Chinese higher vocational system demonstrated comparable performance in overall GC, knowledge, skills, attitudes, and values to their 3-year college peers. This indicates educators can apply sharable GC pedagogies to both 3-year college students and 4-year undergraduates.

This study then used GCSHVS to investigate the relationship between students’ GC acquisition and 19 predictors derived from the systematic review, grounded on cultural capital theory and internationalization framework (ACE, 2023a). Under the cultural capital theory, results demonstrated students with better family and educational backgrounds obtain more educational opportunities and further exhibit higher global competence (GC) achievement. In detail, female higher vocational students demonstrated superior overall GC compared to their male counterparts, particularly in the areas of GC attitudes and values. Urban students exhibited higher levels of overall GC, knowledge, skills, and attitudes achievement in comparison to their rural counterparts. Higher-income families among Chinese higher vocational students were associated with higher overall GC, skills, and attitudes acquisition, in contrast to students from
lower-income families. Students enrolled in Nursing and Health or Economics and Management majors demonstrate higher GC knowledge than those in other fields of study.

Participants with planned for further study demonstrated higher GC attitudes and values, and those with intentions to study abroad reported better GC skills. Noteworthily, first-generation students reported slightly higher overall GC, knowledge, skills, and attitudes achievements compared to their non-first-generation peers. The findings align with Bourdieu’s (1973, 1974, 1984, 1986) cultural capital theory, suggesting students with a higher cultural capital background tend to gain greater educational opportunities and achieve more favorable outcomes in terms of GC. Universities serve as ideal environments where students accumulate cultural capital. It is crucial for educators and stakeholders to consider students’ cultural capital background when developing global competence-based pedagogies.

In the framework of internationalization abroad, the results of this study partially resonate with the notion pedagogies emphasizing internationalization abroad contribute to the development of GC among Chinese higher vocational students. No significant relationship was found between students’ overseas mobility and GC achievement but faculty international mobility positively influenced both overall GC and values attainment. The limited availability of overseas opportunities among students constrains the impact of abroad experiences on GC attainment. Therefore, educators and stakeholders may expand overseas mobility for both students and faculty. Meanwhile, educators and stakeholders need to adopt pedagogies focused on internationalization at home as a feasible alternative.
The findings of this study provided evidence the internationalization at home curriculum played a fundamental role in fostering globally competent students in China’s higher vocational system. The internationalization curriculum, involving extensive English or foreign language learning and preparation for international employability, significantly contributed to the development of overall GC and its four dimensions. Moreover, the internationalization cocurriculum, including lectures by foreign experts and in-person or online interactions with foreigners in courses or campus activities, primarily enhanced GC skills.

The internationalization extracurriculum, encompassing intercultural training, internships, and volunteering in international events, positively impacted overall GC, knowledge, attitudes, and values, although it showed no significant impact on skills. However, the study’s sample reported low participation in internationalization courses. As a result, the primary focus for Chinese higher vocational educators and policymakers should be to integrate international perspectives across diverse curriculum genres, fostering global/intercultural and workforce-ready competence for all students, regardless of their specialized discipline. Additionally, educators must actively promote campus-wide global engagement and encourage full student participation in internationalization curriculum.

Beyond the internationalization framework (ACE, 2023a), the findings shed light off-campus intergroup contact can serve as an effective pedagogy for educators to enhance the development of GC in higher vocational education students and supplementing the limited time spent in campus. In-person and online contact (outside of campus) with foreign individuals facilitated the growth of overall GC and skills. However, data represented a low participation in
in-person and online contact with foreign people in their social lives. Notably, mediated contact, such as engagement with foreign films or TV series, made the biggest unique significant contribution to the overall GC score and its four subdimensions among Chinese higher vocational students. This implies mediated contact can offer unlimited opportunities for students to acquire global resources, especially for students with few or no social connections with foreign people in social lives.

Overall, the findings of this study can add new knowledge to the literature on global competence-based pedagogies among Chinese higher vocational students by uncovering functioning mechanisms of cultural capital theory and internationalization framework. All students, even those with a lower capital background or few opportunities for international mobility, can reap the potential benefits of GC attainment through internationalization pedagogies.
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Appendices

Appendix A. A Survey on Global Competence of Students in Chinese Higher Vocational Education

Dear Participants,

You are invited to participate in a survey on the global competence of students in Chinese higher vocational education. Your participation is strictly voluntary and anonymous.

The survey is mainly to investigate the current situation of students’ global competence in a Chinese higher vocational education. Your answers of this survey will help us better design vocational teaching and curriculum. Please answer each question completely. It takes you about 5 minutes. The data and survey results are for research purposes only and will not have any adverse effects on you. Your information will be kept confidential.

Thank you for your support!

ADULT INFORMED CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Influences of Cultural Capital and Internationalization on Global Competence: Evidence from Higher Vocational Education in China

Members of the Research Team

Principal Investigator: Meghan E. Cosier, Ph.D. Office: (714)744-7921
Researcher: Yiying Teng, MA Office: (657)562-5938; (86)-13564595590

Key Information
You are being asked to take part in a research study. Research studies include only people who choose to take part. You should take your time deciding whether you want to participate.

If you agree to participate in this study, this research will involve:
• Individuals who are 18 years or older, students in higher vocational education in China
• Procedures will include the administration of one web-based survey
• Completion of this survey will take approximately 5 minutes
• Risks that do not exceed what would typically be encountered in daily life.
Invitation

You are invited to take part in this research study. The information in this form is meant to help you decide whether to participate. If you have any questions, please ask.

