



# JUTLP

Journal of University Teaching & Learning Practice

## Understanding and practices of global competence in Sino-foreign cooperative universities

Huijuan Zhuang<sup>a</sup>, Lidan Hu<sup>b</sup>, Jiaxin Guo<sup>a</sup>

<sup>a</sup>South China Normal University, China, <sup>b</sup>Guangong Polytechnic Institute, China

### Abstract

In this new era of multiploidization, economic globalization, and cultural diversification, countries are actively advocating the joint construction of a community of shared futures for mankind and countries paying attention to nurturing global competence (GC). The nine Sino-foreign cooperative universities (SFCUs) have made outstanding achievements in the cultivation of international talent. However, few studies have assessed how these SFCUs correspond to GC. Qualitative content analysis was conducted to identify talent cultivation in SFCUs by analyzing the objectives and curriculum documents collected from university websites. Five representative indicator systems were summarised based on the logic of modular elements, subject-object relationships, action procedures and 20 operational indicators. The objectives of SFCUs were then compared to the GC indicators and found to be highly aligned with GC. Finally, the curricula were organised into language courses, literacy courses, and applied courses, which aligned with 20 indicators of GC, reflecting the cultivation of various aspects such as students' global thinking, knowledge of the world's humanities, adaptability, creativity, leadership, respect for cultural diversity, and concern for cultural diversity. This indicator system can support the global competence cultivation of universities in China, creating better alignment with global competence indicators. The results can aid understanding the current status of GC in talent cultivation and provides recommendations to optimise talent cultivation strategies.

### Citation

Zhuang, H., Hu, L. & Guo, J. (2024). Understanding and practices of global competence in Sino-foreign cooperative universities. *Journal of University Teaching and Learning Practice*, 21(4). <https://doi.org/10.53761/aayefg73>

### Editors

Section: Special Issue  
Senior Editor: Jo-Anne Kelder  
Associate Editor: Navneel Prasad

### Publication

Received: 28 May 2023  
Revision: 5 October 2023  
Accepted:  
Published: 30 March 2024

Copyright: © by the authors, in its year of first publication. This publication is an open access publication under the Creative Commons Attribution CC BY-ND 4.0

## Introduction

In today's era of global integration, internationalisation has become a crucial theme in the development of Chinese universities. Cultivating advanced international talents with global perspective is an important strategy of the Chinese central government (Ministry of Education of the People's Republic of China, 2020). The initiatives "Building a Human Community with a Shared Future" and "One Belt, One Road" have elevated China's position in global affairs, highlighting the significance of nurturing globally competent talents that embody distinctively Chinese characteristics (Aoyama, 2016). The concept of *global competence* has hence emerged as a key educational vision, and its theoretical framework has been increasingly recognised by scholars (Teng et al., 2018).

The concept of global competence is relatively new in Chinese literature, and these studies primarily focus on the elements, assessment, and development of global competence (Teng et al., 2014; Chu, 2022; Hunter, 2004; Li & Zeng, 2018; Yao & Chu, 2021). Global competence is considered an essential skill for students and crucial for their career development (Van Roekel, 2010). With the increasing internationalisation of higher education, universities are placing greater emphasis on cultivating talents with a global and future-oriented outlook. This is particularly evident in Sino-foreign cooperative universities (SFCUs), which possess distinct advantages in internationalised education.

The term *Sino-foreign cooperative university* refers to a cooperative institution with independent legal personality that is established through collaboration between Chinese educational institutions and overseas educational institutions. Specifically, these institutions involve the organisation of higher education institutions in China with Chinese citizens as the main target students (The State Council of the People's Republic of China, 2019). The fundamental objective of Sino-foreign cooperative education is to introduce, absorb and utilise foreign high-quality educational resources through collaboration with world-class foreign universities (Wang, 2007).

In terms of China's overall strategic plan, SFCUs has been positioned as an important means to cultivate high-level international talent (Guo & Liu, 2021). Compared to regular universities, SFCUs have inherent internationalisation features, such as governance system, teaching staff, recruitment mechanism, learning environment and more.

Firstly, these universities are jointly established by Chinese and foreign educational institutions. Through cooperation between the two parties, high-quality educational resources are integrated, and cultural positions of openness, inclusiveness, and win-win cooperation are reflected (The State Council of the People's Republic of China, 2019). Secondly, SFCUs are jointly governed by Chinese and foreign institutions, and must take into account the national educational systems and diverse demands of stakeholders. As a new educational model, these kinds of universities have distinctive local and international characteristics (Mok & Han, 2016). Thirdly, the faculty of these universities is composed of both Chinese and foreign partners and have a high degree of internationalisation background. A majority of faculty have overseas study or work experience, and their teaching concepts and methods reflect unique international characteristics (Ma et al., 2019). Fourthly, SFCUs admissions are no longer based solely on college entrance exam scores, but mostly on a combination of entrance exam results, comprehensive quality tests, and academic level exams, which is more flexible and diverse (Mok & Han, 2016).

Additionally, the proportion of international students in SFCUs is much higher than in regular universities. For instance, at New York University in Shanghai, the ratio of Chinese students to overseas students is 5.1:4.9 (New York University Shanghai, 2018), reflecting a multicultural learning environment and international campus atmosphere. It is evident that SFCUs have integrated the dual requirements of both China and overseas countries or regions in talent cultivation and have more international and global characteristics in personnel training.

Despite extensive research on the international characteristics of Sino-foreign cooperative universities, revealing their features in international education such as diverse student populations, internationalised curriculum offerings, and international faculty (Guo & Liu, 2021; Ma et al., 2019; Mok & Han, 2016), these studies mainly focus on macro-level descriptions and qualitative analyses. They lack a specific corresponding analysis of the various elements involved in universities talent cultivation system and global competence. Therefore, we have no understanding of the extent to which Sino-foreign cooperative universities support global competence in talent cultivation and the corresponding indicators.

As research progresses, scholars have proposed some frameworks for assessing global competence based on the logic of modular element, subject-object relationship, and action procedure (Hunter, 2004; Schejbal & Irvine, 2009; Global Competence Associates, 2023; Mansilla & Jackson, 2011; OECD, 2018). However, these assessment frameworks mainly focus on assessing global competence for workers and youth, without considering university students. Furthermore, different countries and regions have different characteristics in the internationalisation of talent cultivation in higher education (Lei, 2023). Additionally, the overall requirements for talent cultivation in China need to reflect distinctive "localised" characteristics.

Therefore, this study integrates the current mainstream global competence assessment systems and develops a global competence assessment framework that is tailored to higher education learners and reflects Chinese characteristics. Subsequently, this research applies this framework to conduct an in-depth analysis of the talent cultivation objectives and curriculum systems of nine SFCUs in China. The aim is to understand the extent of support and prominent features of these universities' talent cultivation in terms of the dimensions and specific indicators of global competence.

## **Literature Review**

Enhancing students' global competence has become a hot issue in cultivating talent within universities. Various definitions and indicator systems have been proposed to assess global competence. This section aims to provide an overview of the existing research conducted in this field.

### **The Concept of Global Competence**

The term *global competence* was first introduced in 1988 by the Council on International Education Exchange (CIEE) in America (Council on International Educational Exchange, 1988). The definition of global competence was formally introduced by the Council of Chief State School Officers (CCSSO) and the Asia Society in 2011. They defined global competence as "the ability and disposition to understand and deal with matters of global significance" (Mansilla & Jackson, 2011).

On December 12, 2017, the Organisation for Economic Cooperation and Development's (OECD) Directorate of Education and Skills, in collaboration with Project Zero of the Harvard Graduate School of Education, released the official definition of the Programme for International Student Assessment (PISA) 2018 Global Competence assessment framework. They defined global competence as "the capacity to examine local, global and intercultural issues, to understand and appreciate the perspectives and world views of others, to engage in open, appropriate and effective interactions with people from different cultures, and to act for collective well-being and sustainable development" (OECD, 2018).

In China, Tsinghua University defined global competence as the capability to learn, work and live with others from different culture origins, to embrace opportunities and challenges in the future (Tsinghua University, 2018). They believe that developing global competence is a lifelong process which requires Tsinghua University students to continuously explore six core competencies that cover cognitive, interpersonal, and intrapersonal aspects.

In summary, both the OECD definitions and the Tsinghua University definition of global competence share certain similarities. They both emphasise the importance of understanding global issues, interacting with diverse cultures, and incorporating a combination of knowledge, skills, attitudes, and values. However, there are some differences between OECD definition and Tsinghua University definition. The OECD categorised global competence into four key dimensions from a Eurocentric perspective, but Tsinghua University defined global competence from a Chinese perspective. It considers ethics and responsibility as integral components of the core qualities of global competence.

