

Pathways and influencing factors of global competence in Chinese higher vocational education: A systematic literature review

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Abstract: In the context of economic globalization and industrial transformation, this study aims to explore how Chinese higher vocational education (HVE) cultivates students' global competence to meet international labor market demands. Following the PRISMA 2020 guidelines for systematic reviews, twelve eligible studies published between 2010 and 2025 were analyzed using thematic analysis to trace the evolution, main pathways, and influencing factors of global competence cultivation. Findings indicate that research in this area has grown steadily since 2018, focusing on four core themes: empirical investigations, curriculum and pedagogy, teaching materials, and policy strategies. Cultivation pathways are concentrated in three domains: curricular and instructional reform, experiential practice, and campus culture with institutional support. However, challenges persist, including goal-orientation bias, limited faculty capacity, unequal opportunity structures, and mismatches with industry needs. Overall, existing studies remain constrained by limited representativeness, insufficient theoretical localization, and underdeveloped assessment frameworks. Future research should broaden disciplinary and regional coverage, adopt longitudinal and mixed-method approaches, and establish multidimensional evaluation systems aligned with vocational contexts to advance the internationalization and high-quality development of Chinese HVE.

Keywords: Chinese higher vocational education (HVE), Cultivation pathways, Global competence, Influencing factors, Systematic review.

1. Introduction

Amid the waves of economic globalization and the Fourth Industrial Revolution, the restructuring of global value chains, labor mobility, and advances in digital technologies have posed unprecedented challenges to the goals of talent cultivation and the structure of curricula in education [1, 2]. Confronted with such transformations, the education system is urgently required to undergo reform and upgrading, aiming to equip students with the capabilities to adapt to and lead future societal development. This new educational mission not only goes beyond traditional job preparation to emphasize the cultivation of responsible citizens [3] but also, more profoundly, seeks to empower students to actively understand and create the future [4].

Against this backdrop, global competence (GC) has come to be widely regarded as one of the core capacities necessary for individuals in the 21st century [5, 6]. However, the theoretical construction of this concept has not been achieved overnight; instead, it has undergone continuous refinement, evolving from preliminary explorations of its constituent elements to the development of systematic frameworks, combining the contributions of numerous scholars [7]. As early as the late 20th century, Lambert [8] from an educational perspective, proposed a prototypical framework of global competence, defining it as an integrated capacity comprising cultural relativity (including relevant knowledge, empathy, and positive attitudes toward visiting other countries), foreign language proficiency, and intercultural adaptability. This laid the foundation for subsequent research. Building upon this, Hunter [9] through

the Delphi method, proposed the well-known “Knowledge–Skills–Attitudes” (KSA) model, which has since become a classic triadic framework in GC research. Later, Deardorff [10] advanced the Pyramid Model of Intercultural Competence, which emphasizes the gradual development of attitudes, knowledge, and skills, exerting a significant influence on GC theory. Reimers [11] further incorporated responsibility and educational action into the construct of GC, highlighting the role of education in fostering global citizenship. Ultimately, the OECD [12] by synthesizing and integrating diverse scholarly perspectives, formally released the PISA Global Competence Framework, which specifies four core dimensions: identifying global issues, understanding others, intercultural communication, and responsible action. This framework has since become a widely adopted reference in international educational assessment.

Although enhancing youth global competence has become a shared consensus within international education, research and practice in Chinese higher vocational education (HVE) still face considerable challenges. Within traditional societal perceptions in China, vocational education has often been viewed as a “second-best choice” for students [13, 14]. Consequently, HVE has largely been positioned as skills training oriented toward specific occupations, with insufficient attention given to shaping students’ “whole person” development and fostering global literacy [15–17].

With the ongoing restructuring of global industrial chains and the advancement of national strategies such as the Belt and Road Initiative, the international labor market now demands not only specialized technical competencies but also intercultural understanding, awareness of global issues, and the ability to solve problems in diverse contexts [18, 19]. Against this backdrop, HVE—an integral part of Chinese higher education system that annually trains millions of technical and skilled workers—plays a crucial role not only in alleviating employment pressures and promoting educational equity, but also in industrial upgrading, regional transformation, and the implementation of national strategies [20, 21].

It is worth noting that China’s HVE differs from the TVET (technical and vocational education and training) models commonly advocated internationally. While in many countries TVET primarily corresponds to secondary education and short-term training, Chinese HVE has been incorporated into the national higher education system, combining both “higher” and “vocational” attributes [22]. It provides academic degrees while simultaneously serving national strategies and industrial needs, and has developed into the world’s largest and relatively comprehensive vocational education system [23, 24]. Building on this foundation, China’s HVE has actively explored pathways to internationalization—for example, through Luban Workshops, cross-border joint programs, and overseas training centers—promoting the globalization of educational resources and talent cultivation [25, 26]. However, these institutional and program-level explorations have not been fully translated into students’ individual global competence. Deficiencies remain in curriculum integration, opportunities for intercultural learning, and the construction of sustainable mechanisms [27, 28]. This implies that the connotation and mechanisms of GC within Chinese HVE must be systematically explored in alignment with local contexts [29].

