

A 20-Year Bibliometric Analysis on Chinese International Students' Intercultural Adaptation

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Abstract: China is the largest source of internationally mobile students. However, existing reviews of Chinese international students' intercultural adaptation are largely narrative or thematic, offering a useful synthesis but limited evidence-based mapping of the field's knowledge base and thematic development. With the rapid growth of research output, particularly since 2020, with the expansion of digitally mediated learning and social interaction, there is a growing need to systematically synthesize fragmented literature and provide a clearer overview of the field. This study uses bibliometric analysis to examine research on the intercultural adaptation of Chinese international students. Following standard bibliometric reporting practices, the analysis provides a descriptive overview of the field, examining publication output and research participation through performance indicators and collaboration patterns. A total of 145 English-language journal articles indexed in the Web of Science Core Collection (2005–2024) were analyzed. The results show sustained growth in publications over time, with research output concentrated in a limited number of countries, institutions, and journals, and a strong disciplinary orientation toward psychology and counseling. The field also shows a gradual shift from individual-level psychological adjustment toward increased attention to institutional and contextual influences on student adaptation. Building on these patterns, the study proposes a conceptually grounded, preliminary multi-level analytical framework that integrates micro-level individual resources, meso-level institutional conditions, and macro-level sociocultural contexts. In addition, digital technology and study destination are positioned as cross-level contextual conditions that shape adaptation processes, particularly amid recent global disruptions. Overall, the study contributes to a more integrated understanding of intercultural adaptation by linking large-scale bibliometric patterns with theoretically informed interpretation.

Keywords: Intercultural Adaptation; Bibliometric Analysis; Chinese Students; International Education

1.Introduction

Research on Chinese international students' intercultural adaptation has expanded markedly over the past two decades, alongside the growth of Chinese outbound mobility and the internationalization of higher education. Foundational ideas such as culture shock (Oberg, 1954/1960), stage-based adjustment models (Lysgaard, 1955; Gullahorn & Gullahorn, 1963), and stress–adaptation perspectives (Kim, 2001) continue to inform contemporary understandings of adaptation processes. Within this field, research draws on multiple disciplinary traditions. Psychology-oriented studies emphasize acculturation strategies and psychological and sociocultural adjustment (Berry, 1997; Ward & Kennedy, 1999), education research focuses on academic and language adjustment within institutional contexts (Andrade, 2006), while sociocultural perspectives highlight social support, identity negotiation, and interaction in host environments (Matschke, 2022). More recent studies have also addressed digitally mediated adaptation (Kamalova et al., 2020) and diversification of study destinations (Calikoglu, 2018).

Existing reviews are mainly narrative or thematic and provide valuable insights into specific aspects of adaptation, but they do not offer a systematic overview of the field's development as a whole. In particular, there is still a limited understanding of publication patterns, key contributors, and how research attention has evolved over time. As a result, knowledge of the field remains fragmented. In addition, although adaptation is often discussed across multiple levels, including individual, institutional, and sociocultural dimensions, it remains unclear how these perspectives are reflected across the literature as a whole and how they have evolved over time.

To address this gap, this study adopts a bibliometric approach, focusing on descriptive analysis, to provide a systematic overview of research on Chinese international students' intercultural adaptation. It identifies publication trends and key sources of scholarly output and examines how research attention has evolved over time. Building on these patterns, this study proposes a conceptually grounded multi-level framework that links micro-level individual resources, meso-level institutional conditions, and macro-level sociocultural contexts, while conceptualizing digital technology and study destination as cross-level contextual conditions shaping adaptation processes.

2.Methods

A bibliometric analysis applies statistical techniques to examine patterns in bibliographic data, including publication sources, research institutions, and geographic distribution (Van Eck & Waltman, 2010). The aim of this study is to provide a descriptive overview of the development of research on Chinese international students' intercultural adaptation through a descriptive bibliometric approach. The data were retrieved from the Web of Science Core Collection, focusing on English-language journal articles published between 2005 and 2024. A total of 145 articles were identified using predefined inclusion

criteria, including those relevant to intercultural adaptation and Chinese international students. The bibliometric process involved database selection, literature retrieval, and data screening, followed by descriptive analysis of publication output, research participation, and collaboration patterns (Figure 1).

In line with the study's focus on descriptive analysis, the bibliometric approach does not involve network-based techniques (e.g., co-occurrence or clustering analysis) but instead provides a structured overview of publication trends and the distribution of research activity across key actors and contexts.