### **The Indicator Systems of Global Competence**

Over the past few decades, the framework of global competence has undergone several stages of development, which can be summarised into three logics: the modular element logic, the subject-object relationship logic, and the action procedure logic (Hunter, 2004; Schejbal & Irvine, 2009; Global Competence Associates, 2023; Mansilla & Jackson, 2011; OECD, 2018).

The *modular element logic* explores the basic modules and basic elements of global competence by adopting the traditional idea of competence research in the field of human resources (Teng et al., 2018). The most representative ones are the research of Hunter (2004), and Schejbal and Irvine (2009). Among them, Hunter was the first to use scientific empirical investigations to clearly define the definition of global competence (Teng et al., 2018; Hunter, 2004). In 2004, based on a questionnaire survey of international educators and multinational group managers, he proposed 17 indicators of global competence on three dimensions: knowledge, skills/experience, and attitude (Hunter, 2004). Subsequently, Schejbal and Irvine (2009) further expanded Hunter's global competence index system, they included 22 indicators on the same three dimensions: knowledge, attitude, and skills. Their works set up the foundation of a comprehensive framework for assessing and measuring an individual's global competence.

The *subject-object relationship logic* refers to the internal and external relations of the actor as the logic of analysis, emphasising the internal and external relationships of the individual as the primary analysis logic (Teng et al., 2018). This global competence model proposed by Global Leadership Excellence Company, which is a worldwide leader in global competence research (Teng et al., 2018). This organisation integrates the three dimensions of knowledge, skills, and

attitudes into specific people and highlights that the development of global competence is a lifelong, inside-out process (Global Competence Associates, 2023).

The *action procedure logic* refers to the process of transition from thought to practice, which is a theoretical system that emphasises the fundamental process and specific requirements of cultivating students' global competence (Teng et al., 2018). The focus of the action procedure logic presents the basic process and specific requirements for cultivating students' global competence through four procedural steps: investigating the world, understanding others, communicating effectively, and acting for improvement (Mansilla & Jackson, 2011).

Overall, the above three stages of development have played a significant role in improving the understanding and practical application of global competence. The main indicators of the modular element logic, the subject-object relationship logic and the action procedure logic are shown in Table 1.

**Table 1**

*Five Representative Global Competence Indicator Systems*

Research logic	Dimensions	Key indicators
<b>Modular element logic</b> (Hunter, 2004; Schejbal & Irvine, 2009)	1. Knowledge 2. Skills/Experiences 3. Attitudes	<ul style="list-style-type: none"> <li>• An understanding of one's own cultural norms and expectations</li> <li>• Successful participation on project-oriented academic or vocational experience with people from other cultures and traditions</li> <li>• Recognition that one's own worldview is not universal</li> </ul>
	1. Knowledge 2. Attitudes 3. Skills (general)	<ul style="list-style-type: none"> <li>• Knowledge of world geography</li> <li>• Openness to learning and a positive orientation to new opportunities, ideas, and ways of thinking</li> <li>• Technical skills (i.e., research skills) that enhance the ability of students to learn about the world</li> </ul>
<b>Subject-object relationship logic</b> (Global Leadership Excellence Company, 2023)	1. Knowledge 2. Skills 3. Attitudes	<ul style="list-style-type: none"> <li>• Self-awareness</li> <li>• Open-mindedness, risk taking, attentiveness to diversity</li> <li>• Global awareness, historical perspective</li> <li>• Intercultural capability, collaboration across cultures</li> </ul>
<b>Action procedure logic</b> (Mansilla & Jackson, 2011; OECD, 2018)	1. Students investigate the world beyond their immediate environment 2. Students recognise their own and others' perspectives	<ul style="list-style-type: none"> <li>• Identify an issue, generate a question, and explain the significance</li> <li>• Recognise and express their own perspective on situations and identify the influences on that perspective</li> <li>• Listen to and communicate effectively with diverse people</li> </ul>

Research logic	Dimensions	Key indicators
	3. Students communicate their ideas effectively with diverse audiences. 4. Students translate their ideas and findings into appropriate actions to improve conditions.	<ul style="list-style-type: none"> <li>• Reflect on their capacity to advocate for and contribute to improvement locally, regionally, or globally</li> </ul>
	1. Knowledge 2. Skills 3. Attitudes 4. Values	<ul style="list-style-type: none"> <li>• Knowledge about the similarities, differences, and relations between cultures</li> <li>• Skills to understand the world and to take action</li> <li>• Attitudes of openness</li> <li>• Valuing human dignity and diversity</li> </ul>

*Note.* The three logical sections include five indicator systems. OECD's PISA 2018 indicator system has international recognition, which is incorporated into the establishment basis.

This literature, including Hunter (2004), Schejbal and Irvine (2009), as well as the Global Leadership Excellence Company (2023), mainly concentrate on the framework of global competence in terms of knowledge, skills, and attitudes. However, while the OECD explores the dimension of "values," it does not offer concrete operational indicators. Therefore, the indicator system in this article will include knowledge, skills, and attitudes.

### **Talent Cultivation System in China**

China's Higher Education Law clearly states that higher education institutions should focus on cultivating talents, conducting teaching, scientific research, and social services, ensuring that the quality of pedagogy meets national standards (The National People's Congress of the People's Republic of China, 2019). Therefore, the cultivation of talents is the basis for the development of universities and is also the core standard for measuring the level of their operation. The talent cultivation system is an essential part of the talent education process, and President Xi Jinping (2018) emphasises that "what kind of people to cultivate and how to cultivate people" is the fundamental issue of the talent cultivation system. Sui (2010) believes that the talent cultivation system is an organic combination of all educational elements, including cultivation objectives and their realisation parts. These statements highlight the importance of talent cultivation systems in China's higher education system and emphasise the significant role of the talent cultivation systems in achieving educational goals.

The cultivation objectives and the curriculum system are interdependent and essential elements of the talent cultivation system. Scholars also emphasise that the cultivation objectives provide the foundation, while the curriculum system serves as the core and key determinant of the quality in the global competence cultivation model (Yao & Chu, 2021). Based on this, this study mainly conducts an in-depth analysis from talent cultivation objectives and curriculum systems.

### **Methodology**

Content analysis is used to objectively and systematically analyse various aspects of talent cultivation (Bryce & Dou, 1993). It is deemed a suitable method for the current study as it provides an effective guidance on the essential methodological thinking and practice, including category

setting, word frequency analysis, and numerical interpretation (Wang, 2016; Wang, 2018; Su et al., 2019; Yao et al., 2021).

Four analytical steps were undertaken to gather information on:

1. The selection of five representative indicator systems.
2. The selection of keywords based on contextual operational indicators, resulting in 49 primary codes. To ensure reliability, three researchers analysed the textual materials and reached a consensus.
3. Categorisation of primary codes into three dimensions of knowledge, skills, and attitude, based on the keywords.
4. Utilisation of cardinal adjustment to combine indicators with similar or identical meanings of keywords, resulting in 20 typical indicators.
5. Presentation of the analysis results.

### **Participants**

As of January 2023, there are 10 Sino-foreign cooperative universities with legal personality approved by the Ministry of Education at the undergraduate level and above, as shown in Table 2. However, the Hong Kong University of Science and Technology (Shenzhen) started enrolling its first batch of undergraduate students in 2023 and is therefore not within the scope of our research.

**Table 2**

Overview of the Nine Sino-Foreign Cooperative Universities

<b>No.</b>	<b>Institution</b>	<b>Ranking of overseas partner institutions (2022QS)</b>	<b>Date of establishment</b>	<b>Location of institution</b>
1	The Chinese University of Hong Kong, Shenzhen	The Chinese University of Hong Kong (Hong Kong)/39	2014	Guangdong, China
2	New York University, Shanghai	New York University (USA)/42	2012	Shanghai, China
3	Duke Kunshan University	Duke University (USA) / 52	2013	Jiangsu, China
4	Shenzhen MSU-BIT University	Lomonosov Moscow State University (Russia) / 75	2016	Guangdong, China
5	University of Nottingham Ningbo China	University of Nottingham (UK) / 103	2004	Zhejiang, China
6	Xi'an Jiaotong-liverpool University	University of Liverpool (UK) / 189	2006	Jiangsu, China
7	Wenzhou-Kean University	Kean University (USA) / Not ranked	2011	Zhejiang, China

No.	Institution	Ranking of overseas partner institutions (2022QS)	Date of establishment	Location of institution
8	Beijing Normal University - Hong Kong Baptist University United International College	Hong Kong Baptist University (Hong Kong)/287	2005	Guangdong, China
9	Guangdong Technion-Israel Institute of Technology	Technion-Israel Institute of Technology (Israel)/330	2016	Guangdong, China
10	Hong Kong University of Science and Technology, Shenzhen	Hong Kong University of Science and Technology (Hong Kong)/34	2022	Guangdong, China

*Note.* Data collected from university websites in January 2023 from May 2022.