Why are you being asked to be in this research study?

You are being asked to be in this study because you are a student at a vocational university in Shanghai, China. You must be 18 years of age or older to participate.

What is the reason for doing this research study?

Two principal orientations of global competence were developed based on these four dimensions (knowledge, skill, attitude, and value) over the past half-century: employability for a life-long career and responsibility for social sustainability/equity/inclusion. This study defines that the career and civic orientations of global competence are indispensable. Both are interwoven into the lives of students throughout their postsecondary education. In previous studies, global competence was significantly influenced by social identities, reflected in social and cultural capital predictors. Moreover, global competence was one of students’ learning outcomes of many internationalization efforts in higher education institutions. However, little research has addressed the global competence of students in Chinese higher vocational education, which accounted for nearly 40% of the whole higher education population in 2021. To fill the gap, this research is designed to (a) identify 3-year college and 4-year bachelor students’ GC characteristics and examine global competence differences across different characteristic groupings and (b) investigate the relationships between global competence and students’ social identities, student/faculty foreign mobility, and internationalized curricula.

What will be done during this research study?

You will be asked to complete one survey using an internet-based questionnaire that asks questions about personal information, family background, global engagement, foreign acquaintances, internationalized curricula, and global competence. The survey will take approximately 5 minutes to complete, and you may complete them on your phone, tablet, or computer.

What are the possible risks of being in this research study?

There are no known risks to you for being in this research study.

What are the possible benefits to you?
You are not expected to get any direct benefit from being in this study.

**What are the possible benefits to other people?**

The benefits to science and/or society may include a better understanding of the characteristics of the global competence of students in Chinese higher vocational education and the relationships between cultural capital, internationalization, and intercultural competence.

**What are the alternatives to being in this research study?**

Instead of being in this research study, you can choose not to participate.

**What will participating in this research study cost you?**

There is no cost to you to be in this research study.

**Will you be compensated for being in this research study?**

You will not be compensated for your participation in this research study.

**What should you do if you have a problem during this research study?**

Your welfare is the primary concern of every member of the research team. If you have a problem as a direct result of being in this study, you should immediately contact one of the people listed at the beginning of this consent form.

**How will information about you be protected?**

Reasonable steps will be taken to protect your privacy and the confidentiality of your study data. The data will be stored electronically in a Chapman cloud storage provider and will only be seen by the research team during the study. The data will be destroyed after publication. The only people who will have access to your research records are the research team members, the Institutional Review Board (IRB), and any other person, agency, or sponsor as required by law. Information from this study may be published in scientific journals or presented at scientific meetings, but the data will be reported as a group or summarized data, and your identity will be kept strictly confidential.

**What are your rights as a research participant?**

You may ask any questions about this research and have those questions answered before agreeing
to participate in the study or during the study. For study-related questions, please contact the investigator(s) listed at the beginning of this form. For questions concerning your rights or complaints about the research, contact the Institutional Review Board (IRB) at (714) 628-2833 or irb@chapman.edu.

What will happen if you decide not to be in this research study or decide to stop participating once you start?

You can decide not to be in this research study, or you can stop being in this research study (i.e., “withdraw”) at any time before, during, or after the research begins for any reason. Deciding not to be in this research study or deciding to withdraw will not affect your relationship with the investigator, with Z university, or with Chapman University. You will not lose any benefits to which you are entitled.

1. I have read the informed consent form. I hereby grant permission to use the information I provide as data in this research project.
   ○ Yes
   ○ No (To the end of the survey)

   **Personal Information**

2. Age [Single Choice]
   ○ Under 18 (To the end of the survey) ○ 18 ○ 19 ○ 20 ○ 21 ○ 22 ○ 23 and older

3. Are you currently studying in China’s higher vocational education? [Single Choice]
   ○ Yes
   ○ No (To the end of the survey)

4. Gender [Single Choice]
   ○ Male ○ Female

   **Family Background**

5. Place of origin: [Single Choice]
   ○ City
   ○ Rural
6. Your family monthly income (RMB): [Single Choice]
   ○ Lower than 1,000
   ○ 1,000
   ○ 1,000~2,999
   ○ 3,000~5,999
   ○ 6,000~9,999
   ○ 10,000~14,999
   ○ 15,000~19,999
   ○ 20,000~29,999
   ○ More than 30,000

7. Your father’s highest degree: [Single Choice]
   ○ Lower than middle school
   ○ Middle school
   ○ High school
   ○ Junior college
   ○ Bachelor
   ○ Master
   ○ Doctor

8. Your mother’s highest degree: [Single Choice]
   ○ Lower than middle school
   ○ Middle school
   ○ High school
   ○ Junior college
   ○ Bachelor
○ Master
○ Doctor

Educational Background

9. Your degree: [Single Choice]
   ○ Three-year college degree
   ○ Four-year bachelor degree

10. Your academic level: [Single Choice]
    ○ Freshman
    ○ Sophomore
    ○ Junior
    ○ Senior

11. You were a student in [Single Choice]
    ○ Leading high school
    ○ Normal high school
    ○ High vocational school