Existing research further confirms these deficiencies: overall, Chinese HVE institutions remain at an early stage of GC cultivation. Problems such as fragmented internationalized curricula at home and limited authentic intercultural learning opportunities have led to students’ weak performance in global issue awareness and intercultural communication skills [23, 30, 31]. Searches in CNKI likewise show that studies using “HVE” and “global competence” as keywords are relatively limited, with most focusing on theoretical discussions or policy recommendations, and lacking large-scale empirical research and systematic mapping of cultivation pathways [28, 32].

Therefore, this study aims to conduct a systematic literature review to comprehensively map the research status of GC among Chinese HVE students, with particular attention to major pathways and their characteristics, while also identifying existing gaps and limitations. Specifically, this study seeks to: (1) summarize and categorize existing literature to reveal the developmental trajectory and key thematic areas of GC research in Chinese HVE; (2) analyze the limitations of current research, especially

with respect to theoretical construction, empirical methods, and practical applications; and (3) propose possible directions for future studies, in order to provide references for HVE institutions in curriculum design, internationalization practice, and policy formulation. As a systematic review, this article not only integrates and reflects on existing knowledge but also lays a foundation for subsequent empirical research and offers scholarly insights for the internationalization of HVE in China.

2. Methodology

2.1. Research Design

This study adopts the method of a Systematic Literature Review (SLR) to systematically examine and synthesize research on global competence among students in Chinese higher vocational education. An SLR enables transparent procedures of retrieval, screening, and analysis, thereby reducing subjective bias and enhancing the transparency and reliability of the review results [33]. In addition, the PRISMA 2020 guidelines were followed to ensure the completeness and traceability of the research process [34].

2.2. Literature Search Strategy

To ensure comprehensive coverage of relevant research, this study conducted systematic searches across multiple databases for the period from 2010 to 2025. The choice of 2010 as the starting point was based on the following considerations. First, global competence research began to increase in international education after 2010 and has exhibited distinct developmental stages. Wu [35] noted that the period from 2010 to 2017 represented a fluctuation phase in global competence research abroad, while the field entered a stage of rapid growth after 2018, when the OECD officially incorporated global competence into the PISA assessment framework. Second, related research in China emerged later than in the international community. The earliest systematic explorations can be traced to 2014, and the framework of core elements of global competence proposed by Tsinghua University in 2016 marked the formal initiation and subsequent expansion of domestic research [36]. Therefore, setting 2010 as the baseline year not only captures the expansion phase of international research but also encompasses the emergence and growth of Chinese studies, thereby ensuring both the completeness and representativeness of the review.

Regarding database selection, this study included both international and domestic core databases. The international databases were Web of Science (WoS) and Scopus, while the domestic database was China National Knowledge Infrastructure (CNKI). In educational and social sciences research, using multiple databases has been proven to enhance coverage and representativeness [37].

In the WoS search, the following combinations of keywords were applied: “*global competence*” OR “*global competency*” combined with “*higher vocational*” OR “*higher vocational education*” OR “*higher vocational colleges*” and further restricted by “*China*” OR “*Chinese*.”

In Scopus, however, the same delimiters did not yield results. Therefore, the search strategy was adjusted to “*global competenc**” AND “*higher vocational*” AND “*China*” OR “*Chinese*”.

In the CNKI database search, since the research subjects were already situated in the Chinese context, it was unnecessary to include “China/Chinese” as delimiters. Accordingly, the search terms adopted were the Chinese translations of “*global competence*” or “*global competency*” combined with “*higher vocational*,” “*higher vocational education*,” or “*higher vocational colleges*.”

In addition, the snowballing method was employed, whereby the reference lists and citation records of relevant studies were traced to expand the search results. This approach has been demonstrated to be effective in enhancing the comprehensiveness of literature retrieval in review studies [38].

2.3. Inclusion and Exclusion Criteria

To ensure the relevance and scholarly quality of the literature, the following criteria were established:

2.3.1. Inclusion Criteria

- a. Studies focusing on global competence among Chinese higher vocational education (HVE) students, or research addressing cultivation pathways, mechanisms, and policies of GC within the Chinese HVE context;
- b. Sources limited to journal articles, conference papers, and policy research reports formally issued by authoritative institutions;
- c. Publications written in English or Chinese.

2.3.2. Exclusion Criteria

- a. Studies not involving Chinese HVE, focusing only on general higher education or TVET;
- b. Studies not directly related to the concept of global competence;
- c. Master's or doctoral theses, and non-scholarly documents such as news reports, editorials, or short commentaries.

The formulation of explicit inclusion and exclusion criteria helps to enhance the transparency and reproducibility of the review, which is also a key requirement emphasized by the PRISMA framework [34, 39].