### **Analytical Framework**

Based on the current mainstream global competence assessment frameworks (Hunter, 2004; Schejbal & Irvine, 2009; Global Competence Associates, 2023; Mansilla & Jackson, 2011; OECD, 2018), we developed our global competence analytical framework. The Global Competence Framework as showed in Table 3.

**Table 3**

Global Competence Framework

Dimension	Indicators
Knowledge	1-1. Understand the concept of globalisation 1-2. Understand the diversity of cultures, beliefs, and opinions 1-3. Possess knowledge of foreign languages 1-4. Possess knowledge of world humanities (including events, history, and geography) 1-5. Possess knowledge of intercultural communication
Skills	2-1. Utilise and integrate subject knowledge and modes of thinking acquired in school to formulate questions, analyse data and arguments, explain phenomena, and develop positions on local, global, or cultural issues 2-2. Demonstrate media literacy by accessing, analysing, and critically evaluating media messages and creating new media content 2-3. Demonstrate the ability to think differently and empathise 2-4. Demonstrate intercultural competence (including communication, life, social, academic, and business cooperation skills) and the ability to evaluate intercultural performance 2-5. Demonstrate critical and comparative thinking, including creative thinking, advanced thinking skills, and integration of world knowledge



Dimension	Indicators
Attitudes	2-6. Understand and express their own views and identify influencing factors
	2-7. Demonstrate adaptability by navigating unfamiliar and challenging situations
	2-8. Demonstrate leadership and cross-organisational cooperation skills
	2-9. Demonstrate the ability to use a variety of languages, resources, and multimedia to identify and weigh relevant evidence; analyse, integrate, and synthesise this evidence to construct consistent answers; and conduct discussions based on strong evidence to reach persuasive conclusions
	2-10. Act creatively and ethically, individually or collaboratively, to address real problems, improve the situation, and evaluate the consequences of their actions
3-1. Show respect for one's own culture and that of others, and possess self-awareness and self-reflective consciousness	
3-2. Demonstrate global thinking (including intercultural communicative awareness, global citizenship, a sense of responsibility for others in the world, interconnectedness, and global self-efficacy)	
3-3. Pay attention to diversity by maintaining sensitivity or respect for differences	
3-4. Demonstrate openness to learning, a positive attitude toward new ways of thinking, new opportunities, and new perspectives, and a willingness to pursue diverse learning, intercultural learning, and personal and professional development	
3-5. Be action-oriented and result-oriented	

## Findings

Findings generated from content analysis include cultivation objectives and curriculum systems of the nine Sino-foreign cooperative universities after data collection and sorting, as well as the analysis results of cultivation objectives and curriculum systems with the global competence framework.

### ***Cultivation Objectives***

The first set of findings was the talent cultivation objectives of nine Sino-foreign cooperative universities. These universities all had clearly articulated talent cultivation objectives that focus on international perspective and innovative abilities. Table 4 presents the talent cultivation objectives of these universities, providing a comprehensive overview of their educational goals and aspirations.

**Table 4**

## Cultivation Objectives of the Nine Sino-foreign Cooperative Universities

No.	Institution	Overall objective of talent development
1	The Chinese University of Hong Kong, Shenzhen (CUHK-Shenzhen)	Cultivate innovative high-level talents with an international perspective, awareness of traditional Chinese culture and social responsibility
2	New York University, Shanghai (NYU Shanghai)	Cultivate global citizens with international perspective, cross-cultural communication skills and innovative abilities
3	Duke Kunshan University (Duke-Kunshan)	Cultivate well-rounded global citizens with local cultural awareness
4	Shenzhen MSU-BIT University (Shenzhen MSU-BIT)	Cultivate highly qualified and innovative talents who are virtuous, knowledgeable, collaborative, mission-oriented, and understanding of Russian and Chinese culture
5	University of Nottingham Ningbo China (Nottingham-Ningbo)	Cultivate innovative senior talents with China-based values, future-ready and international perspective
6	Xi'an Jiaotong-liverpool University (Xi'an Jiaotong-liverpool)	Cultivate senior technical and managerial talent with international perspective and competitiveness
7	Wenzhou-Kean University (Wenzhou-Kean)	Cultivate international applied talents with a global perspective, knowledge of international rules and affairs, and innovative abilities
8	Beijing Normal University - Hong Kong Baptist University United International College (UIC)	Cultivate a new generation of well-rounded students with patriotism and international perspective
9	Guangdong Technion-Israel Institute of Technology (GTIIT)	Cultivate outstanding engineers and scientific talents with innovative ability, global perspective and humanistic qualities

*Note.* Overall objective of talent development of Sino-foreign cooperative universities. Data collected in January 2023 from May 2022.

**Curriculum Systems**

The second set of findings was on the curriculum systems, collected from official websites and annual teaching quality reports of the nine universities. Courses were classified into four categories based on their cultivation purposes: language courses, literacy courses, professional courses, and applied courses.

1. Language courses were English as a second language courses. According to the university website, the goal was to enhance students' language competence and improve their skills in applying the language.
2. Literacy courses were courses that primarily covered logical thinking, emotional and attitudinal development, and the acquisition of information technology skills. They aimed to enrich learners' understanding and thinking, with the objective of creating holistic individuals.
3. Professional courses referred to knowledge and skill-based courses in specific fields offered by universities for the purpose of professional development. The aimed was to

cultivate the ability to analyse and solve practical problems within the scope of the profession.

4. Applied courses mainly consisted of dynamic and flexible instruction that does not rely on textbooks or fixed content systems. The purpose was to guide students in practical learning and cultivate their comprehensive abilities. This was primarily achieved through international exchanges, club activities, and internship experiences.

Since the professional curricula of each universities vary, making comparisons was difficult. Therefore, this study only analysed three types of courses: language courses, literacy courses, and applied courses. The main contents of these courses are shown in Table 5.

**Table 5**

Three types of Courses in the Nine Universities

<b>Course type</b>	<b>Course subcategories</b>	<b>Sample</b>
Language Courses	Knowledge of Languages	New York University, Shanghai: Language General Studies Core Course Shenzhen MSU-BIT University: General Studies in Foreign Languages (mainly Russian)
	English Language Skills Training	University of Nottingham Ningbo China: English for Academic Purposes (Year 1) Xi'an Jiaotong-Liverpool University: English for Academic Purposes (Year 1 & 2)
	Mathematical Logic	Xi'an Jiaotong-Liverpool University: Foundations of Mathematics and Science New York University, Shanghai: Algorithmic thinking
Literacy Courses	Humanities and Society	University of Nottingham Ningbo China: Chinese Culture Course Xi'an Jiaotong-Liverpool University: Humanities Education (Year 1). Based on the principles of international perspective and worldly application
	Science and Technology	Beijing Normal University - Hong Kong Baptist University United International College: Information Management Technology Chinese University of Hong Kong, Shenzhen: Information Technology Courses
	Physical Education and Health	Beijing Normal University - Hong Kong Baptist University United International College: Physical Education Wenzhou-Kean University: Sports and Health
	Ideological and Political Education	The Chinese University of Hong Kong, Shenzhen: Ideology and Politics Guangdong Technion-Israel Institute of Technology: Ideological and political theory courses

Course type	Course subcategories	Sample
Applied Courses	International Exchange	University of Nottingham Ningbo China: 2+2 model, exchange programs, study abroad programs, summer term programs New York University, Shanghai: Students must spend one semester at one of NYU's Global Academic Centres or degree-granting campuses or an approved International Exchange Program
	Club Activities	University of Nottingham Ningbo China: More than 70 clubs in academic, practical, arts and culture, and sports Xi'an Jiaotong-liverpool University: Over 150 student associations in six categories: functional, academic, artistic, sports, public service and recreational
	Internship practice	Duke Kunshan University: Signature educational experiences (internships, community field studies, social and community service) Xi'an Jiaotong-liverpool University: Social practice and experimental training
	Holistic Education Experiential Learning Programme	Beijing Normal University - Hong Kong Baptist University United International College: Holistic Education Experiential Learning Programme comprising seven modules (experiential development, emotional intelligence, physical culture, arts experience, volunteer service, environmental awareness and survival in adversity), four of which must be completed by each student

*Note.* Data collected in January 2023 from May 2022.

### **Analysis of Cultivation Objectives with the Global Competence Framework**

This study initially divided the talent cultivation objectives of the nine Sino-foreign cooperative universities into 36 segments of key words (as shown in Table 6), then extracted and analysed the keywords, and finally matched them with global competence indicators.

