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Enhancing the global competence of Chinese students necessitates a multi-dimensional, systematic approach that integrates curricular reform, pedagogical innovation, and institutional internationalization. This framework should be anchored in cultivating cross-cultural communication skills, critic...

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Abstract

Global competence represents the comprehensive capacity of individuals to adapt to the evolving process of globalization, reflecting their global awareness and cross-cultural adaptability. However, a consensus on the definition and core components of global competence has yet to be reached, with variations in its conceptualization and evaluation evident in the literature, where terms such as “multicultural competence” and “global competence” are frequently used interchangeably. To assess global competence and its constituent sub-dimensions, both unidimensional and multidimensional measurement instruments may be utilized. The development of global competence can be facilitated through classroom instruction, engagement with local cultures, and cross-cultural interactions. Future research should address the multidimensional and complex nature of global competence by endeavoring to develop and validate assessment tools and enhancement pathways that prove effective across diverse cultural and educational contexts.

Full Text

How to Enhance Chinese Students' Global Competence?

Preamble

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Abstract

Global competence represents an individual's comprehensive ability to adapt to the process of globalization, reflecting their global awareness and cross-cultural adaptability. However, no unified definition or core elements of global competence have yet been established, resulting in varied understandings and assessments across literature, where terms such as "multicultural competence" and "global competence" are often used interchangeably. To measure global competence and its related sub-dimensions, both unidimensional and multidimensional measurement tools can be employed. The development of global competence can be achieved through classroom learning, exposure to local cultures, and cross-cultural interactions. Future research should account for the multidimensional and complex nature of global competence, striving to develop and validate assessment tools and improvement pathways that are effective across different cultural and educational systems.

Keywords: global competence, globalization, cross-cultural communication, cultural awareness

Humanity is currently in an era of globalization, where deep interactions and integration of economies, politics, and cultures across different countries and regions worldwide have produced unprecedented profound impacts (Leung et al.,

2014). A globally integrated, rapidly changing, and interconnected world enables people from different cultural backgrounds to encounter diverse lifestyles, cultural systems, and value systems (Chiu et al., 2011; OECD, 2018). This cross-cultural contact subtly shapes individuals' psychology and behavior while simultaneously presenting both challenges and opportunities (Leung et al., 2014; Marsella, 2012). Consequently, how to understand cultural differences and participate in the rapid development and transformation of the world from a global perspective and with an open attitude has become a crucial issue for global citizens today.

In the context of globalization, the initiative for global competence has emerged to promote sustainable development goals and the well-being of all humanity (UNESCO, 2013). Global competence is a comprehensive capability that reflects individuals' global awareness and their adaptation to globalization processes (OECD, 2018). Individuals with global competence can examine cross-cultural issues with open minds, understand and appreciate different cultural norms and worldviews, respect people from different cultures, and interact with them effectively (OECD, 2018). Multiple international organizations, including UNESCO, the OECD, and the Council of Europe, have emphasized the importance of cultivating global competence (Giannina, 2020). Particularly for youth in the new era, global competence is a key competency for adapting to multicultural environments and promoting connections with the international community (Han & Zhu, 2022; Meng et al., 2018).

The evolution of the global competence concept can be traced back to the 1980s. Many concepts proposed by scholars, such as international mindedness (Metli & Lane, 2020), intercultural competence (Simpson & Dervin, 2019), and global citizenship (Auld & Morris, 2019; Oxley & Morris, 2013), can be considered precursors to global competence. In 2018, the Organisation for Economic Co-operation and Development (OECD) first explicitly proposed the concept and framework of global competence in its Programme for International Student Assessment (PISA) for youth (OECD, 2018). Today, global competence has developed into a multidimensional concept. Research indicates that global competence encompasses not only a series of knowledge, skills, and attitudes but also represents actions taken to embrace cultural diversity and promote social justice (Han & Zhu, 2022; Reysen & Katzarska-Miller, 2013). The study of global competence has attracted increasing attention from scholars, and the term has gradually entered public discourse. However, no unified definition or core elements of global competence currently exist, and consensus on understanding and assessing this concept has not been reached. Based on this, this paper reviews existing research on global competence, comprehensively elaborates on its core elements, summarizes methods for measuring and evaluating it, and systematically reviews how to cultivate global competence.