12. Your college [Single Choice]
    ○ College of Architecture and Engineering
    ○ College of Economics and Management
    ○ College of Foreign Languages
    ○ College of Nursing and Health
    ○ College of Intelligent and Manufacturing
    ○ College of Information Engineering
    ○ College of Food and Drug
    ○ College of Art
13. What is the level of your current overall GPA? [Single Choice]
   ○ < 2.00
   ○ 2.00–2.49
   ○ 2.50–2.99
   ○ 3.00–3.49
   ○ ≥ 3.5

**Cultural Reproduction**

14. Your highest English Level: [Single Choice]
   ○ I have never passed any college English test.
   ○ CET 3
   ○ CET 4
   ○ CET 6
   ○ Higher than CET 6

15. Have you ever learned a second foreign language other than English? [Single Choice]
   ○ Yes
   ○ No

16. Employment expectation: [Single Choice]
   ○ Public sectors (e.g., academics, government agencies, state-owned enterprises)
   ○ Non-public sectors (e.g., jobs other than academics, government agencies, state-owned enterprises)

17. Have you ever planned to pursue further study after graduation (for example: bachelor, master, doctorate)? [Single Choice]
   ○ Yes
   ○ No
18. Have you ever planned to pursue overseas study after graduation (for example: bachelor, master, doctorate)? [Single Choice]
   ○ Yes
   ○ No

**International Mobility**

19. Have you been abroad? [Single Choice]
   ○ Yes
   ○ No

20. Are there any professors or faculty that you know have experience of academic international mobility (e.g., studying or attending training abroad)? [Single Choice]
   ○ Yes
   ○ No

**Self-report Global Competence Assessment**

21. World Knowledge

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a basic understanding of the geography of other countries, including climate, topography, resource distribution, etc.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have the historical knowledge of other countries, including the</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
historical development, transformation/revolution and significant international historical events of major countries in the world.

Other than my own country, I know about the political and economic systems of at least one other country.

Other than my own country, I know about the language, cultural norms, religions, beliefs, and customs of at least one.

22. Understanding Globalization

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I understand the concept of globalization and its development trends.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I understand the effect of globalization on a country’s development, individual learning, working and lifestyles.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
I understand the roles of international organizations and institutions in today’s world and society. | ○ | ○ | ○ | ○ | ○ | ○

I often follow current global affairs and significant world events. | ○ | ○ | ○ | ○ | ○ | ○

<table>
<thead>
<tr>
<th>23. Use of Tools</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can fluently use at least one foreign language, including listening, speaking, reading, and writing</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I can easily use MS Office, PDF Reader, and other common international software.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I can easily browse foreign language websites to obtain knowledge and the requisite information.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I can easily comprehend foreign literature.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I can communicate with foreigners for more than 1 hour.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
### 24. Cross-Cultural Communication

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can analyze and evaluate issues from the perspective of a foreign culture.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have made efforts to understand foreigners so that we can work or live together.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I can be aware of cultural differences in my interactions with people from different cultures.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am able to quickly communicate in common topics in my interactions with people from different cultures.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I used to successfully participate in project or work with people from other countries.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I have the ability to adjust to language and communication outside of my own culture.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I can learn, work, and live outside of my own culture.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
### 25. Intent to Interact

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would like to expose myself to other cultures and customs rather than avoid them.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I would like to experience life and culture in other countries.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I would like to take the risk to experience cross-cultural learning and personal development (such as through short-term exchange program).</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I would like to take the risk to experience cross-cultural learning and personal development (such as through overseas study and work).</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am willing to communicate and study with foreigners, and set up some connections with them.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

### 26. Open Attitude

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
</table>
When communicating with foreigners, I try to understand their cultures and values.

○ ○ ○ ○ ○ ○

When communicating with foreigners, I try to respect their cultures and values.

○ ○ ○ ○ ○ ○

When communicating with foreigners, I try to appreciate their cultures and values.

○ ○ ○ ○ ○ ○

27. Values

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I identify with my own country’s culture and values.</td>
<td>○ ○ ○ ○ ○ ○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe that my worldview is one of many equally valid worldviews.</td>
<td>○ ○ ○ ○ ○ ○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I consider myself valuable to my country and society.</td>
<td>○ ○ ○ ○ ○ ○</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Internationalization at Home Curriculum

### 28. Internationalization Curriculum

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you taken any courses related to your field of study taught in foreign languages (e.g., English, Japanese, Spanish, and French)?</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Have you read any English literature or literature in other foreign languages related to your field of study?</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Have you used any textbooks written in English or other foreign languages besides Foreign language courses?</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Have you had any courses related to international employment?</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Have you taken any courses related to international vocational skills training?</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>
### 29. Internationalization Co-curriculum

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>In class, have you contacted any foreign tutors/professors in person?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>In class, have you contacted any foreign tutors/professors online?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Have you had any online courses in which you collaborated/discussed with foreign students?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Have you contacted any foreigners through campus activities?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Have you participated in international activities (e.g., foreign language festivals, lectures, and discussions)?</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

### 30. Internationalization Extracurriculum

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>In your university, are there any curricula offering joint/dual diplomas or credit transfers from different countries?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Does your university provide any school-enterprise cooperation or internship opportunities with multinational corporations?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Have you participated in any school-enterprise cooperation program or internship at multinational corporations?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Have you ever volunteered for an international event?</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Do you know if your university is recruiting students, researchers, and developers of foreign educational programs and companies to develop new programs?</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
### Internationalization at Home Intergroup Contact