**Table 6**

## Word Segmentation Results

Institution	Word segmentation results of talent cultivation objective
CUHK-Shenzhen	International perspective, Chinese tradition, social responsibility, innovative, advanced
NYU Shanghai	international perspective, cross-cultural communication ability, innovation ability, global citizen
Duke-Kunshan	holistic development, rooted in local culture, global citizen
Shenzhen MSU-BIT	moral integrity, diligent study, broad-minded, friendly and loving, innovative collaboration, mission responsibility, well-versed in Chinese and Russian culture, proficient in Chinese, Russian, and English, expertise mastery, high quality, innovation
Nottingham-Ningbo	China-based values, international perspective, future competence, innovative, advanced
Xi'an Jiaotong-Liverpool	international perspective, competitiveness, advanced, technology, management
Wenzhou-Kean	international perspective, proficient in international rules and affairs, innovative, creative, pioneering capability, internationalisation, application-oriented
UIC	Patriotic sentiments, international perspective, holistic development, new era
GTIIT	innovative, international perspective, humanistic quality, outstanding engineers, technology

*Note.* Word segmentation results of talent training objectives of Sino-foreign cooperative universities.

It was found that most of the global competence indicators were aligned with cultivation objectives to different extents, as shown in Table 7. The strong correlation of these indicators suggests that global competence has indeed become a key educational development objective for these universities.

As can be seen in Table 7, Sino-foreign cooperative universities prioritise talent development in three key aspects: *international perspective, innovation, and China-based values*.

The most frequent keyword found in the talent development objectives of these nine universities was *international perspective*, which was mentioned by seven universities. The concept of international perspective aligns with the indicators of the three dimensions of knowledge, attitudes, and skills of global competence, including '1-1' *globalisation*, '2-4' *intercultural competence*, and '3-2' *global thinking*. This indicates that these seven universities prioritise developing and enhancing students' global knowledge, global thinking, and intercultural competence, which also underscores the international nature of Sino-foreign cooperative universities' operations. Of the other two universities, also indirectly refers to *international perspective*. For example, Duke Kunshan University explicitly aims to cultivate *global citizens*. While it does not directly mention *international perspective*, this quality is still reflected as a necessary attribute for global citizens.

Shenzhen MSU-BIT University emphasises the understanding of Russian and Chinese culture, which is a concrete manifestation of international perspective.

*Innovation* was the second most frequent keyword, mentioned by six universities. This keyword corresponded to the indicators '2-5' of the skills dimension and '3-4' of the attitude dimension. The emphasis on innovative skills and attitudes by the six Sino-foreign cooperative universities reflects the advanced nature of talent development aiming to adapt to the creative needs of future society.

**Table 7**

Word Frequency Statistics

<b>Key words for cultivation objectives</b>	<b>Corresponding to global competence indicators</b>	<b>Number of institutions involved</b>
International perspective	1-1. Understand the concept of globalisation 2-4. Demonstrate intercultural competence (including communication, life, social, academic, and business cooperation skills) and the ability to evaluate intercultural performance 3-2. Demonstrate global thinking (including intercultural communicative awareness, global citizenship, a sense of responsibility for others in the world, interconnectedness, and global self-efficacy)	7
Innovative abilities	2-5. Demonstrate critical and comparative thinking, including creative thinking, advanced thinking skills, and integration of world knowledge 3-4. Demonstrate openness to learning, a positive attitude toward new ways of thinking, new opportunities, and new perspectives, and a willingness to pursue diverse learning, intercultural learning, and personal and professional development	6
China-based values/ patriotism/local cultural awareness	3-1. Show respect for one's own culture and that of others, and possess self-awareness and self-reflective consciousness	5
Global citizens	3-2. Demonstrate global thinking (including intercultural communicative awareness, global citizenship, a sense of responsibility for others in the world, interconnectedness, and global self-efficacy)	2

*Note.* Word frequency statistics of global competence indicators corresponding to the cultivation objectives of Sino-foreign cooperative universities.

*China-based values* and *local cultural awareness* was the third most prioritised objective. It was found in objectives of five universities. This keyword corresponding to the '3-1' *respect for one's own culture and that of others, self-awareness, and self-reflective consciousness* indicator in the attitude dimension. The talent cultivation approach of the 5 Sino-foreign universities seems to emphasise both localisation and internationalisation, showcasing the Chinese character of international talent development.

In particular, New York University in Shanghai and Duke Kunshan University explicitly aim to cultivate *global citizens*, which corresponds to the '3-2' indicators of the global competence attitude dimension. These two universities emphasise the cultivation of global citizens, reflecting the breadth of their talent cultivation. The emphasis on the cultivation of talents who understand Russian and Chinese culture at Shenzhen MSU-BIT University and the emphasis on cultivating *outstanding engineers* at Guangdong Technion-Israel Institute of Technology are closely related to the cultural and technical backgrounds of the partner institutions. This reflects the influence of the partners' backgrounds on the overall cultivation objectives.

## Analysis of Curriculum System with the Global Competence Framework

### Language Courses

To explore the relationship between language courses and global competence, we divided language courses into two dimensions: knowledge of language and English language skills training. We aligned them with the indicators of global competence.

We found that Sino-foreign cooperative universities offer many language courses, and these language courses can be aligned with global competence indicators. The specific correspondence is shown in Table 8.

**Table 8**

Alignment between Language Courses and Global Competence Indicators

Course subcategories	Included courses	Corresponding indicators
Knowledge of Language	<ul style="list-style-type: none"> <li>English General Studies</li> <li>Chinese Liberal Studies</li> <li>Chinese Language Course (for non-native speakers of Chinese)</li> <li>Third Language (for students who have met the exemption requirement for English and Chinese)</li> <li>Russian</li> </ul>	<p>1-3. Possess knowledge of foreign languages</p> <p>1-5. Possess knowledge of intercultural communication</p>
English Language Skills Training	<ul style="list-style-type: none"> <li>English for Academic Purposes</li> <li>Compulsory English for Academic Purposes (Non-native English)</li> </ul>	<p>2-4. Demonstrate intercultural competence (including communication, life, social, academic, and business cooperation skills) and the ability to evaluate intercultural performance</p> <p>2-5. Demonstrate critical and comparative thinking, including creative thinking, advanced thinking skills, and integration of world knowledge</p>

As Table 8 shows, knowledge of language mainly comprises of Chinese general courses and English general courses. However, since the official language of the partner university, Shenzhen

MSU-BIT University, is Russian, the curriculum also covers Russian language courses. These courses include fundamental language knowledge and intercultural communication knowledge, which correspond to global competence '1-3' and '1-5' indicators.

The language courses catered for global competence framework. It reflects the alignment between language courses and global competence indicator system. This alignment highlights the importance of foreign language knowledge, especially English, in the context of internationalisation. Additionally, it showcases the significance that Sino-foreign cooperative universities place on building foreign language skills among their students. For instance, New York University in Shanghai offers English and Chinese general studies courses based on students' language proficiency and major choice. English is the medium of instruction, and all students were required to be proficient. Students who did not speak Chinese as their native language were expected to attain proficiency in the language while completing their professional courses.

The training for English language skills was based on English for Academic Purposes (EAP) in those universities, which emphasises the development of intercultural competence and critical thinking, corresponding to global competence '2-4' and '2-5' indicators. This may reflect the significance of cross-cultural communication skills in Sino-foreign cooperative universities and the requirement for students to use English fluently in their daily lives, studies, and future work. This also emphasises the importance that universities place on the development of students' critical thinking skills. For instance, Xi'an Jiaotong-Liverpool University employed English as the medium of instruction for professional courses and provides intensive EAP training to students in their first year of study, equipping them with the language skills necessary for university-level study in an English-speaking country and preparing them for further study in English.

### ***Literacy Courses***

Literacy courses were classified into five categories: mathematics and logic, humanities and society, science and technology, physical education and health, and ideological and political education. Our analysis was carried out only with the first three categories and excluded two categories of literacy course physical education and health, and ideological and political education, as they are compulsory courses in all Chinese universities (Ministry of Education of the People's Republic of China, 2021) and not created by the SFCUs.

We found that Sino-foreign cooperative universities offer various types of literacy courses, and these courses can be aligned with many global competence indicators. Table 9 presents the alignment between literacy courses and global competence indicators.