2 Core Elements of Global Competence

Before reviewing existing literature on how scholars understand global competence, it is essential to emphasize that definitions of global competence are constructed through different pathways by various stakeholders, including international organizations, academic researchers, and educators. Additionally, because global competence lacks a clear, unified definition, it is sometimes used interchangeably with different terms in other literature (Schenker, 2019; Li, 2013; Puckett, 2020). Examples include multicultural competence (Moskal & Schweisfurth, 2018), intercultural competence (Li, 2013; Peckenpaugh, 2016; Tompkins et al., 2017; Puckett, 2020; Sakamoto, 2022; Kulturel-Konak, 2020), intercultural awareness (Moskal & Schweisfurth, 2018), global awareness (Kurt et al., 2013; Kulturel-Konak, 2020), social awareness (Puckett, 2020), cultural responsiveness (Puckett, 2020), and global readiness (He et al., 2017). Meanwhile, definitions of global competence continue to evolve with new empirical research and cultural contexts.

2.1 The Evolution of Understanding Global Competence

Bennett's Developmental Model of Intercultural Sensitivity (DMIS) is often considered by scholars as the theoretical foundation for individual global competence (Li, 2013). This model proposes six stages: the first three "ethnocentric stages" are denial of cultural differences, defense against cultural differences, and minimization of cultural differences, while the latter three "ethnorelative stages" are acceptance of cultural differences, adaptation to cultural differences, and integration of cultural differences into effective intercultural communication bridges (Bennett, 1993).

Based on DMIS, early articles on global competence used concepts jointly agreed upon by senior education experts and international organizations as definitions. For example, Hunter (2004) proposed a definition agreed upon by multiple stakeholders, including senior international educators, United Nations officials, and embassy officials, stating that global competence means "having an open mind while actively seeking to understand the cultural norms and expectations of others, and using the acquired knowledge to interact, communicate, and work effectively outside one's own environment." Deardorff and Hunter (2006) further explored "intercultural competence" as an alternative term for global competence (Li, 2013), defining it as "the ability to communicate effectively and appropriately in intercultural situations based on one's intercultural knowledge, skills, and attitudes." Deardorff et al. summarized this definition of global competence through the Delphi method, which was agreed upon by 23 top intercultural experts primarily from the United States. In summary, the definitions provided by Hunter (2004) and Deardorff et al. (2006) emphasize three aspects: intercultural open attitudes, knowledge, and skills.

The first aspect of global competence is having positive attitudes toward other cultures (Green & Oslo, 2003; Hunter et al., 2006; Reimers, 2009; Flammia

et al., 2019). Reimers (2009) argues that a prerequisite for global competence is empathizing with people from other cultural identities, showing interest in different civilizations and their histories, and viewing these differences as constructive, respectful, and peaceful opportunities for exchange. Second, in terms of knowledge, individuals need in-depth understanding of global topics such as world history, geography, healthcare, climate change, economics, politics, and international relations, while also understanding the process of globalization itself and thinking critically about these topics (Reimers, 2009). Finally, essential skills for functioning competently in cross-cultural environments include: 1) the ability to acquire, analyze, and evaluate information and to think critically and solve practical learning problems using cultural references (Deardorff, 2006); 2) skills in listening, observing, and relating to communicate and connect with people from other cultural backgrounds (Bok, 2008); and 3) the ability to use acquired knowledge to extend learning about unknown matters (Li, 2013).

2.2 Definitions by International Organizations

Unlike academic perspectives, intergovernmental organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organisation for Economic Co-operation and Development (OECD) view global competence as an important pathway to promote educational reform, equality, and peace. Although the OECD and UNESCO prioritize Western values over other value frameworks (Grotlüschen, 2018), they still hold significant international status (Briga, 2023), making them relevant for discussion in this review.