#### 31. Direct contact with foreigners

<table>
<thead>
<tr>
<th>How many foreign friends do you have in real life?</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 and more</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

#### 32. Direct contact with foreigners

<table>
<thead>
<tr>
<th>How much do you have face-to-face chat with foreigners?</th>
<th>Never or almost never</th>
<th>Several times a year</th>
<th>Several times a season</th>
<th>Several times a month</th>
<th>Once a week or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How much do you do social things with foreigners?</th>
<th>None</th>
<th>1~2 days</th>
<th>3~4 days</th>
<th>5~6 days</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
</tbody>
</table>

#### 33. Online contact with foreigners

<table>
<thead>
<tr>
<th>The number of days you have been online to contact with foreign people for the past week:</th>
<th>None</th>
<th>1~2 days</th>
<th>3~4 days</th>
<th>5~6 days</th>
<th>Every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td></td>
</tr>
</tbody>
</table>
34. Online contact with foreigners

<table>
<thead>
<tr>
<th>Duration of Online Contact</th>
<th>less than 15 min</th>
<th>between 15 min and 1 h</th>
<th>1–2 h</th>
<th>3–4 h</th>
<th>more than 4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekdays</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Weekends</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

35. Mediated contact

<table>
<thead>
<tr>
<th>How many foreign TV series or movies have you viewed?</th>
<th>0</th>
<th>1–9</th>
<th>10–19</th>
<th>20–29</th>
<th>30 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

36. Mediated contact

<table>
<thead>
<tr>
<th>How often do you view foreign TV series or movies?</th>
<th>Never or almost never</th>
<th>Several times a year</th>
<th>Several times a season</th>
<th>Several times a month</th>
<th>Once a week or more</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

37. Mediated contact

<table>
<thead>
<tr>
<th>How much do I like viewing foreign TV series or movies?</th>
<th>not at all</th>
<th>not so much</th>
<th>neutral</th>
<th>much</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

This is the end of the survey. Thanks again for your support.
Appendix B. 高职学生国际胜任力调查问卷

亲爱的同学:
您好！
这份问卷是用来了解当前高职学生的国际胜任力的基本情况。本研究认为国际胜任力覆盖国际职业能力和全球公民责任感。国际胜任力有助于学生的国际就业能力发展，同时促进全球公民责任和社会可持续发展意识。您的参与将有助于我们国际职业教学与课程的改革。因此，您的每一个回答对本研究都很重要，请完整回答每道题目。您不需要填写姓名，其数据和调查结果仅供研究用，不会对您造成任何不利的影响。感谢您的支持！

知情同意书

研究课题：文化资本与国际化对中国高职学生国际胜任力的影响

研究小组成员
首席调查员：Meghan E. Cosier，博士   办公室：(714)744-7921（美国）
研究员：滕艺莹，文学硕士  联系电话：(657)562-5938（美国）
(86)13564595590（中国）

主要信息

我们邀请您参加这项研究。研究只包括自愿参加的人。您可以考虑然后决定您是否要参加。

如果您同意参加这项研究，请悉知，这项研究将涉及：
- 18 岁或以上的中国高职大学生
- 研究包括一份网络问卷调查
- 完成这份问卷调查将花费大约 5 分钟；
- 风险不超过日常生活中通常会遇到的风险

邀请

我们邀请您参加这项研究。本表中的信息是为了帮助您决定是否参加。如果您有任何问题，请提出。

为什么邀请您参加这项研究？

您被邀请参加这项研究是因为您是中国上海一所高职的学生。您必须年满 18 岁才能参加。
做这项研究的目的是什么？

在过去的半个世纪里，国际胜任力的两个主要方向是基于这四个维度（知识、技能、态度和价值）发展起来的：终身就业能力和社会可持续性/公平/包容的责任感。本研究认为在整个高等教育过程中，职业能力和公民责任感是培养具备国际胜任力人才的必要品质。在前人的研究中，国际胜任力受到个人社会身份的影响，包括社会和文化资本因素。此外，国际胜任力是高校学生在许多国际化努力下的学习成果之一。根据2021年中国教育部数据统计显示，中国高职学生占高等教育总人数的40%左右。然而，现今几乎没有人研究涉及中国高等职业学生的国际胜任力。为了填补这些研究空白，本研究旨在：（1）确定三年制高职专科生和四年制高职本科生的国际胜任力的特征，并考察高职专科生和本科生的全球能力差异；（2）调查全球能力与学生的社会身份、学生/教师的海外交流以及国际化课程之间的关系。

这项研究包括什么？

您将被要求完成一项网络问卷调查，询问有关个人信息、家庭背景、海外经历、国际友人、国际化课程和国际胜任力的相关问题。整个问卷将花费大约5分钟来完成，您可以在手机、平板电脑或电脑上完成。