**Table 9**

Alignment between the Literacy Courses and Global Competence Indicators

<b>Course sub categories</b>	<b>Included courses</b>	<b>Corresponding indicators</b>
Mathematics and Logic	<ul style="list-style-type: none"> <li>• Foundations of Mathematical Science</li> <li>• Algorithmic Thinking</li> <li>• Mathematics for Science</li> </ul>	2-1. Utilise and integrate subject knowledge and modes of thinking acquired in school to formulate questions, analyse data and arguments, explain



Course sub categories	Included courses	Corresponding indicators
Humanities and Society	<ul style="list-style-type: none"> <li>• Foundations of Business Management</li> <li>• Business and Promotion</li> <li>• Interdisciplinary Studies</li> <li>• Mathematics</li> <li>• Preparatory Courses (mathematics, physics, chemistry)</li> <li>• Chinese Culture Class</li> <li>• Values and the Meaning of Life</li> <li>• Foundations of Humanities and Social Sciences</li> <li>• Foundation Course in Foreign Languages or World History and Civilisation</li> <li>• Foreign Languages and Cultures</li> <li>• Humanities, Music and Arts</li> <li>• Humanities Education</li> <li>• Foundations of Society and Culture</li> <li>• Writing</li> <li>• Social Issues (e.g. China in the World)</li> <li>• Humanities Modules</li> </ul>	<p>phenomena, and develop positions on local, global, or cultural issues</p> <p>2-5. Demonstrate critical and comparative thinking, including creative thinking, advanced thinking skills, and integration of world knowledge</p> <p>2-9. Demonstrate the ability to use a variety of languages, resources, and multimedia to identify and weigh relevant evidence; analyse, integrate, and synthesise this evidence to construct consistent answers; and conduct discussions based on strong evidence to reach persuasive conclusions</p> <p>1-2. Understand the diversity of cultures, beliefs, and opinions</p> <p>1-4. Possess knowledge of world humanities (including events, history, and geography)</p> <p>2-1. Utilise and integrate subject knowledge and modes of thinking acquired in school to formulate questions, analyse data and arguments, explain phenomena, and develop positions on local, global, or cultural issues</p> <p>2-6. Understand and express their own views and identify influencing factors</p> <p>3-1. Show respect for one's own culture and that of others, and possess self-awareness and self-reflective consciousness</p> <p>3-3. Pay attention to diversity by maintaining sensitivity or respect for differences</p>
Science and Technology	<ul style="list-style-type: none"> <li>• Information Management Technology</li> <li>• Science and Technology Foundation Course</li> <li>• Social Sciences</li> <li>• Science and Technology</li> <li>• Science</li> <li>• Social Science Modules</li> <li>• Information Technology</li> </ul>	<p>2-2. Demonstrate media literacy by accessing, analysing, and critically evaluating media messages and creating new media content</p> <p>2-9. Demonstrate the ability to use a variety of languages, resources, and multimedia to identify and weigh relevant evidence; analyse, integrate, and synthesise this evidence to construct consistent answers; and conduct discussions based on strong evidence to reach persuasive conclusions</p>
Physical Education and Health	<ul style="list-style-type: none"> <li>• Sports</li> <li>• Sports and Health Module</li> <li>• Physical Education and Health</li> <li>• Quality Education in Physical Education and Culture</li> </ul>	

Course sub categories	Included courses	Corresponding indicators
Education and Ideological and Political	<ul style="list-style-type: none"> <li>• Physical Education</li> <li>• Ideology and Politics</li> <li>• Civics</li> <li>• Ideological and Political Theory Classes</li> </ul>	--

*Note.* Correspondence between Sino-foreign cooperative universities' literacy courses and global competence indicators.

As can be seen from Table 9, the literacy course is mainly composed of three sub-courses. The mathematical and logic courses mainly comprised modules such as Mathematical Foundations, Algorithmic Thinking, and Scientific Mathematics. These courses, focus on developing students' logical and critical thinking skills, corresponding to the indicators of global competence '2-1', '2-5', and '2-9'. This reflects the importance that Sino-foreign cooperative universities place on students' thinking patterns, emphasising that students are expected to use the knowledge they have learned to form critical and comparative thinking. It also indicates that Sino-foreign cooperative universities aim to cultivating international talents with critical thinking skills. For example, Xi'an Jiaotong-Liverpool University offers basic courses in mathematics and science for first-year students and holds regular lectures on mathematics and science to lay a solid foundation for students in these subjects. Similarly, New York University Shanghai also includes mathematics as a necessary part of students' studies to improve their ability in mathematical logic analysis.

Humanities and society courses mainly consist of modules on Chinese culture, foreign languages and cultures, and social issues. These courses involve knowledge of world cultures and social sciences, focusing on developing both Chinese and international students' cultural literacy and enhancing their understanding of diverse cultures around the world, corresponding to the global competence '1-2', '1-4', '2-1', '2-6', '3-1', and '3-3' indicators. Humanities and society courses help students understand and appreciate cultural diversity and form an opinion on local and global cultures. Furthermore, these courses strengthen the connection between students and society and make them better understand and address social issues. For example, Xi'an Jiaotong-Liverpool University's humanities education courses are based on the principles of *international perspective* and *practical application*. This kind of courses focus on addressing the most pressing issues that students are concerned about. New York University Shanghai emphasises the creation of interdisciplinary courses, incorporating writing skill into humanities and social courses, and the courses have the characteristics of *integration*.

The science and technology courses consist of modules such as information management technology, basic science and technology, and information technology, corresponding to the global competence '2-2' and '2-9' indicators. This reflects the importance that schools attach to cultivating students' information literacy to keep up with the rapid development of science and technology. It aims to lays a good foundation for students' self-learning and lifelong learning. For example, Beijing Normal University-Hong Kong Baptist University United International College offers interdisciplinary courses in science, technology, and society, aiming to develop students' abilities to analyse data using technology and to propose suggestions for the implementation of social, economic, business, cultural, and political strategies.

## ***Applied Courses***

Based on the methods of extracurricular activities of each university, applied courses are categorised into four types: international exchange, community engagement, holistic education experiential learning program, and internship practice. These categories are further divided based on whether the activities are domestic or international, in-school or out-of-school, and in-classroom or out-of-classroom.

We found that Sino-foreign cooperative universities have various forms of practical activities, and applied courses can be aligned with many global competence indicators. The alignment between the applied courses and the global competence indicators is shown in Table 10.

Table 10 shows all universities' international exchanges mainly involve student exchanges, study tours, and other forms of visits. Developing various forms of international exchange activities aligns to the indicators of knowledge, skills, and attitude dimensions of global competence. These activities were expected to promote the integration of domestic and international students and enhance in-depth exchanges between teachers and students. These activities can reflect the universities' goal of cultivating of students' global knowledge, intercultural competence, and global thinking.

We also found co-curricular and extra-curricular activities in these courses. Club activities mainly consist of academic, practical, literary, sports, and other types of clubs, as well as service-oriented student organisations and student innovation teams. Corresponding to multiple indicators of global competence, including knowledge, skills, and attitude dimensions, student organisations are committed to carrying out a variety of extracurricular activities that strengthen the interaction between university and local community. Club activities reflect the importance that Sino-foreign cooperative universities attach to applied and hidden courses. On the other hand, it shows that Sino-foreign cooperative schools cultivate students' diverse knowledge, ability to take action, and open attitude.

In particular, Beijing Normal University - Hong Kong Baptist University United International College has set up a whole-person education experiential learning course consisting of seven modules, including experience development, emotional intelligence, sports culture, art experience, volunteer service, environmental awareness, and survival in adversity. Students must complete at least four modules. These activities reflect the school's innovative liberal arts education and whole-person education philosophy, providing many non-formal education opportunities that complement the college's professional courses. They also show that the school encourages teachers and students to communicate and learn from each other, organises group activities to impart soft skills such as interpersonal skills, cultural awareness, self-confidence, and a sense of responsibility to students, and helps develop their potential for personal growth.

**Table 10***Alignment between Applied Courses and Global Competence Indicators*

<b>Course sub categories</b>	<b>Included courses</b>	<b>Corresponding indicators</b>
International Exchange	<ul style="list-style-type: none"> <li>• 2+2, 1+X Programmes</li> <li>• Exchange Student Programme</li> <li>• Summer and Winter Short Term Programmes</li> <li>• Visiting Student Programme</li> </ul>	<p>1-1. Understand the concept of globalisation</p> <p>1-2. Understand the diversity of cultures, beliefs, and opinions</p> <p>1-3. Possess knowledge of foreign languages</p> <p>1-4. Possess knowledge of world humanities (including events, history, and geography)</p> <p>1-5. Possess knowledge of intercultural communication</p> <p>2-4. Demonstrate intercultural competence (including communication, life, social, academic, and business cooperation skills) and the ability to evaluate intercultural performance</p> <p>2-5. Demonstrate critical and comparative thinking, including creative thinking, advanced thinking skills, and integration of world knowledge</p> <p>2-7. Demonstrate adaptability by navigating unfamiliar and challenging situations</p> <p>3-2. Demonstrate global thinking (including intercultural communicative awareness, global citizenship, a sense of responsibility for others in the world, interconnectedness, and global self-efficacy)</p> <p>3-3. Pay attention to diversity by maintaining sensitivity or respect for differences</p> <p>3-4. Demonstrate openness to learning, a positive attitude toward new ways of thinking, new opportunities, and new perspectives, and a willingness to pursue diverse learning, intercultural learning, and personal and professional development</p>
Community Activities	<ul style="list-style-type: none"> <li>• Academic, Practical, Literary, Sports Clubs</li> <li>• Service Student Organisation</li> <li>• Student Innovation Team</li> </ul>	<p>1-2. Understand the diversity of cultures, beliefs, and opinions</p> <p>1-5. Possess knowledge of intercultural communication</p> <p>2-4. Demonstrate intercultural competence (including communication, life, social, academic, and business cooperation skills) and the ability to evaluate intercultural performance</p> <p>2-6. Understand and express their own views and identify influencing factors</p> <p>2-7. Demonstrate adaptability by navigating unfamiliar and challenging situations</p> <p>2-8. Demonstrate leadership and cross-organisational cooperation skills</p> <p>2-10. Act creatively and ethically, individually or collaboratively, to address real problems, improve the situation, and evaluate the consequences of their actions</p> <p>3-5. Be action-oriented and result-oriented</p>