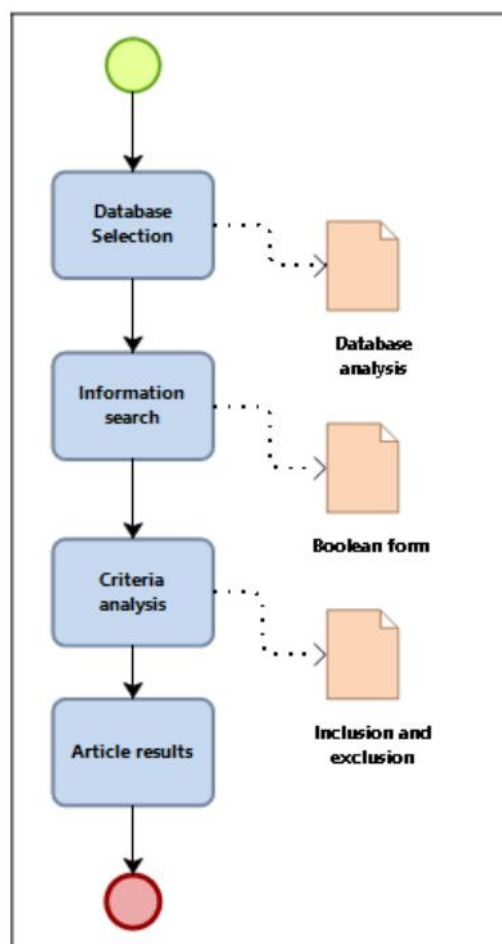


Figure 1. Information Search Process.

Source: Adapted from Andrade-Arenas et al. (2023).

3.Search Procedure

The literature search was conducted in the Web of Science Core Collection (WoSCC) because it provides high-quality, standardized bibliographic records and cited-reference data that are essential for bibliometric analysis. Although the present study focuses on descriptive bibliometric indicators rather than network-based techniques, the use of WoSCC ensures the dataset's accuracy and consistency.

The analytic time span was set to 2005–2024 (inclusive) to ensure year-complete coverage up to 31 December 2024 at the time of retrieval and to avoid partial-year indexing bias that may distort trend interpretation. Publications indexed in 2025 were not included because indexing coverage for the most recent year can be incomplete or uneven across journals at the time of download; a fully updated analysis incorporating 2025 publications can be conducted in future research.

Data retrieval was performed on 5 February 2025 using WoSCC. To ensure correct Boolean logic, the search string was constructed with explicit parentheses to require both the adaptation/adjustment construct and the Chinese-student construct: TS = ((“intercultur* adapt*” OR “cross-cultur* adjust*” OR “acculturat*” OR “cross-cultur* adapt*” OR “cultur* adjust*”) AND (“Chin* international student*” OR “Chin* student*” OR “Mainland Chin* student*”))

Records were included if they focused on Chinese international students’ intercultural adaptation or adjustment, were published as journal articles, and were written in English. The restriction to journal articles ensures comparability of bibliometric indicators, given differences in citation practices across document types. The English-language restriction was applied to maintain consistency in metadata parsing and keyword classification within WoSCC, while acknowledging that non-English scholarship may be under-represented.

Title and abstract screening were conducted to confirm topical relevance. Records were excluded if they were reviews, proceedings papers, meeting abstracts, or early access items with unsettled publication-year attribution at the time of retrieval. After applying these criteria, the final dataset comprised 145 English-language journal articles (Table 1).

Table 1
Search Protocol

Web of Science Database	All
Time Period	2005-2024 (inclusive; indexed up to Dec 2024)
Search Fields	Topic
Search Keywords	TS = ((“intercultur* adapt*” OR “cross-cultur* adjust*” OR “acculturat*” OR “cross-cultur* adapt*” OR “cultur* adjust*”) AND (“Chin* international student*” OR “Chin* student*” OR “Mainland Chin* student*”))
Document Type	Article
Language	English

Based on the PRISMA flow diagram (Moher et al., 2009; Page et al., 2021), Figure 2 illustrates the data extraction and filtration process, consisting of four stages: identification, screening, eligibility, and inclusion.