参加这项研究可能有什么风险？

参加这项研究对您没有已知的任何风险。

参加这项研究可能有什么好处？

您不会从这项研究中得到任何直接的好处。

参加这项研究对其他人可能有什么好处？

对科学和/或社会的好处可能包括更好地了解中国高职学生国际胜任力的特点，以及个人社会身份、国际化课程和国际胜任力之间的关系。此研究将有助于高职教学与课程的改革。

参加这项研究的替代方案是什么？

您可以选择不参加这项研究。

参加这项研究您需要付出多少费用？

您参加这项研究不需要任何费用。

参加这项研究是否会得到补偿？


您参加这项研究不会得到任何补偿。

如果在这项研究中遇到问题，应该怎么做？

研究小组成员将密切关注每个参与者的情况。如果参加本研究会产生任何后果，请您立即与本同意书开头所列的任一研究人员联系。

您的信息将被如何保护？

我们将采取合理的措施来确保您的隐私和研究数据的保密性。数据将以电子数据的方式储存在查普曼大学提供的网盘中，只有研究小组可以看到。所有数据将在论文发表后销毁。

只有研究小组成员、机构审查委员会（IRB）以及法律规定的其他人、机构或赞助人可以查阅您的研究参与记录。本研究的信息可能会在科学杂志上发表或在学术会议上汇报，但数据将作为一个整体或汇总数据进行汇报，您的身份将被严格保密。

作为研究参与者，您有什么权利？

您可以提出关于这项研究的任何问题，并在同意参加研究之前或在研究期间得到这些问题的回答。有关研究的问题，请联系本表开头所列的调查员。有关您的权利问题或对研究的投诉，请联系机构审查委员会（IRB），电话：（714）628-2833 或 irb@chapman.edu。

如果您决定不参加这项研究，或在研究开始后决定停止参与，会发生什么？

您可以不参加这项研究，也可以在研究开始之前、期间或之后的任何时候以任何理由停止参加这项研究（即“退出”）。决定不参加本研究或决定退出不会影响您与研究者、Z大学或查普曼大学的关系。您不会失去您有权享受的任何权益。

1. 我已阅读了”知情同意书”。在此，我同意在本研究项目中使用我提供的信息作为数据，且可以随时无理由退出。[单选题]
   ○同意参加问卷调查
   ○不同意参加问卷调查（请跳至第问卷末尾，提交答卷）

个人信息

2. 您的年龄： [单选题]
   ○未满 18 岁（请跳至第问卷末尾，提交答卷）
3. 您现在是中国高职大学生吗（不包括：已经毕业学生，休学等）？ [单选题] *
   ○是
   ○否（请跳至第问卷末尾，提交答卷）

4. 您的性别： [单选题]
   ○男
   ○女

家庭背景

5. 您的家庭所在地： [单选题] *
   ○城镇
   ○农村

6. 您的家庭月总收入大致为： [单选题]
   ○低于 1,000
   ○1,000~2,999
   ○3,000~5,999
   ○6,000~9,999
   ○10,000~14,999
   ○15,000~19,999
7. 您父亲所受最高教育程度是：[单选题]
   ○ 初中以下
   ○ 初中
   ○ 高中或中专
   ○ 大专或本科
   ○ 硕士
   ○ 博士及以上

8. 您母亲所受最高教育程度是：[单选题]
   ○ 初中以下
   ○ 初中
   ○ 高中或中专
   ○ 大专或本科
   ○ 硕士
   ○ 博士及以上

9. 您现在是高职的 [单选题]
   ○ 大专生（3年制）
   ○ 本科生（4年制）

10. 您的所在年级：[单选题]
    ○ 大一
    ○ 大二
11. 您的高中学习经历是：【单选题】

○ 重点高中
○ 普通高中
○ 三校生

12. 您所学的专业属于：【单选题】

○ 护理与健康学院
○ 建筑工程学院
○ 经济与管理学院
○ 食品药品学院
○ 外语学院
○ 信息工程学院
○ 艺术学院
○ 智能制造学院
○ 其他

13. 您目前的平均绩点是多少？【单选题】

○ 2.00 以下
○ 2.00~2.49
○ 2.50~2.99
○ 3.00~3.49
○ 3.50 及以上
○ 不确定

文化再制
14. 您通过的最高英语等级是：[单选题]
○大学英语三级以下
○大学英语三级
○大学英语四级
○大学英语六级
○大学英语六级以上
○未参加过任何大学英语等级考试

15. 您学过除英语以外的第二外语吗（例如：日语，西班牙语，法语，德语等）？[单选题]
○是
○否

16. 您的就业期望：[单选题]
○公共部门（例如：学术、政府机关、国企）
○非公共部门（除”学术、政府机关、国企”以外的其他工作）

17. 您是否计划在毕业后继续深造学习（例如：专升本，硕士等）？[单选题]
○是
○否

18. 您是否计划在毕业后继续出国深造学习（例如：海外本科，海外硕士等）？[单选题]
○是
○否

海外交流

19. 您是否有出国经历：[单选题]
○是
20. 在您就读的大学里，您认识的教师、辅导员或者其他在校工作人员中是否有赴海外学术交流经历（例如，在国外学习或参加培训）？[单选题]

○是
○否

国际胜任力自评

21. 世界知识[量表题]

<table>
<thead>
<tr>
<th></th>
<th>非常不符合</th>
<th>不符合</th>
<th>不确定</th>
<th>符合</th>
<th>非常符合</th>
</tr>
</thead>
<tbody>
<tr>
<td>我了解其他国家地理的基本知识，包括气候、地形、资源分布等基本知识。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>我了解其他国家的历史知识，包括世界上主要国家的历史发展与变革、国际重大历史事件等。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>我熟悉除本国以外的至少一个国家的政治、经济和法律制度。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>我熟悉除本国以外的至少一个国家的语言、文化、宗教和风俗习惯。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

22. 全球化理解[量表题]