Course sub categories	Included courses	Corresponding indicators
Holistic Education Experiential Learning Programme	<ul style="list-style-type: none"> <li>• Expansion of Experience</li> <li>• Emotional Intelligence</li> <li>• Sports Culture</li> <li>• Art Experience</li> <li>• Volunteer Service</li> <li>• Environmental Awareness</li> <li>• Survive Adversity</li> </ul>	<p>1-2. Understand the diversity of cultures, beliefs, and opinions</p> <p>1-4. Possess knowledge of world humanities (including events, history, and geography)</p> <p>1-5. Possess knowledge of intercultural communication</p> <p>2-3. Demonstrate the ability to think differently and empathise</p> <p>2-4. Demonstrate intercultural competence (including communication, life, social, academic, and business cooperation skills) and the ability to evaluate intercultural performance</p> <p>2-6. Understand and express their own views and identify influencing factors</p> <p>2-7. Demonstrate adaptability by navigating unfamiliar and challenging situations</p> <p>3-2. Demonstrate global thinking (including intercultural communicative awareness, global citizenship, a sense of responsibility for others in the world, interconnectedness, and global self-efficacy)</p> <p>3-4. Demonstrate openness to learning, a positive attitude toward new ways of thinking, new opportunities, and new perspectives, and a willingness to pursue diverse learning, intercultural learning, and personal and professional development</p>
Internship Practice	<ul style="list-style-type: none"> <li>• Internships</li> <li>• Social Practice</li> <li>• Experimental Practical Training</li> <li>• Community Field Studies</li> <li>• Social and Community Service</li> </ul>	<p>2-1. Utilise and integrate subject knowledge and modes of thinking acquired in school to formulate questions, analyse data and arguments, explain phenomena, and develop positions on local, global, or cultural issues</p> <p>2-6. Understand and express their own views and identify influencing factors</p> <p>2-7. Demonstrate adaptability by navigating unfamiliar and challenging situations</p> <p>2-10. Act creatively and ethically, individually or collaboratively, to address real problems, improve the situation, and evaluate the consequences of their actions</p> <p>3-2. Demonstrate global thinking (including intercultural communicative awareness, global citizenship, a sense of responsibility for others in the world, interconnectedness, and global self-efficacy)</p> <p>3-5. Be action-oriented and result-oriented</p>

*Note.* Alignment between Sino-foreign cooperative universities' applied courses and global competence indicators.

The internship courses were another form of applied courses. They encompass various applied forms such as internships, social practices, laboratory practical training, community field studies, and community service, which align to multiple indicators in both the skills and attitudes dimensions. These courses demonstrate Sino-foreign cooperative universities' ability to cultivate students to apply the knowledge they have acquired and adapt to social needs. In addition, these

courses also indicate that these institutions emphasise developing students' skills and attitudes and to create, expand, and solve real-world problems.

For instance, the University of Nottingham Ningbo China has established student exchange programs with over 100 universities in more than 40 countries and regions, enabling students to participate in different types of overseas study programs. The university has over 70 associations in four categories: academics, practice, art, and sports, 20 service-oriented school-level student organisations, and several student innovation teams. Similarly, Duke Kunshan University has internship, community field research, and community service requirements. This curriculum system reflects the Sino-foreign cooperative university's curriculum's characteristics, which extend beyond the classroom, into the community and the world.

## Discussion

Based on the analysis of the alignment between talent cultivation objectives in Sino-foreign cooperative universities and global competence framework, it is found that most of these universities include *international perspective*, *innovation*, and *China-based values* as their talent cultivation objectives. This reflects the incorporation of both Western emphasis on an international perspective and the Chinese emphasis on the spirit of innovation and values rooted in China, demonstrating the integration of educational philosophies from both cultures.

Scholars from the West have noted the importance of enhancing students' soft skills in higher education institutions, with a focus on developing their international perspective and cross-cultural skills to adapt to the globalised economic and social environment (Hunter, 2006; Mansilla & Jackson, 2011). For example, the University of Pennsylvania encourages students to tackle the world's most challenging problems through interdisciplinary approaches, aiming to enhance international perspective and cross-cultural competence (Wang, 2016). Meanwhile, an analysis of the objectives of top-tier Chinese universities revealed that high quality, innovation spirit, and patriotic commitment were the most prominent keywords (Wang, 2016). Li and Xue (2022) also emphasised the importance of fostering innovation and entrepreneurial spirit in talent cultivation for China to establish world-class universities. SFCUs effectively combine these two sets of objectives, reflecting the positioning of foreign partner universities as well as the localisation of talent needs in China. This finding is clearly different from the current talent cultivation objectives in Chinese regular universities (Hunter, 2006; Mansilla & Jackson, 2011; Wang, 2016; Li & Xue, 2022).

Based on the finding of the alignment between the curriculum systems of SFCUs and global competence framework, it can be observed that their curriculum systems correspond to the requirements of knowledge, attitudes, and skills in various dimensions of global competence. This shows that the curriculum systems of SFCUs contribute significantly to the cultivation of globally competent talents. In contrast, the curriculum systems of Chinese regular universities only focus on knowledge field, lacking comprehensive application of knowledge, abilities, and attitudes (Liu et al., 2004). In other countries, such as the United States, higher education institutions integrate requirements for knowledge and abilities into the classroom, conducting comprehensive and three-dimensional designs (Liu et al., 2004). SFCUs, in terms of curriculum systems, seem to be better aligned with international standards compared to Chinese regular universities in cultivating talents with global competence. Specifically, SFCUs emphasise the development of linguistic

competence, humanities literacy, and engage in various forms of practical communication activities. This aligns with the goals of liberal education advocated by Western universities, which adjust the themes based on the demands of surrounding society, aiming to cultivate "Wise" citizens (Haberberger, 2018). In the curriculum systems of regular universities in China, there is typically an emphasis on enhancing students' innovation abilities and cultivating practical talents. These differences highlight that the curriculum systems of SFCUs emphasise the comprehensive development of students' knowledge, skills, and attitudes, with different emphases on linguistic competence and humanities literacy compared to regular universities.

The findings of this study will be further discussed, focusing on three important discoveries concerning the curriculum system of Sino-foreign cooperative universities.

SFCUs emphasised the cultivation of students' language abilities is important to help students to cope with global challenges. English language proficiency is vital for academic and social adaptation (Andrade, 2006) and facilitate the development of critical thinking skills, particularly in areas such as verbal reasoning and argument analysis (Lun et al., 2010). When language proficiency is low, bilingual instruction places higher demands on cognitive efforts in language comprehension, which may hinder effective learning and impede students' overall development (Kempert et al., 2011).

SFCUs offered language learning courses and provided intensive academic English training specifically for students with weaker language skills. This may mitigate the limitations of language proficiency and hopefully help students with better skill development. The variety of literacy education in SFCUs may also foster the talent cultivation goal in these universities. Humanistic literacy education promotes learners' development in various aspects such as thinking, emotions, and experiences, and that 21st-century skills like scientific and information literacy are essential for students to address societal challenges (Turiman et al., 2012; Khatib et al., 2013). While some critics argue that humanities education may not provide specific professional skills, they acknowledge its value in addressing global challenges (Rogers & Freiberg, 1994; Chen & Schmidtke, 2017). SFCUs place great emphasis on the importance of preparing students for the future through humanities education, showing the alignment with global competence framework.

The implementation of various forms of internships and practical experiences, focusing on international exchanges and local engagement also indicates the alignment between applied courses and global competence framework. Overseas activities not only enrich students' study abroad experiences but also promote a deeper understanding of cultural differences, beliefs, and perspectives from around the world (Miller-Perrin & Thompson, 2014). Various types of practical activities can cultivate students' cross-cultural communication skills, adaptability, openness to learning, and global awareness (Miller-Perrin & Thompson, 2014; Chang, 2016).