2.4. Literature Screening Process

The initial search yielded 62 records (4 from WoS, 22 from Scopus, and 36 from CNKI). After removing duplicates, 56 studies remained. Based on titles and abstracts assessed against the inclusion and exclusion criteria, 12 potentially relevant studies were identified. Subsequently, the snowballing method was applied to these 12 studies, tracing their references and citation records, which added one additional paper related to the research topic. After full-text screening, 12 studies were finally included for analysis. Articles that mentioned the cultivation of global competence in their abstracts but whose core focus was on STEM education design or the application of PLS-SEM were excluded, as they did not specifically address global competence in Chinese higher vocational education [40]. The screening procedures in this study followed the PRISMA guidelines, and the process is presented in a flow diagram (Figure 1) to ensure clarity and traceability [34].

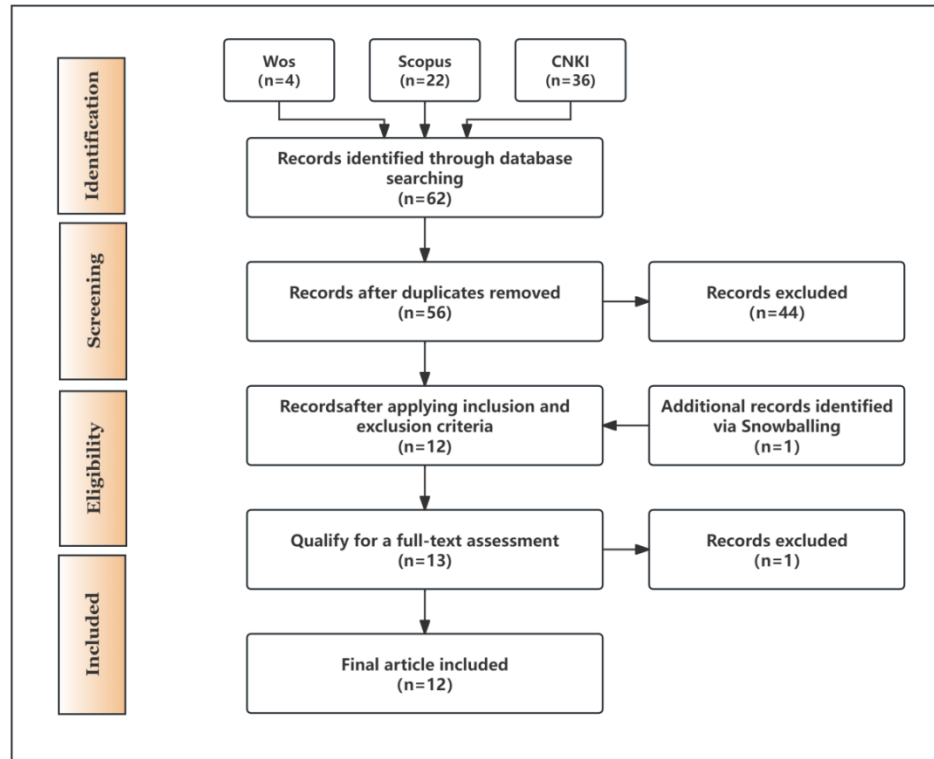


Figure 1.
PRISMA flow diagram of this study.

2.5. Data Extraction and Analysis

For the studies finally included, a standardized data extraction form was designed, covering the following items: author(s) and year, research subjects (institution type, sample size, etc.), definitions and measurement approaches of global competence, cultivation pathways (such as curriculum system, teaching models, international exchange, school–enterprise collaboration, and policy support), research methods, and main findings. The use of a unified form enhanced the consistency of data extraction [41].

For the analysis, thematic analysis was employed. As a flexible and widely applied qualitative method in educational research, thematic analysis enables the identification of latent patterns and themes within the data [42, 43]. Specifically, this study focused on two core dimensions:

- Cultivation pathways: Summarizing the approaches and strategies proposed or implemented in the existing literature;
- Influencing factors: Synthesizing the main factors affecting the development of global competence among Chinese HVE students, including those at the individual level, the curriculum and teacher level, and the institutional and policy level.

This approach not only integrates the existing body of research systematically but also reveals commonalities and differences across studies, thereby providing directions for future research.

3. Findings and Discussion

3.1. Overall Distribution Characteristics

The initial search period of this study was set from 2010 to 2025; however, the earliest publication meeting the inclusion and exclusion criteria appeared only in 2018. This gap can be attributed primarily to the fact that global competence research worldwide has focused mainly on K–12 students and those

in traditional higher education institutions [44, 45] while students in higher vocational education, as a distinct educational group, entered the research agenda relatively late [28].

Within this context, the 12 studies ultimately included in this review span the years 2018 to 2025 and broadly cover the major contributions to research on global competence in Chinese HVE. Overall, these studies reveal a developmental trajectory evolving from exploratory inquiries to more diversified and systematic investigations. The research subjects encompass different regions and disciplines, while the types of studies range from empirical assessments to curriculum, textbook, and policy analyses, collectively reflecting both the expansion and staged characteristics of this field.