First, UNESCO has identified Global Citizenship Education (GCitEd) as a key strategy in its educational work. Briga et al. (2023) consider global citizenship as a replacement term for global competence and note that UNESCO elaborates GCitEd as: 1) cognitive (i.e., acquiring knowledge, understanding, and critical thinking about a) global, regional, national, and local issues; and b) the interconnections and interdependencies between different countries and populations); 2) socio-emotional (i.e., having a sense of belonging to a common humanity, being able to share values, and having a sense of responsibility, empathy, solidarity, and respect for differences and diversity); and 3) behavioral (i.e., acting effectively and responsibly at local, national, and global levels to achieve a more peaceful and sustainable world) (UNESCO, 2015, p. 15).

Second, the OECD proposed in its 2018 PISA study that global competence refers to the ability to: 1) examine local, global, and intercultural issues; 2) understand and appreciate the perspectives and worldviews of others; 3) engage in open, appropriate, and effective interactions with people from different cultures; and 4) take action for collective well-being and sustainable development. These elements are supported by four inseparable factors: (1) knowledge of the world and other cultures; (2) skills to understand the world and take action; (3) open attitudes, respect for people from different cultural backgrounds, and global mindedness; and (4) valuing human dignity and diversity (OECD, 2018).

This interpretation has been cited in existing literature (e.g., Meng et al., 2017; Zhou et al., 2022; Parmigiani et al., 2022), though other scholars question its validity across all cultures (Engel et al., 2019). Research shows that regional and national differences in civic values and character, along with the goals and positions of international organizations, may challenge the development of universal definitions (Veuglers, 2011; Engel et al., 2019; Bailey et al., 2023). For example, the International Civic and Citizenship Study (ICCS) introduces regional differences in civic and citizenship education values, revealing that Asians emphasize self-cultivation and moral development, Latin Americans focus on civic knowledge and the rule of law, while Europeans prioritize equal rights and regional coordination.

In summary, attitudes, knowledge, and skills are also regarded by large international organizations as key elements of global competence. More importantly, international organizations incorporate taking action for the public good and valuing broad humanitarian causes into the consideration of global competence.

3 Measurement and Assessment of Global Competence

Research progress over the past two decades in the measurement and assessment of global competence has shown efforts toward developing specialized scales and attempting to measure various dimensions of global competence separately. These new measurement tools and methods aim to more accurately assess individuals' abilities in cross-cultural understanding, communication, cooperation, and global awareness.

3.1 Unidimensional Scales

Even before the OECD first specifically proposed global competence in 2017, academia had already conducted some measurements and research on similar concepts (commonly referred to as intercultural competence in the past), such as the Intercultural Development Inventory (IDI). The IDI scale proposed by Hammer et al. (2003) measures intercultural sensitivity—that is, an individual's ability to experience cultural differences—through self-report. Constructed based on Bennett's (1993) DMIS model as a theoretical framework to measure different orientations toward cultural differences, the IDI established a self-report questionnaire containing 50 items (plus an additional 10 demographic items) to measure intercultural competence. The DMIS model explains six orientations in the process of acquiring intercultural competence, each representing a specific worldview structure, with movement between worldview structures assumed to be unidirectional. That is, people typically cannot regress from having more complex intercultural experiences to simpler ones. Moreover, individuals who can perceive cultural differences in more complex ways (i.e., those with higher intercultural sensitivity) also have greater potential to exercise intercultural competence. The IDI scale has undergone confirmatory factor analysis, reliability analysis, and construct validity testing, verifying the five dimensions proposed by the DMIS model: the DD (Denial/Defense) scale; the R (Reversal)

scale; the M (Minimization) scale; the AA (Acceptance/Adaptation) scale; and the EM (Encapsulated Marginality) scale. The concept measured by the IDI scale is quite stable, as no significant differences in scale scores were found regarding age, education, social desirability, or cross-cultural validity, and gender differences were only found in the DD scale (Hammer et al., 2003; Hammer, 2011). Additionally, the IDI scale remains a valid measurement tool today; Scott and Sandell (2022) used the IDI scale to compare changes in marketing undergraduates' intercultural competence after participating in a 9-day study abroad program (an opportunity for multicultural exposure) and found significant positive growth in students' intercultural competence after the program.