Although the talent cultivation objectives and curriculum systems of SFCUs generally align with the global competence framework, there is a greater emphasis on the knowledge and skills dimensions while the attitude dimension appears to be somewhat lacking. Additionally, indicators related to demonstrating leadership and cross-organisational cooperation skills in the skills dimension are mentioned less frequently. Leadership and collaboration abilities are considered core skills of the 21st century (Van Laar et al., 2017). Therefore, Sino-foreign cooperative universities need to pay attention to strengthening curriculum development to cultivate students'

abilities in 21st-century skills. As a special institution of China's higher education, SFCUs must not only comply with the requirements of Chinese higher education, but also comply with the requirements of policies and laws related to Sino-foreign cooperative education. The academic requirements of the university and its cultivation objectives need to be continuously discussed and negotiated. The curriculum system is also constantly developing and improving. In particular, the selection and review of teaching content will face more complex processes and more and more questions from both parties' requirements, which will bring greater challenges to the integration of high-quality course resources.

## **Conclusions and Further Research**

This study explored the alignment between talent cultivation and global competence indicators in nine Sino-foreign cooperative universities, analysed the advantages of SFCUs in cultivating talents. Firstly, these universities strive to cultivate well-rounded global competent talents with international perspectives, innovation and China-based value. This aligns with the knowledge, skills and attitude dimensions of global competence framework, highlighting the international orientation of talent development in SFCUs. Secondly, SFCUs focus on linguistic competence, humanities education, and practical activities, which align to the dimensions of cross-cultural communication, innovative thinking, and action orientation that global competence talents possess. Thirdly, a variety of literacy courses were provided to enhance critical thinking, establish proper values, and improve information application skills to develop holistic individuals. Finally, to cultivate students with a broad and comprehensive international perspective, most SFCUs require overseas study experiences and participation in a wide range of practical internship activities. These universities focus on linguistic competence development, comprehensive literacy development, especially in mindset and intercultural literacy, and various of practical activities, mainly overseas exchanges, to enable students to understand and know the world.

### **Implications**

This paper's indicator system may support the global competence cultivation of universities in China, creating better alignment with global competence framework. The results of the study on nine SFCUs can help understand the current status of global competence in talent cultivation of these universities and provide recommendation for SFCUs to optimise their talent cultivation strategies.

### **Limitations and Future Studies**

The study only focuses on Sino-foreign cooperative universities, which limits the generalisability of the research results. Future research should expand the sample size to include non-cooperative universities and conduct in-depth comparative analysis. Additionally, the study is limited by the resources available for data collection and analysis, as it did not analyse teaching implementation and evaluation. Future research should expand upon these analyses and comprehensively examine the multi-dimensional developmental relationships between objective, curriculum, implementation, and evaluation in the context of local internationalised talent cultivation. Furthermore, the study only employed qualitative research methods, and future research should use mixed research methods to provide a more comprehensive and rigorous analysis.



## Acknowledgments

The work was supported in part by the 2020 Ministry of Education Humanities and Social Sciences Research Youth Fund Project "A study on the pathway of cultivating local international talents with global competence" (Project Approval No. 20YJC880135), and Guangdong Province Philosophy and Social Science Planning 2023 Discipline Co-construction Project "Research on Local International Talent Cultivation System Oriented by Global Competence in Guangdong, Hong Kong and Macao Greater Bay Area" (Project Approval No. GD23XJY59).

## Conflict of Interest

The authors disclose that they have no actual or perceived conflicts of interest. The authors disclose that they have not received any funding for this manuscript beyond resourcing for academic time at their respective university. The authors have produced this manuscript without artificial intelligence support.

## References

- Andrade, M. S. (2006). International students in English-speaking universities: Adjustment factors. *Journal of Research in International Education*, 5(2), 131-154.  
<https://doi.org/10.1177/1475240906065589>
- Aoyama, R. (2016). "One belt, one road": China's new global strategy. *Journal of Contemporary East Asia Studies*, 5(2), 3–22. <https://doi.org/10.1080/24761028.2016.11869094>
- Bryce, A., & Dou, P. (1993). The content analysis method in library and information science research. *Foreign Information Science*, 3, 27-30.  
[https://xueshu.baidu.com/usercenter/paper/show?paperid=a456641cfbb6642bfb0e581c9f8a459c&site=xueshu\\_se](https://xueshu.baidu.com/usercenter/paper/show?paperid=a456641cfbb6642bfb0e581c9f8a459c&site=xueshu_se)
- Chang, C. W. (2016). I studied abroad, therefore I am a global citizen? An initial study on relationship between global citizenship and international mobility experiences. *Asian Journal of Education*, 17, 131–147. <https://doi.org/10.15753/aje.2016.05.17S.131>
- Chen, P., & Schmidtke, C. (2017). Humanistic elements in the educational practice at a United States sub-baccalaureate technical college. *International Journal for Research in Vocational Education and Training*, 4(2), 117-145. <https://doi.org/10.13152/ijrvet.4.2.2>
- Chu, Z. (2022). *Research on the talents cultivation mode for global competence of undergraduates in research university under new global order*. [Doctoral dissertation, Zhejiang University]. CNKI.  
<https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CDFDLAST2023&filename=1023426362.nh> (Chinese Version)
- Council on International Educational Exchange. (1988). *Educating for global competence: The report of the advisory council for international educational exchange*. CIEE.  
<https://eric.ed.gov/?id=ED305833>

- Global Competence Associates. (2023, April 26). *Global competence model*. Global Competence Associates. <https://globallycompetent.com/global-competence-model/>
- Guo, Q., & Liu, Y. (2021). Analysis on the current situation of talent cultivation in Sino - foreign cooperative universities under the background of "Double-first-class". *Heilongjiang Researches on Higher Education*, 39(3), 52–58. [https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2021&filename=HLJG202103010&uniplatform=OVERSEA&v=EI8N6a0wjE95U-UPQH43Xt8EhBNRmz6pYw-Lh24A5\\_hBZ-a6KtAMhtHGncxPamHR](https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2021&filename=HLJG202103010&uniplatform=OVERSEA&v=EI8N6a0wjE95U-UPQH43Xt8EhBNRmz6pYw-Lh24A5_hBZ-a6KtAMhtHGncxPamHR) (Chinese Version)
- Haberberger, C. (2018). A return to understanding: Making liberal education valuable again. *Educational Philosophy and Theory*, 50(11), 1052-1059. <https://doi.org/10.1080/00131857.2017.1342157>
- Hunter, B., White, G, P., & Godby, G, C. (2006). What does it mean to be globally qualified? *Journal of Studies in International Education*, 10 (3): 267-285. [https://www.researchgate.net/publication/258158051\\_What\\_Does\\_It\\_Mean\\_to\\_Be\\_Globally\\_Competent](https://www.researchgate.net/publication/258158051_What_Does_It_Mean_to_Be_Globally_Competent)
- Hunter, W. D. (2004). *Knowledge, skills, attitudes, and experiences necessary to become globally competent*. [Doctoral dissertation, Lehigh University]. PruQuest. <https://www.proquest.com/docview/305176326>
- Kempert, S., Saalbach, H., & Hardy, I. (2011). Cognitive benefits and costs of bilingualism in elementary school students: The case of mathematical word problems. *Journal of Educational Psychology*, 103(3), 547. <https://doi.org/10.1037/a0023619>
- Khatib, M., Sarem, S. N., & Hamidi, H. (2013). Humanistic education: Concerns, implications and applications. *Journal of Language Teaching and Research*, 4(1), 45-51. <https://doi.org/10.4304/jltr.4.1.45-51>
- Lei, M. (2023). Comparative study of internationalized talent cultivation models in international higher education programs. *Journal of Contemporary Educational Research*, 7(7), 19-25. <https://doi.org/10.26689/jcer.v7i7.5122>
- Lei, Z. (2005). Gaozhi kecheng ji qi tixi he mubiao yanjiu [Research on higher vocational courses and their systems and objectives]. *Vocational and Technical Education Forum*, 18, 4-10. <https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFD2005&filename=ZJLT200518001&uniplatform=OVERSEA&v=P9KWu5JIZLpyTozch7voV6nt2FOjp2yDMk1y2ICnC5h3NT1h98FVa7wxN3gKA7Vn> (Chinese Version)
- Li, J., & Xue, E. (2022). How talent cultivation contributes to creating world-class universities in China: A policy discourse analysis. *Educational Philosophy and Theory*, 54(12), 2008-2017. <https://doi.org/10.1080/00131857.2021.1965876>