In terms of temporal evolution, research on global competence in Chinese higher vocational education (HVE) started relatively late within the databases covered by this study, with the earliest publications traceable to 2018. Since then, the number of studies has shown a steady upward trend, entering a phase of rapid growth after 2023.

3.1.1. Temporal Evolution

Overall, the development of this field can be divided into three stages:

- a. Initial exploratory stage (2018–2021): A small number of studies appeared, mainly focusing on theoretical explications and case practices, reflecting the nascent phase of the field.
- b. Expansion and empirical stage (2022–2023): Research began applying global competence frameworks to specific disciplines and student groups, employing quantitative tools or benchmarking approaches, and conducting systematic analyses of textbook resources.
- c. Advanced development stage (2024–2025): A significant increase in publications occurred, with research themes becoming more diversified, covering curriculum reform, cross-disciplinary cultivation, regional cooperation, policy pathways, and innovative practice models, indicating a shift from fragmented explorations to systematic development.

As illustrated in Figure 2, the number of publications in this field has steadily increased since 2018, reaching a temporary peak in 2023 and further expanding in 2025. This trend reflects the growing academic attention to global competence in Chinese HVE. Overall, the research trajectory demonstrates a progression from scattered explorations to a multidimensional and parallel structure, laying the foundation for subsequent typological analyses.

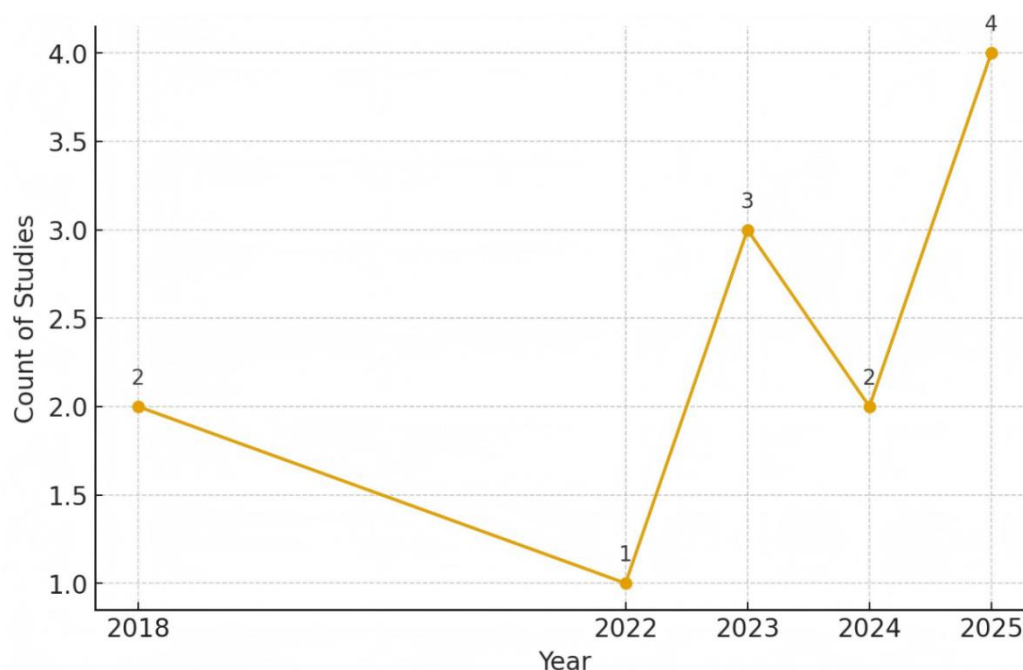


Figure 2.
Trend of global competence studies in Chinese HVE.

3.1.2. Research Type Characteristics

From the perspective of research types, existing studies on global competence in Chinese higher vocational education (HVE) can largely be divided into four categories: empirical investigations, curriculum and pedagogy studies, textbook and resource analyses, and policy and strategy **research**. This classification reflects the development of research at different levels and highlights the trend of moving from theoretical exploration toward teaching reform and institutional design.

- a. **Empirical investigations:** These studies often draw on established international or localized theoretical frameworks (e.g., the OECD PISA Global Competence Framework, the Tsinghua University GC model) to assess and compare the GC levels of Chinese HVE students. For example, Cao [46] adapted the OECD PISA GC framework to design an assessment tool and conducted pre- and post-comparisons for students participating in China–New Zealand exchange programs, finding that international exchange significantly improved students' intercultural communication, awareness of global issues, and collaboration skills. Guo [47] focused on tourism majors in HVE, using questionnaires and factor analysis to construct a layered model of global competence for international tourism talents, emphasizing the integration of intercultural communication and professional skills. Zhang and Sun [48] applied the PISA scale to evaluate GC among HVE students in Beijing and conducted international benchmarking, revealing gaps in cognition and attitudes compared with both OECD and global averages. Liu [28] drawing on Tsinghua's GC model, adapted the scale to the HVE context and surveyed 471 students across four colleges in Jiangsu Province, finding that the cognitive dimension was the weakest. While such studies provide valuable data for diagnosing the current state of GC, their evidence base remains limited due to narrow sample coverage and a lack of longitudinal tracking.
- b. **Curriculum and pedagogy studies:** This strand emphasizes curricula as the core arena for cultivating GC, including both theoretical discussions and practices in specialized and foreign language courses. Cao [32] discussed GC cultivation in HVE from a theoretical perspective,