3.2 Multidimensional Scales Based on Core Elements

However, more scholars in the field of international higher education believe that global competence is a multidimensional concept that should be measured by breaking it down according to its core elements. Fantini and Tirmizi (2006) first developed a four-dimensional scale for intercultural competence (abbreviated as AIC) in 2006. The AIC includes four measurement indicators: knowledge, attitudes, skills, and intercultural awareness to assess abilities in cross-cultural communication and cooperation. This four-dimensional scale passed reliability and validity tests among German and Swiss participants.

Although intercultural competence and global competence are conceptually similar, they have distinct differences. Global competence includes not only the ability to communicate across cultures but also emphasizes understanding global issues and participating in global solutions, representing an important expansion and deepening of the intercultural competence concept. The Organisation for Economic Co-operation and Development (OECD) retained in its 2018 Global Competence assessment report the AIC indicators that assess knowledge of analyzing regional, global, and intercultural issues and the ability to participate in intercultural cooperation, and particularly emphasized incorporating action for the common well-being and sustainable development of humanity into the assessment of global competence (OECD, 2018). The validity of the PISA 2018 four-dimensional global competence scale is reflected in its particular focus on global “21st-century knowledge and skills”—that is, the ability for global cooperation to solve complex global problems such as pandemics, climate crises, and poverty. This modification is also consistent with the United Nations Sustainable Development Goals (SDGs) focus on global citizenship (OECE, 2020). However, although existing scales have achieved certain success in measuring knowledge and attitudes, they remain insufficient in measuring the critical dimension of communication and language skills. This indicates that future research urgently needs to develop and refine tools specifically for assessing communication and language skills to accurately capture individuals' ability to communicate effectively in intercultural environments, thereby more comprehensively measuring the multidimensional structure of global competence.

Building on this foundation, Liu et al. (2020) developed the Global Competence

Scale for Graduate Students (GCSG) by extracting three common core components of global competence from previous multidimensional scales proposed by researchers from both Eastern and Western contexts, specifically to measure graduate students' global competence. This scale not only integrates the three core dimensions of knowledge and understanding, skills, and attitudes and values but, more importantly, specifically emphasizes the measurement of cross-cultural communication abilities within the skills dimension, including individuals' ability to use foreign languages and information technology, cross-cultural communication capabilities, and the ability to communicate with students and scholars from different cultural backgrounds, thereby filling the gap in existing research tools regarding the assessment of practical communication skills. The study applied this scale to a sample of Chinese graduate students from five universities in Beijing, testing the three-dimensional theoretical framework and examining the scale's reliability and validity. Additionally, the research found that the sample scored relatively high in knowledge and understanding as well as attitudes and values but lower in communication skills. The development of the GCSG scale is based on a comprehensive theoretical framework and has undergone empirical testing, demonstrating high reliability and validity, making it an effective tool for assessing students' global competence. However, although the scale performed well among Chinese student samples, its applicability needs further validation in broader cultural and educational contexts.

Currently, most global competence scales focus on measuring people's knowledge, attitudes, skills, and awareness, but the measurement of global competence should focus more on individuals' abilities and performance in specific contexts. The Cultural Intelligence Scale (CQS) is precisely a questionnaire designed to predict individuals' performance in globalized environments and interactions (Van et al., 2008). The CQS self-report scale developed by Van et al. (2008) contains 20 items measuring four dimensions of the CQ (Cultural Intelligence) model: metacognitive, cognitive, motivational, and behavioral. These four dimensions correspond to the depth, breadth, and flexibility of individuals' cultural strategies, knowledge, motivation, and skills. Metacognitive CQ relates to strategies (specifically planning, awareness, and checking) and refers to individuals' mental ability to acquire understanding of cultural knowledge. Cognitive CQ relates to knowledge of various cultures and cultural differences, including general knowledge of cultural issues and specific knowledge of particular cultures. Motivational CQ relates to motivation and refers to individuals' ability to concentrate energy and persist in efforts to achieve effective functioning in intercultural situations. Behavioral CQ relates to skills and refers to individuals' ability to function effectively in intercultural interactions in flexible ways. The CQS as a self-report scale may subjectify individuals' self-efficacy in global situations, but such subjectification may cause their scale data to deviate from actual global competence.