- Li, Y., & Zeng, X. (2018). PISA 2018 global competence assessment. *Foreign Primary and Secondary Education*, 5, 25-32. <https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2018&filename=WGZX201805004&uniplatform=OVERSEA&v=CrWukC5IVf0rl-g6Su3hfxPylfO01pafeHPpn6l5MD5QU9aP2kpUqrZsRMoPwWMr> (Chinese Version)
- Liu, T., Chen, X., & Li, P. (2004). Zhongmei bufen daxue tongshi jiaoyu shijian bijiao yanjiu [Comparative study on general education practices in some universities in China and the United States]. *Heilongjiang Researches on Higher Education*, 3, 156-159. [https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFD2004&filename=HLJG200403061&uniplatform=OVERSEA&v=h282rky0L3S4uXcWhkSf07GBT3H4u4kJO7OYHPkUF9wl-3M\\_qf74ZKm45\\_01OeE9](https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFD2004&filename=HLJG200403061&uniplatform=OVERSEA&v=h282rky0L3S4uXcWhkSf07GBT3H4u4kJO7OYHPkUF9wl-3M_qf74ZKm45_01OeE9) (Chinese Version)
- Lun, V. M. C., Fischer, R., & Ward, C. (2010). Exploring cultural differences in critical thinking: Is it about my thinking style or the language I speak? *Learning and Individual Differences*, 20(6), 604-616. <https://doi.org/10.1016/j.lindif.2010.07.001>
- Ma, J., Li, C., & Gu, M. (2019). Transnational education in Sino-foreign cooperative universities: Modes, benefits and concerns. *International Journal of Information and Education Technology*, 9(9), 629-633. <https://doi.org/10.18178/ijiet.2019.9.9.1279>
- Mansilla, V. B., & Jackson, A. W. (2011). *Educating for global competence: Preparing our youth to engage the world*. ASCD. <https://doi.org/10.13140/2.1.3845.1529>
- Miller-Perrin, C., & Thompson, D. (2014). Outcomes of global education: External and internal change associated with study abroad. *New Directions for Student Services*, 146, 77–89. <https://doi.org/10.1002/ss.20093>
- Ministry of Education of the People's Republic of China. (2020 June 23). *The ministry of education and seven other departments of the People's Republic of China released the opinions on accelerating and expanding the opening-up of education in the new era*. Ministry of Education of the People's Republic of China. [http://www.moe.gov.cn/jyb\\_xwfb/s5147/202006/t20200623\\_467784.html](http://www.moe.gov.cn/jyb_xwfb/s5147/202006/t20200623_467784.html)
- Mok, K. H., & Han, X. (2016). The rise of transnational higher education and changing educational governance in China. *International Journal of Comparative Education and Development*, 18(1), 19–39. <https://doi.org/10.1108/IJCED-10-2015-0007>
- New York University Shanghai. (2018). *Academic year undergraduate teaching quality report* [Brochure]. <http://edu.sh.gov.cn/attach/article/2029.pdf>
- OECD. (2018). *Preparing our youth for an inclusive and sustainable world: The OECD PISA global competence framework* [Brochure]. <https://www.oecd.org/education/Global-competency-for-an-inclusive-world.pdf>

- Rogers, C. R., & Freiberg, H. J. (1994). *Freedom to learn* (3rd ed.). Merrill/Macmillan College Publishing Co. [https://www.goodreads.com/book/show/220862.Freedom\\_to\\_Learn](https://www.goodreads.com/book/show/220862.Freedom_to_Learn)
- Schejbal, D., & Irvine, G. (2009). *Global competencies, liberal studies, and the needs of employers* (EJ903457). ERIC. <https://files.eric.ed.gov/fulltext/EJ903457.pdf>
- Sui, Y. (2010). Suzhi jiaoyu: gaoxiao rencai peiyang tixi de chonggou [Quality education: Reconstruction of talent cultivation system in universities]. *China Higher Education*, 9, 10–13. <https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFD2010&filename=ZGDJ201009006&uniplatform=OVERSEA&v=7VZad-Wns3wO4IsPzyeNHiPXbEXCOqrTJAc7BeZXZmNtBq1fNIYqB77WdSHV0dqJ> (Chinese Version)
- Teng, J., Qu, M., Zhu, X., & Zhang, T. (2014). What capacities are important for international organizations: Case study on professional position recruitment standards in UN's special institutes. *Comparative Education Review*, 10, 78–84. <https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2015&filename=BJJY201410014&uniplatform=OVERSEA&v=dPOcliQhzA5Nug0zF6IW7GFFBfSFNYayW77JsWJ6nKPU4gtwsduD9xTehrmAa0ef> (Chinese Version)
- Teng, J., Zhang, T., & Hu, J. (2018). Preparing students with “Global Competence” - The new idea of American international education and its critical reflection in China. *Educational Research*, 1, 142–147. [https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2018&filename=JYYJ201801020&uniplatform=OVERSEA&v=MIQ\\_TU5-kv2EX39KEdE-CVZUNZJiU3Plekmy-TrF3EIFDRIIAskWShy8eVQkLZPc](https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2018&filename=JYYJ201801020&uniplatform=OVERSEA&v=MIQ_TU5-kv2EX39KEdE-CVZUNZJiU3Plekmy-TrF3EIFDRIIAskWShy8eVQkLZPc) (Chinese Version)
- The National People's Congress of the People's Republic of China. (2019, January 7). *Higher education law of the People's Republic of China*. <http://www.npc.gov.cn/npc/c30834/201901/9df07167324c4a34bf6c44700fafa753.shtml>
- The State Council of the People's Republic of China. (2019, March 2). *Regulations of the People's Republic of China on Chinese-foreign cooperation in running schools*. [http://www.gov.cn/gongbao/content/2019/content\\_5468875.htm](http://www.gov.cn/gongbao/content/2019/content_5468875.htm)
- Tsinghua University. (2018). *Global competence preparing for the world* [Brochure]. [https://cdn.applysquare.net/a2/Tsinghua/Global\\_Competence\\_Brochure.pdf](https://cdn.applysquare.net/a2/Tsinghua/Global_Competence_Brochure.pdf)
- Turiman, P., Omar, J., Daud, A. M., & Osman, K. (2012). Fostering the 21st century skills through scientific literacy and science process skills. *Procedia-Social and Behavioral Sciences*, 59, 110-116. <https://doi.org/10.1016/j.sbspro.2012.09.253>
- Van Laar, E., Van Deursen, A. J., Van Dijk, J. A., & De Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 72, 577-588. <https://doi.org/10.1016/j.chb.2017.03.010>

- Van Roekel, D. (2010). *Global competence is a 21st century imperative*. NEA Education Policy and Practice Department.  
[https://www.girlbossmath.com/uploads/1/1/7/5/117585876/nea\\_global\\_imperative.pdf](https://www.girlbossmath.com/uploads/1/1/7/5/117585876/nea_global_imperative.pdf)
- Wang, M. (2007). Zhongwai hezuo banxue zhong youzhi jiaoyu ziyuan zhi neihan [The connotation of high-quality educational resources in Sino-foreign cooperative education]. *Jiangsu Higher Education*, 5, 128–129. <https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFD2007&filename=JSGJ200705049&uniplatform=OVERSEA&v=9p7vYw0IIPbxQV4RBIPijZUU-rwrSpacVDJqjknFyAORN1QTVhFOmkDTgGNDXr6r> (Chinese Version)
- Wang, K. (2018). Research on the training model of business subjects in independent colleges based on content analysis. *Higher Education Forum*, 4, 89-92. [https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2018&filename=GGJY201804025&uniplatform=OVERSEA&v=b7vxPjmr\\_bGEapiGpAsXw2pgba57mdju20u7IAR1PnrBQYlahllovhQJpVNBZL4y](https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2018&filename=GGJY201804025&uniplatform=OVERSEA&v=b7vxPjmr_bGEapiGpAsXw2pgba57mdju20u7IAR1PnrBQYlahllovhQJpVNBZL4y) (Chinese Version)
- Wang, Y. (2016). Talent cultivation objectives of the first-class university in China. *China Higher Education Research*, 8, 13-19. <https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2016&filename=ZGGJ201608004&uniplatform=OVERSEA&v=Wa8bljp0QMGO7lxWb5In0uvTDRrUkY27JXfE7Ouyt4JO0yMsy9ESAv0OPHduwkl-> (Chinese Version)
- Xi, J. (2018, May 3). *Speech at the symposium of teachers and students of Peking University*. XINHUA. [http://www.xinhuanet.com/politics/2018-05/03/c\\_1122774230.htm](http://www.xinhuanet.com/politics/2018-05/03/c_1122774230.htm)
- Yao, W., & Chu, Z. (2021). Construction of global competence training model for research university undergraduates under the background of new globalization: Multi-case study based on content analysis. *Research in Educational Development*, 41(23), 21–29. [https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2022&filename=SHGJ202123006&uniplatform=OVERSEA&v=9U4HFaxxubyVtGegLof0CPefC622aBc\\_Wg8ehhmwSsoxMAT-tNQQ3u-X7xHTQJLL](https://tra-oversea-cnki-net.lingnan.idm.oclc.org/KCMS/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2022&filename=SHGJ202123006&uniplatform=OVERSEA&v=9U4HFaxxubyVtGegLof0CPefC622aBc_Wg8ehhmwSsoxMAT-tNQQ3u-X7xHTQJLL) (Chinese Version)
- Zhang, X., & Zhou, M. (2019). Interventions to promote learners' intercultural competence: A meta-analysis. *International Journal of Intercultural Relations*, 71, 31-47. <https://doi.org/10.1016/j.ijintrel.2019.04.006>