stressing cultural confidence as the foundation, intangible cultural heritage as a carrier, international exchange as an effective pathway, and foreign language learning and intercultural training as essential supports. Jiang [49] and Jiang [50] focused on English curriculum reform, proposing strategic adjustments to objectives, content, and assessment, and further developed an “integrated model” to combine language ability with GC. Hu [51] in the context of the “new liberal arts,” defined GC for HVE foreign language talents as a three-dimensional structure of “qualities–knowledge–skills” and advocated cross-disciplinary curricula combined with practice. Overall, these studies underscore the critical role of curriculum reform in GC development, but most remain case-based and lack systematic empirical evaluation.

- c. **Textbook and resource studies:** Research on textbooks is relatively limited. A representative study is by Ping and Wang [23] who conducted content analysis and found that while Chinese HVE English textbooks (Edition D) cover GC indicators to some extent, they overly emphasize knowledge comprehension and insufficiently address attitudes, values, critical thinking, and multiple perspectives. Such studies highlight resource-related constraints on GC cultivation, though their limited samples reduce the generalizability of conclusions.
- d. **Policy and strategy studies:** This line of research focuses on institutional design and regional cooperation, emphasizing strategic orientation and replicable experiences. Ma and Wu [30] under the “Education Power” strategy, proposed a dual-dimension framework of GC for HVE students—general and vocational—and, based on existing challenges, designed implementation pathways encompassing policy guidance, curricular reform, faculty development, and digital transformation. Lu [52] drawing on the “community of shared future for mankind” and China–ASEAN cooperation, proposed a regionalized pathway integrating language, curriculum, practice, faculty, and assessment, advocating multidimensional synergy for GC development. Niu, et al. [53] leveraged counselor studios—a characteristic model of Chinese universities—to introduce the “light cavalry” approach, exploring low-cost, replicable GC cultivation programs. These studies underscore the complementary value of macro-level strategies and grassroots innovations but still lack quantitative evaluation of implementation outcomes.

In sum, the four types of studies each have distinct emphases: empirical investigations provide diagnostic data on current status; curriculum and pedagogy research stress classroom and disciplinary pathways; textbook analyses reveal resource-level deficiencies; and policy and strategy research offer institutional and regional guidance. Collectively, the existing literature has begun to form a multi-level structure spanning micro, meso, and macro dimensions, yet gaps remain in scale, depth, and empirical validation, and systematic integration across categories has not yet been achieved.

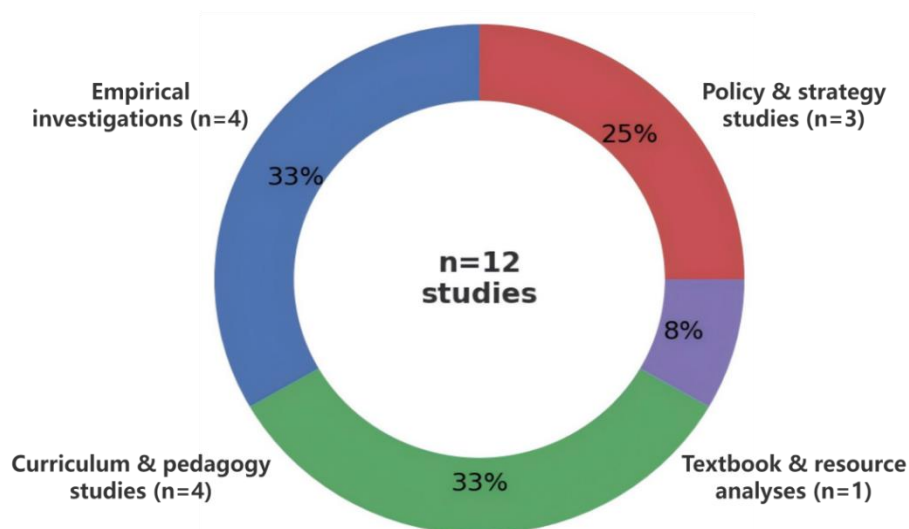


Figure 3.
Research Type Distribution of Global Competence in Chinese HVE context.

3.1.3. Research Subjects and Contexts

With regard to research subjects, most existing studies take higher vocational students as the core group. Among them, empirical studies typically present students' global competence levels directly through sample-based assessments, while curriculum-, textbook-, and policy-related studies, although not based on specific samples, are likewise oriented toward the cultivation needs of students' global competence.