To address this limitation, the CQS scale can also be measured by informed third parties, such as colleagues, classmates, supervisors, or observers (Wang & Goh, 2020). Ang et al. (2015) found that the convergent validity between self-

rated and other-rated CQ is adequate and shows considerably high correlation. Additionally, the factor structure of the CQS scale has been tested through individual samples from multiple countries, including Germany, South Korea, Singapore, Turkey, and the United States (Greischel et al., 2021; Wang & Goh, 2020). Therefore, we believe that the concept and scale of cultural intelligence can serve as an effective tool for measuring individual global competence.

4 Mechanisms for Enhancing Global Competence

The arrival of the globalization era has made global competence an important topic in education. Cultivating students' global competence requires not only theoretical knowledge from classroom learning but also practical experience and exposure through direct contact with local cultures and cross-cultural interactions. This section explores the pathways and methods for enhancing students' global competence from these three perspectives and examines the underlying psychological mechanisms.

4.1 Curriculum Learning

Promoting cross-cultural international education is often regarded as one of the primary means of cultivating global competence, and learning specific courses is considered an important method for developing attitudes, values, and skills related to global competence (Kjellgren & Richter, 2021; Tarrant et al., 2014). Educators can cultivate students' capacity as global citizens by integrating learning content that promotes global, international, and intercultural competence into existing curricula or designing entirely new courses (Huang, 2023; Huo & Wang, 2023; Krebs, 2020). For example, the "BE a Global Citizen" program created by the Beyond Education organization aims to cultivate core concepts such as critical thinking, communication skills, collaboration ability, curiosity, and moral values (Celume & Maoulida, 2022). Additionally, by conducting cultural examinations of learned cultural theories and reflecting on how different cultures influence communication and interaction patterns between groups, students can better become aware of conflicts between different cultures and envision learning, working, and living in sociocultural systems with significant cultural differences (Machwate et al., 2021).

However, despite numerous studies on cross-cultural and global-oriented education, scholars and educators have not yet reached consensus on the definition of global competence (Grotlüschen, 2018; Engel et al., 2019; Mansilla et al., 2020). To better cultivate global competence, cross-cultural exposure and cooperation must be combined with classroom theoretical learning.

4.2 Direct Exposure to Local Cultures

Living in another country allows individuals to experience different cultural backgrounds, thereby better understanding cultural differences and developing a more ethnorelative perspective (Wikana, 2022). Research by Salisbury et

al. (2013) shows that regardless of students' socioeconomic status, educational aspirations, or college experiences, study abroad experiences enhance their intercultural competence.

Both long-term and short-term overseas study programs, as well as short-term overseas travel for learning purposes, can cultivate students' open-mindedness, intercultural communication skills, intercultural sensitivity, and global awareness (Schenker, 2019; Grabowski et al., 2019; Moskal & Schweisfurth, 2018; Byker & Putman, 2019; Nepal et al., 2022). Furthermore, activities during study abroad such as visiting local museums, touring historical sites, and traveling to nearby cities can also increase students' attention to cultural diversity and develop historical perspectives and international outlooks (Schenker, 2019).

4.3 Cross-cultural Interaction

Collaborating and communicating with people from different cultures can also help individuals enhance their global competence and personal capabilities (Oka & Taji, 2022; Wikana, 2022). For example, in a project that adopted a “buddy system” approach, learning and working together with people from different countries, exchanging experiences and insights, not only improved both parties' self-esteem, foreign language proficiency, and maturity but also helped them broaden their worldviews, eliminate existing cultural stereotypes, and enhance their interest in and understanding of other cultures and countries (Wikana, 2022).