<table>
<thead>
<tr>
<th></th>
<th>非常不符合</th>
<th>不符合</th>
<th>不确定</th>
<th>符合</th>
<th>非常符合</th>
</tr>
</thead>
<tbody>
<tr>
<td>我理解全球化的含义及其发展趋势。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
我理解全球化的影响，包括对国家发展以及个人在学习、工作和生活等方面的影响。 | 〇 | 〇 | 〇 | 〇 | 〇 |
我理解国际组织和机构在当今社会发挥的作用。 | 〇 | 〇 | 〇 | 〇 | 〇 |
我经常关注当今国际时事及重大国际事件。 | 〇 | 〇 | 〇 | 〇 | 〇 |

23. 使用工具 [量表题]

<table>
<thead>
<tr>
<th></th>
<th>非常不符合</th>
<th>不符合</th>
<th>不确定</th>
<th>符合</th>
<th>非常符合</th>
</tr>
</thead>
</table>
我能自如地使用至少一门外语，包括听、说、读、写。 | 〇 | 〇 | 〇 | 〇 | 〇 |
我能轻松地使用 MS Office, PDF Reader 等国际通用软件。 | 〇 | 〇 | 〇 | 〇 | 〇 |
我能顺利地浏览外文网站以获取所需的知识和信息。 | 〇 | 〇 | 〇 | 〇 | 〇 |
我能比较流畅地阅读外文文献。 | 〇 | 〇 | 〇 | 〇 | 〇 |
在与外国人交流时，我能自如应对 1 个小时以上。 | 〇 | 〇 | 〇 | 〇 | 〇 |

24. 跨文化交际 [量表题]

<table>
<thead>
<tr>
<th></th>
<th>非常不符合</th>
<th>不符合</th>
<th>不确定</th>
<th>符合</th>
<th>非常符合</th>
</tr>
</thead>
</table>
我能用另外一国的文化视角来分析和评价问题。 | 〇 | 〇 | 〇 | 〇 | 〇 |
我试着了解外国人，以便我们能一起工作或生活。 | 〇 | 〇 | 〇 | 〇 | 〇

在与外国人共同学习和交往的过程中，我能注意到文化的差异。 | 〇 | 〇 | 〇 | 〇 | 〇

在外国人进行沟通和交流时，我能迅速地找到与别人的共同话题。 | 〇 | 〇 | 〇 | 〇 | 〇

我曾成功与外国人一起参加项目或工作。 | 〇 | 〇 | 〇 | 〇 | 〇

在外国文化情境中，我能够灵活调整和改变自己的用语、沟通方式和态度。 | 〇 | 〇 | 〇 | 〇 | 〇

我能在外国文化的环境中自如地学习、工作和生活。 | 〇 | 〇 | 〇 | 〇 | 〇

25. 国际化意识【量表题】

<table>
<thead>
<tr>
<th></th>
<th>非常不符合</th>
<th>不符合</th>
<th>不确定</th>
<th>符合</th>
<th>非常符合</th>
</tr>
</thead>
<tbody>
<tr>
<td>我愿意与外国人接触，而不是回避他们。</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>我愿意走出自己的文化，体验其他国家的文化和生活。</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>我愿意承担一定风险去尝试跨文化的学习经历，如短期交换生。</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>我愿意承担一定风险去追求跨文化的学习和个人发展，如留学和工作。</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
<tr>
<td>我愿意与外国人交流和学习，并建立一定的联系。</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
<td>〇</td>
</tr>
</tbody>
</table>
26. 国际化态度 [量表题]

<table>
<thead>
<tr>
<th></th>
<th>非常不符</th>
<th>不 符 合</th>
<th>不 确 定</th>
<th>符 合</th>
<th>非常 符 合</th>
</tr>
</thead>
<tbody>
<tr>
<td>与外国人沟通时，我愿意尽力去理解外国文化的价值观。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>与外国人沟通时，我尊重对方国家的价值观。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>与外国人沟通时，我愿意尝试去欣赏对方的文化和价值。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

27. 价值观认同 [量表题]

<table>
<thead>
<tr>
<th></th>
<th>非常不符</th>
<th>不 符 合</th>
<th>不 确 定</th>
<th>符 合</th>
<th>非常 符 合</th>
</tr>
</thead>
<tbody>
<tr>
<td>我认同本国的文化和价值观。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>我认为我的世界观是许多同样正确的世界观之一。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>我认为自己是个对社会和国家有价值的人。</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

28. 国际化课程 [量表题]

<table>
<thead>
<tr>
<th></th>
<th>是</th>
<th>否</th>
</tr>
</thead>
<tbody>
<tr>
<td>您修过与您专业有关的外语课程吗（例如：英语，日语，西班牙语，法语等）？</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>您是否用英语或其他外语阅读过与您所学专业相关的文献资料？</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>除了英语/外语课之外，你是否使用过英语/外语编写的教科书？</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

在地国际化课程
您是否参与过与国际就业有关的课程？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

您是否参与过与国际技能培训有关的课程（例如：国际技能考证培训）？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

29. 国际化辅助课程【量表题】

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

在课堂上，您面对面接触过外教（外籍教师或教授）吗？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

在课堂上，您是否在线接触外教（外籍教师或教授）？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

您有参加过任何在线课程，其中包含与外籍学生合作或讨论吗？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

在您就读的大学里，有没有在各类校园活动中与外国人有过接触？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