In empirical research, Cao [46] used as samples 100 five-year program students from Suzhou Tourism and Finance Vocational College, focusing on their participation in international exchange programs. Zhang and Sun [48] surveyed 74 students from a vocational college in Beijing, covering majors such as electronic information engineering, new energy vehicles, mechatronics, software technology, and big data technology. Liu [28] conducted a large-scale survey across four public vocational colleges in Jiangsu Province, with 471 students in total, of whom nearly 60% were from humanities-related majors. Different from these student-centered quantitative studies, Guo [47] adopted a mixed-methods approach: the qualitative part involved interviews with 12 senior international tourism practitioners, while the quantitative part included 193 outbound tour leaders, foreign language guides, immigration officers, and tourism experts, making it the only empirical study that did not take students as the primary subjects.

In terms of research contexts, most studies rely on in-class curricula and classroom teaching, with foreign language courses and tourism-related courses as the most common settings. Jiang [49] and Jiang [50] proposed English curriculum reform models that integrate language learning with global literacy, while Hu [51] constructed a three-dimensional structure of global competence for foreign language talents under the "new liberal arts" initiative. Guo [47] in turn, closely integrated GC with tourism curricula. In addition, some studies focus on international exchanges and school-based programs, such as Cao [46] who examined changes in students' GC dimensions before and after participating in Sino-foreign cooperative projects. Niu, et al. [53] explored the optimization of counselor studios as a school-based platform to more effectively promote students' GC cultivation. Moreover, a few studies adopt regional or national strategies as entry points, highlighting the guiding role of development strategies in cultivating GC among vocational students. For example, Guo [47] constructed a model of international tourism talents in response to local cultural tourism industry needs

under Hunan Province's "*Open Rise*" strategy. Lu [52] emphasized the importance of training technically skilled talents with global vision and intercultural communication competence within the framework of the "*A Community with a Shared Future for Mankind*" and China–ASEAN cooperation. Similarly, Ma and Wu [30] stressed the practical significance of GC cultivation for vocational students under the national strategy of "*Building a Strong Educational System*."

Overall, research subjects are concentrated on student groups, and the contexts are mainly limited to classroom teaching and regional strategies. Studies that are cross-disciplinary, multi-regional, or longitudinal in nature remain relatively scarce.

3.2. Pathways of Global Competence Cultivation in Chinese HVE

Based on the synthesis of 12 studies, the cultivation pathways of global competence in Chinese higher vocational education (HVE) can be broadly categorized into three complementary dimensions: curriculum and instruction, experiential practice, and campus culture with institutional support. These pathways address not only "*what to teach and how to teach*" but also "*where to teach and through what contexts and mechanisms*", collectively aiming at the integrated development of students' knowledge, skills, attitudes, and values.

3.2.1. Curriculum and Instruction Pathways

Several studies identify English courses (both general English and English for specific purposes) as the primary arena for cultivating global competence in HVE students, emphasizing the systematic integration of objectives, content, methods, and assessment. Jiang [49] argued that international understanding, workplace scenarios, professional contexts, and ideological perspectives should be embedded into English curricula, supported by measures such as resource digitalization, modularized design, faculty internationalization, contextualized teaching, and standardized evaluation. Together, these measures form a comprehensive curricular framework that strengthens the role of English courses in fostering global competence, including intercultural communication, global awareness, and critical thinking. In terms of pedagogical provision and delivery, Jiang [50] further proposed the use of digital resources such as language platforms, scenario simulations, and VR-based experiences, combined with blended teaching modes of "online + offline," "real + virtual," and "in-class + extracurricular." Such approaches aim to lower the threshold of intercultural experience, enhance student engagement, and promote individualized learning outcomes.

At the same time, drawing on the interdisciplinary orientation of the "new liberal arts," Hu [51] advocated restructuring curricula around industrial digital upgrading, in collaboration with outward-oriented sectors such as cross-border e-commerce and international logistics, to cultivate compound international talents with "English + industry" competencies.

At the textbook level, Ping and Wang [23] found that while the sampled English textbooks covered all dimensions of global competence, the dimension of *attitudes and values* was relatively weak and often implicitly presented. Since textbook content is mainly embedded in task- and activity-based formats (e.g., reading, speaking, and integrated applications), their findings suggest that teachers need to place greater emphasis on value-oriented guidance and issue-based inquiry in classroom practice.

3.2.2. Experiential and Practice-Based Pathways

The existing literature generally agrees that the transferability and action-oriented nature of global competence must be forged in authentic or simulated contexts. Typical pathways include:

- a. Balancing cultural confidence and international exchange. At the macro level, cultural confidence is emphasized as a foundation, shaping students' "global citizen" literacy through interactions between Chinese and Western cultures [32]. At the micro level, programs such as overseas internships, international volunteering, and inter-institutional collaborations are employed to enhance students' intercultural communication and adaptability [30, 51].