Online exchange is also an effective form of cross-cultural programs. By exchanging daily life photos and videos or jointly discussing culturally controversial issues, both parties can develop oral and written language skills while understanding cultural structures and intercultural challenges (Machwate et al., 2021), enhancing their ability to view issues from different cultural perspectives, respect, interpret, and negotiate different viewpoints (Krebs, 2020; Nicolaou & Sevilla-Pavón, 2022). This type of online cross-cultural program has lower implementation costs, provides opportunities for non-native speakers to improve their foreign language oral expression skills, and reduces psychological barriers to participating in all-foreign-language seminars (Aihara et al., 2021), making it an effective way to cultivate global competence.

5 Limitations and Future Directions

In today's globalized context, global competence has become increasingly important and urgent. This paper reviews the definitions, measurement methods, and cultivation approaches for global competence. However, existing research has the following limitations: First, the concept of global competence is difficult to unify. Although the Organisation for Economic Co-operation and Development (Global Competence Associates, 2018) has provided a relatively authoritative definitional framework, differences in the definition and included dimensions of this concept still exist across literature. The general definition of global com-

petence mainly includes five aspects: positive open and respectful attitudes, knowledge of globalization and global topics, effective communication and learning abilities in intercultural contexts, and humanitarian values that lead to action. However, research needs and cultural backgrounds significantly influence the specific definition of global competence, and empirical studies show that the above definitions may not be applicable to individuals from non-Western cultures.

Second, global competence scales should be continuously updated with evolving global education trends. The PISA 2018 report reveals future assessment evolution trends, such as incorporating creative thinking and learning in digital worlds into the assessment scope for 2022 and 2025. This evolution reflects the dynamic and contemporary nature of global competence components and the need for assessment tools to adapt to developmental requirements of the times.

Meanwhile, current research on global competence among international student groups is limited. In the wave of globalization, studying abroad has become an increasingly common trend. The population of Chinese overseas students is large, structurally diverse, and spread worldwide (Wang et al., 2022; Ministry of Education of the People's Republic of China, 2019). As pioneers of cross-cultural contact, overseas students not only face adaptation issues such as cultural differences and language barriers (Wang et al., 2022) but also bear the mission and responsibility of cross-cultural exchange and inclusivity (Zhou & Green, 2022). There is now greater emphasis on cultivating overseas students' global perspectives and cross-cultural communication abilities so they can thrive and create greater value on the international stage (Hammond & Keating, 2018). Future research should focus on the enhancement and cultivation of global competence among Chinese overseas student groups.

Finally, for educational institutions, PISA emphasizes that education systems play a crucial role in cultivating students' global competence. To strengthen this cultivation, schools need to develop curricula encompassing open worldviews, create a positive and inclusive learning environment, and provide opportunities for deep interaction with people from different cultural backgrounds. This requires not only diversified curriculum content but also teachers who can effectively guide students in developing necessary global perspectives and cultural skills. Additionally, Liu et al.'s (2020) study reveals deficiencies in cross-cultural communication skills in current assessments, suggesting that educators should strengthen training and improvement in students' global communication skills, which can be achieved through practical models such as simulating international cooperation projects and cross-cultural exchange activities. This can not only enhance students' global competence but also deepen their understanding of and engagement with global issues.

In conclusion, given the multidimensional and complex nature of global competence, future research should strive to develop and validate assessment tools effective across different cultural and educational systems. Education practitioners should adopt a critical attitude when using these tools to ensure they can

fairly and accurately reflect students' comprehensive abilities across different cultural backgrounds and promote the overall development of global competence. The adaptability and flexibility of education systems will be key to supporting students' success in multicultural and globalized contexts. Through these theoretical guidance and practical explorations, education systems will be better able to adapt to globalized educational needs, cultivate the next generation of youth with global perspectives and global competence, lay a solid foundation for them to live, learn, and work better in a multicultural world, and prepare strategically with knowledge, skills, and large-scale cooperation for building a global community with a shared future.

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