您参与过国际化活动吗（例如：外语节，国际讲座，国际讨论等）？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

30. 国际化课外课程【量表题】

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

在您就读的大学，是否有提供来自不同国家的联合/双文凭的课程或学分互认？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

在您的就读的大学，是否提供跨国公司校企合作交流或在跨国公司实习机会？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

您参与过跨国公司校企合作交流或在跨国公司实习过吗？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

您参加过任何国际赛事的志愿者活动吗？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

您是否了解在您就读的大学正在开发新的海外合作项目，包括外籍学生、技术人员、研究人员来校交流？

<table>
<thead>
<tr>
<th>是</th>
<th>否</th>
</tr>
</thead>
</table>

在地社群接触

31. 面对面接触【量表题】

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4 及以上</th>
</tr>
</thead>
</table>
32. 面对面接触 [量表题]

<table>
<thead>
<tr>
<th>您和外国人面对面聊天的频率是多少？</th>
</tr>
</thead>
<tbody>
<tr>
<td>从不或几乎从不</td>
</tr>
<tr>
<td>○</td>
</tr>
</tbody>
</table>

33. 在线接触 [量表题]

<table>
<thead>
<tr>
<th>过去一周内您与外国人在线交流的天数：</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>○</td>
</tr>
</tbody>
</table>

34. 在线接触 [量表题]

<table>
<thead>
<tr>
<th>平均来说，在工作日，您与外国人在线交流的总时长：</th>
</tr>
</thead>
<tbody>
<tr>
<td>少于15分钟</td>
</tr>
<tr>
<td>○</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>平均来说，在双休日，您与外国人在线交流的总时长：</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
</tr>
</tbody>
</table>

35. 媒介接触 [量表题]

<table>
<thead>
<tr>
<th>您观看过多少部外国电视剧或电影？</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>○</td>
</tr>
</tbody>
</table>

36. 媒介接触 [量表题]
您多久看一次外国电视剧或电影？

<table>
<thead>
<tr>
<th>频率</th>
<th>从不或几乎从不</th>
<th>每年 2 至 3 次</th>
<th>每季度 2 至 3 次</th>
<th>每月 2 至 3 次</th>
<th>每周 2 至 3 次</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

37. 媒介接触 [量表题]

请描述下您对外国电视剧或电影的喜欢程度？

<table>
<thead>
<tr>
<th>喜欢程度</th>
<th>非常不喜欢</th>
<th>不喜欢</th>
<th>中立</th>
<th>喜欢</th>
<th>非常喜欢</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

问卷结束，感谢您的支持！
Appendix C. Standardized Residual Plot

For Global Competence Knowledge, Skills, Attitudes, and Values

Appendix C1

*Standardized Residual Plot for Knowledge Dimension*
Appendix C2

*Standardized Residual Plot for Skills Dimension*
Appendix C3

Standardized Residual Plot for Attitudes Dimension
Appendix C4

*Standardized Residual Plot for Values Dimension*
Appendix D. Histogram of Normally Distributed Standardized Residuals for Global Competence Knowledge, Skills, Attitudes, and Values

Appendix D1

*Histogram of Normally Distributed Standardized Residuals for Knowledge Dimension*
Appendix D2

Histogram of Normally Distributed Standardized Residuals for Skills Dimension
Appendix D3

Histogram of Normally Distributed Standardized Residuals for Attitudes Dimension
Appendix D4

Histogram of Normally Distributed Standardized Residuals for Values Dimension
Appendix E. Normal P-P Plot With Normally Distributed Dependent Data for Global Competence Knowledge, Skills, Attitudes, and Values

Appendix E1

*Normal P-P Plot With Normally Distributed Dependent Data for Knowledge Dimension*
Appendix E2

Normal P-P Plot With Normally Distributed Dependent Data for Skills Dimension
Appendix E3

Normal P-P Plot With Normally Distributed Dependent Data for Attitudes Dimension
Appendix E4

Normal P-P Plot With Normally Distributed Dependent Data for Values Dimension
## Appendix F. Comparison of GC Level in Three Dimensions With Previous Literature