- b. Regional collaboration and industry-oriented practice. In the context of China–ASEAN cooperation, research advocates ASEAN-oriented specialized language education and the expansion of multilayered experiential opportunities through “inter-school, school–enterprise, and platform” collaborations, thereby strengthening students’ communication, cooperation, and adaptability in authentic international environments [52].
- c. Lightweight, low-cost project clusters. Leveraging the Chinese-characteristic model of counselor studios, Niu, et al. [53] proposed a “light cavalry” approach and formulated the resource transformation equation: *local resources* \times *creative design* = *global literacy cultivation scenarios*. Based on a “three-dimension six-aspect” training model (cognition, competence, and literacy \rightarrow cultural understanding, technical literacy, bilingual collaboration, innovative practice, global vision, and social responsibility), they organized a project matrix to improve the inclusiveness and replicability of GC cultivation.
- d. Backward mapping of competencies from occupational roles. Frontline industry research has extracted a four-layered competence model—*skills, intercultural competence and values, international mindset, and individual motivation*—through behavioral event interviews and factor analysis, providing reference points for curriculum design and competence enhancement in tourism-related vocational majors [47].

3.2.3. Campus Culture and Institutional Support Pathways

Beyond curriculum and practice, the cultivation of global competence can be “amplified” at the institutional level through cultural ecology and systemic support. First, an internationalized campus culture and diverse activities—such as international cultural festivals, exhibitions, and student associations—can enhance students’ intercultural understanding and their ability to articulate national culture through everyday immersion [50]. A case from Guangxi institutions demonstrates that initiatives such as joint student associations and festival activities effectively broaden students’ international perspectives and foster intercultural exchange [52].

Second, in terms of institutional mechanisms and faculty development, some studies propose multidimensional pathways for sustainable GC cultivation: localized international curricula as entry points, faculty development as the core, digital transformation as the driver, and national policy as the guiding force [28, 30]. Research on counselor studios further suggests mechanisms such as dual-track faculty development and one-to-one mentorship, supported by standardized toolkits and inter-institutional dissemination, to enhance organizational capacity and large-scale implementation [53].

Finally, at the level of regional cooperation, ASEAN-oriented language education and international curriculum construction are viewed as key institutional levers for linking internal and external resources, thereby forming a closed loop of “regional strategy–curriculum–practice” [52].

3.2.4. Common Features of Cultivation Pathways

Synthesizing the above literature, several common features of global competence cultivation pathways in Chinese higher vocational colleges can be identified:

- a. Integration of vocational orientation and cultural confidence: While serving industrial and occupational demands, pathways are grounded in the inheritance of Chinese culture and its international dissemination [30, 32].
- b. Triadic linkage of curriculum–practice–culture: Starting with curricular integration (objectives, content, methods, assessment), strengthening competencies through practical projects, and amplifying outcomes via campus culture and institutional support, thereby forming a multi-level interactive mechanism [53].
- c. Localization of internationalization and regional synergy: Emphasis is placed on embedding international cooperation into localized curricula and projects, while aligning with regional strategies (e.g., ASEAN cooperation, Greater Bay Area industries) and national strategies (e.g., the Belt and Road Initiative) to enhance feasibility and sustainability [28, 30, 51].

- d. Digitalization and lightweight implementation: Platforms, simulations, blended teaching, and project clusters are employed to realize low-cost, efficient, and replicable cultivation pathways [49, 50, 53].
- e. Shortcomings at the textbook level: Although textbooks cover GC elements overall, the *attitudes and values* dimension remains underrepresented and insufficiently explicit, requiring stronger value-oriented guidance and issue-based inquiry in actual teaching [23].

3.3. Influencing Factors of Global Competence in Chinese HVE

A comprehensive analysis of the twelve representative studies indicates that the cultivation of global competence in Chinese higher vocational education (HVE) is constrained by systemic factors. These constraints are not independent of one another but are reflected at three interrelated levels: goal orientation, supply capacity, and opportunity structures.

3.3.1. Goal-Orientation Bias

Existing curricula and textbooks invest heavily in the domains of knowledge and skills but show clear deficiencies in the presentation and assessment of values, attitudes, and critical thinking. Textbook analyses reveal that although most GC indicators are reflected in HVE English textbooks, the dimension of *Attitudes and Values* has the lowest coverage and is often presented only implicitly [23]. This directly weakens students' development in value positions and multi-perspective understanding. Similarly, classroom-based studies indicate that teaching content remains limited, pedagogical models are relatively traditional, and assessment approaches are overly singular. As a result, students tend to achieve improvements at the levels of “knowing” and “being able to do,” while their performance in the dimensions of “thinking” and “acting” remains inadequate [49, 50]. Such goal-orientation bias has led to an imbalanced structure in GC cultivation, characterized by *knowledge outweighing action, and cognition outweighing attitudes*.

3.3.2. Supply-Side Capacity Thresholds

The depth and quality of student learning are largely determined by the availability of teachers and curricula. Studies consistently point out that HVE teachers currently lack sufficient international literacy and intercultural teaching experience, making it difficult to effectively guide students in developing perspectives on global issues within the classroom [30, 51]. Although curriculum reforms have proposed innovative models, including digitalized and blended teaching approaches [49, 50] these explorations have not yet achieved large-scale implementation. At the same time, constraints in resources and technological conditions also serve as barriers: some institutions lack stable platforms and funding support for intercultural activities, while virtual exchange and online collaboration projects, though proposed, have been implemented only on a limited scale [50]. The accumulation of these supply-side thresholds has thus restricted students' real opportunities for practice across the chain of “language–culture–global issues–action.”

3.3.3. Unequal Opportunity Structures and Industry-Profile Mismatches

Significant disparities exist across regions and institutions in terms of international exchange channels, curricular resources, and funding conditions, leading directly to unequal opportunities for students' intercultural learning. A survey in Guangxi shows that vocational colleges generally suffer from weak foreign language foundations and insufficient opportunities for international exchange, which severely limits students' practical training [52]. More broadly, eastern coastal institutions, owing to locational and industrial advantages, are able to provide richer internationalized platforms, whereas central and western institutions remain relatively disadvantaged [28, 47].

In addition, different industries exhibit differentiated demands for global competence. Research in the tourism sector, for example, constructed a layered model of “skills–intercultural competence and values–international mindset–individual motivation” through factor analysis [47] demonstrating that

occupational profiles exert direct influence on students' competence structures. However, institutional cultivation systems have not yet been effectively aligned with industry needs, resulting in supply–demand mismatches. Empirical assessments further reveal that students' overall GC levels remain low, with particularly weak performance in the cognitive dimension [28] which to some extent reinforces this “structural gap.”

At the macro level, although national strategies such as the *Belt and Road Initiative* and the *Education Power* agenda provide directional guidance, the absence of systemic safeguards and sustainable evaluation mechanisms has limited the stable transmission of policy dividends into institutional practices [30].

4. Research Gaps and Future Directions

In summary, although existing studies provide multi-perspective insights into global competence in Chinese higher vocational education (HVE), the literature as a whole still demonstrates several limitations:

First, insufficient coverage. Although empirical investigations involve multiple disciplines, the overall sample sizes and regional representativeness remain limited. For instance, the study in Beijing included only 74 students [48] while the Jiangsu survey, despite covering 471 participants, had nearly 60% from humanities-related majors [28]. In contrast, systematic research on science and engineering, manufacturing, and institutions in central and western regions is markedly lacking.

Second, methodological and theoretical constraints. Most studies employ cross-sectional questionnaires and descriptive statistics [28] lacking longitudinal tracking and intervention experiments, thereby limiting the ability to uncover causal mechanisms. Theoretically, many studies rely on the OECD PISA framework or Hunter's KSA model [46, 48] with only Hu [51] introducing Deardorff's Pyramid Model of Intercultural Competence. Meanwhile, localized explorations, such as the “general–vocational dual-dimension framework” proposed by Ma and Wu [30] remain at the conceptual stage and lack empirical validation.

Third, inadequate evaluation and practice mechanisms. Current assessments mainly depend on adapted scales or textbook analyses [23] which fail to capture students' performance-based competencies in authentic vocational contexts. Some innovative practices, such as the “light cavalry” model [53] or regional collaboration strategies in Guangxi [52] demonstrate localized value but remain confined to pilot cases, without cross-institutional validation or scalable mechanisms.

Future research directions. To address the above limitations, future studies may advance in three ways: (1) broaden coverage by incorporating more disciplines and regional samples to enhance representativeness; (2) employ longitudinal and mixed-method approaches to foster theoretical localization and empirically test exploratory frameworks such as the “general–vocational dual-dimension framework”; and (3) construct multidimensional evaluation systems aligned with vocational contexts, while exploring how localized innovations can be transformed into sustainable and replicable practices.

5. Conclusion

Through a systematic review of 12 relevant studies, it is evident that research on global competence in Chinese higher vocational education (HVE) remains largely in its early stages. The existing literature demonstrates exploratory value in terms of research subjects, methodologies, and theoretical frameworks, and it reveals multiple cultivation pathways and influencing factors involving curricula, teachers, campus culture, and institutional environments. Nevertheless, it is also characterized by limited coverage, insufficient theoretical localization, and underdeveloped evaluation systems and practice mechanisms.

The value of this review lies in clarifying the current status and developmental trajectory of GC research in Chinese HVE, identifying its structural constraints, and proposing possible directions for future inquiry. This not only contributes to enriching and deepening the theoretical system of global

competence in the academic community but also provides practical references for vocational colleges in curriculum reform, faculty development, resource allocation, and policy-making.

Overall, research on global competence in Chinese HVE needs to be advanced across broader disciplinary and regional scopes, strengthened by longitudinal and empirical studies, and supported by the organic integration of international frameworks with local contexts. At the practical level, sustainable institutional guarantees and context-sensitive evaluation systems must be established to better respond to the demands of internationalization and high-quality development in the new era of China's vocational education.

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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