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Population</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total GG</strong></td>
<td><strong>Higher vocational students</strong></td>
<td>3.43</td>
<td>.55</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, H. Meng (2021)</td>
<td>3.48</td>
<td>.59</td>
</tr>
<tr>
<td></td>
<td>Public undergraduates, Q. Meng et al. (2017a)</td>
<td>/</td>
<td>/</td>
</tr>
<tr>
<td></td>
<td>Postgraduates, Y. Liu et al. (2020)</td>
<td>3.40</td>
<td>.52</td>
</tr>
<tr>
<td></td>
<td>Medical postgraduates, Jiang et al. (2022)</td>
<td>3.52</td>
<td>.49</td>
</tr>
<tr>
<td></td>
<td>Postgraduates, Cen and Yang (2022)</td>
<td>3.82</td>
<td>.53</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td><strong>Higher vocational students</strong></td>
<td>3.50</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, H. Meng (2021)</td>
<td>3.54</td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>Public undergraduates, Q. Meng et al. (2017a)</td>
<td>3.14</td>
<td>.56</td>
</tr>
<tr>
<td></td>
<td>Postgraduates, Y. Liu et al. (2020)</td>
<td>3.43</td>
<td>.70</td>
</tr>
<tr>
<td></td>
<td>Medical postgraduates, Jiang et al. (2022)</td>
<td>3.61</td>
<td>.58</td>
</tr>
<tr>
<td></td>
<td>Postgraduates, Cen and Yang (2022)</td>
<td>3.62</td>
<td>.67</td>
</tr>
<tr>
<td><strong>Skills</strong></td>
<td><strong>Higher vocational students</strong></td>
<td>3.20</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, H. Meng (2021)</td>
<td>3.07</td>
<td>.79</td>
</tr>
<tr>
<td></td>
<td>Public undergraduates, Q. Meng et al. (2017a)</td>
<td>3.33</td>
<td>.59</td>
</tr>
<tr>
<td></td>
<td>Postgraduates, Y. Liu et al. (2020)</td>
<td>3.11</td>
<td>.64</td>
</tr>
<tr>
<td></td>
<td>Medical postgraduates, Jiang et al. (2022)</td>
<td>3.08</td>
<td>.64</td>
</tr>
<tr>
<td></td>
<td>Postgraduates, Cen and Yang (2022)</td>
<td>3.86</td>
<td>.58</td>
</tr>
<tr>
<td><strong>Attitudes and values</strong></td>
<td><strong>Higher vocational students</strong></td>
<td>3.62</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, H. Meng (2021)</td>
<td>3.83</td>
<td>.59</td>
</tr>
<tr>
<td></td>
<td>Public undergraduates, Q. Meng et al. (2017a)</td>
<td>3.83</td>
<td>.56</td>
</tr>
<tr>
<td></td>
<td>Postgraduates, Y. Liu et al. (2020)</td>
<td>3.71</td>
<td>.61</td>
</tr>
<tr>
<td></td>
<td>Medical postgraduates, Jiang et al. (2022)</td>
<td>3.87</td>
<td>.59</td>
</tr>
<tr>
<td></td>
<td>Postgraduates, Cen and Yang (2022)</td>
<td>3.96</td>
<td>.64</td>
</tr>
</tbody>
</table>
## Appendix G. Comparison of GC Level in Subfactors With Previous Literature

<table>
<thead>
<tr>
<th>Factors</th>
<th>Population</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>World knowledge</td>
<td>Higher vocational students</td>
<td><strong>3.45</strong></td>
<td>.69</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, (Meng, 2021)</td>
<td>3.39</td>
<td>.77</td>
</tr>
<tr>
<td>Understanding globalization</td>
<td>Higher vocational students</td>
<td><strong>3.55</strong></td>
<td>.66</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, (Meng, 2021)</td>
<td>3.69</td>
<td>.77</td>
</tr>
<tr>
<td>Use of tools</td>
<td>Higher vocational students</td>
<td><strong>3.23</strong></td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, (Meng, 2021)</td>
<td>3.07</td>
<td>.87</td>
</tr>
<tr>
<td>Cross-cultural communication</td>
<td>Higher vocational students</td>
<td><strong>3.18</strong></td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, (Meng, 2021)</td>
<td>3.07</td>
<td>.81</td>
</tr>
<tr>
<td>Intent to interact</td>
<td>Higher vocational students</td>
<td><strong>3.50</strong></td>
<td>.70</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, (Meng, 2021)</td>
<td>3.83</td>
<td>.70</td>
</tr>
<tr>
<td>Open attitude</td>
<td>Higher vocational students</td>
<td><strong>3.65</strong></td>
<td>.71</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, (Meng, 2021)</td>
<td>4.09</td>
<td>.72</td>
</tr>
<tr>
<td>Value identity</td>
<td>Higher vocational students</td>
<td><strong>3.79</strong></td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>Private undergraduates, (Meng, 2021)</td>
<td>3.59</td>
<td>.53</td>
</tr>
</tbody>
</table>
Appendix H. Comparison of GC Level Between Nonfirst-Generation Students and First-Generation Students

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>$N$</th>
<th>Population</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GG</td>
<td>578</td>
<td>Nonfirst-generation Students</td>
<td>3.45</td>
<td>.575</td>
</tr>
<tr>
<td></td>
<td>926</td>
<td>First-generation Students</td>
<td>3.41</td>
<td>.523</td>
</tr>
<tr>
<td>Knowledge</td>
<td>578</td>
<td>Nonfirst-generation Students</td>
<td>3.51</td>
<td>.656</td>
</tr>
<tr>
<td></td>
<td>926</td>
<td>First-generation Students</td>
<td>3.50</td>
<td>.603</td>
</tr>
<tr>
<td>Skills</td>
<td>578</td>
<td>Nonfirst-generation Students</td>
<td>3.24</td>
<td>.692</td>
</tr>
<tr>
<td></td>
<td>926</td>
<td>First-generation Students</td>
<td>3.17</td>
<td>.654</td>
</tr>
<tr>
<td>Attitudes</td>
<td>578</td>
<td>Nonfirst-generation Students</td>
<td>3.58</td>
<td>.696</td>
</tr>
<tr>
<td></td>
<td>926</td>
<td>First-generation Students</td>
<td>3.54</td>
<td>.643</td>
</tr>
<tr>
<td>Values</td>
<td>578</td>
<td>Nonfirst-generation Students</td>
<td>3.79</td>
<td>.741</td>
</tr>
<tr>
<td></td>
<td>926</td>
<td>First-generation Students</td>
<td>3.79</td>
<td>.720</td>
</tr>
</tbody>
</table>