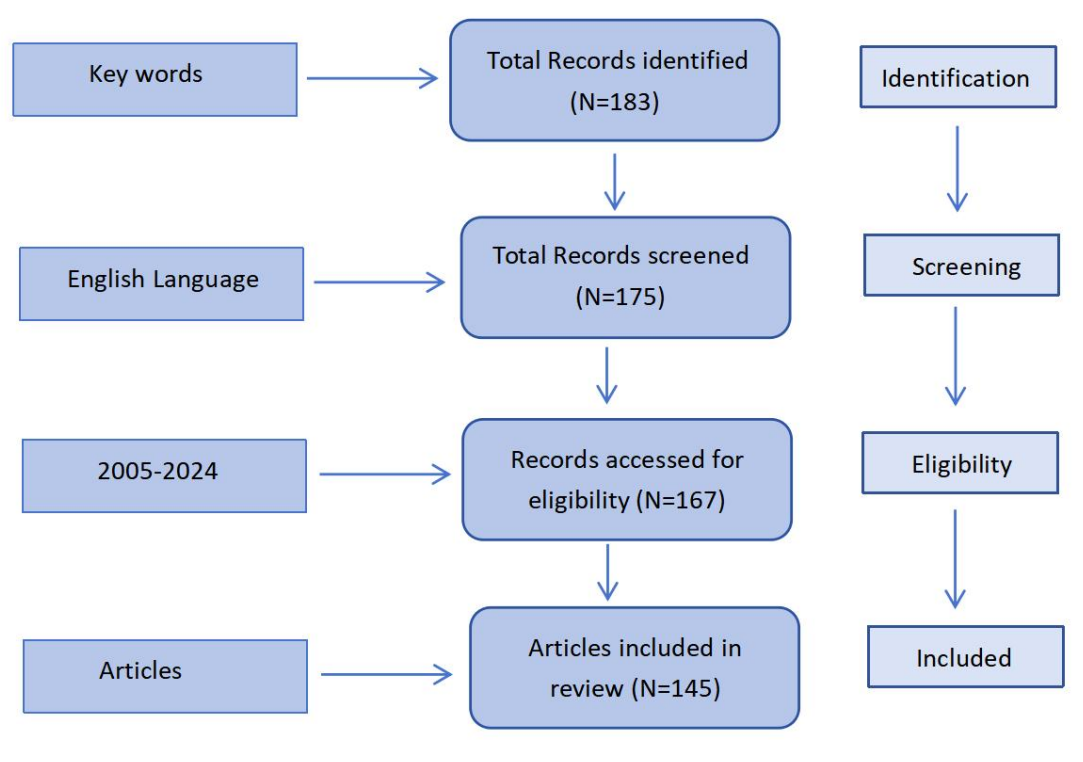


Figure 2. PRISMA Flow Diagram of the Screening Process

4. Bibliometric Analysis

Bibliometric analysis was conducted to provide a descriptive overview of the field. Following standard bibliometric reporting practice, the analysis focuses on performance-based indicators to examine publication output and research participation. Specifically, the analysis covers annual publication trends, the distribution of publications across countries and regions, leading journals, and key contributing institutions. In addition, patterns of research participation are examined at the aggregate level through authorship and collaboration. Consistent with the study's descriptive focus, the analysis does not employ network-based techniques (e.g., co-occurrence or network visualization) but instead provides a structured account of how research activity is distributed across major actors and contexts.

5. Results

5.1 Annual growth of Publication Trends

Figure 3 presents annual publication output and citation patterns. Overall, output increased steadily from 2005 to 2024, with modest activity in the early years, followed by sustained growth from the mid-2010s and a marked rise after 2019, with peaks in 2020, 2022, and 2024. Citations follow a similar trend, rising sharply after 2019 and remaining elevated.

The marked growth in publication output after 2019 may be attributed to several converging factors. Although temporally close to the COVID-19 pandemic, the 2019 surge itself is unlikely to have been pandemic-driven, given typical publication lags. Rather,

COVID-19 likely acted as an accelerant from 2020 onwards, intensifying research attention to student wellbeing, mobility disruptions, and digitally mediated intercultural experiences. Additionally, policy developments across key host destinations, such as adjustments to internationalization strategies, visa regimes, and post-study work opportunities in the late 2010s, alongside continued state support for outbound mobility from China, expanded both the scale and policy salience of international student flows. These shifts have generated increased scholarly engagement with issues of governance, integration, and institutional response. More broadly, the sustained expansion of Chinese outbound mobility constitutes a primary structural driver; China has remained the largest source of internationally mobile students, with over 1,021,000 students abroad in 2021 (UNESCO, 2021). Growth in mobility during the pre-2019 period likely translated into increased research output with a lag effect, as larger and more diverse student populations enabled broader empirical and comparative inquiry. The parallel rise in citations further suggests growing consolidation and visibility of research on Chinese international students, particularly in relation to intercultural adaptation.

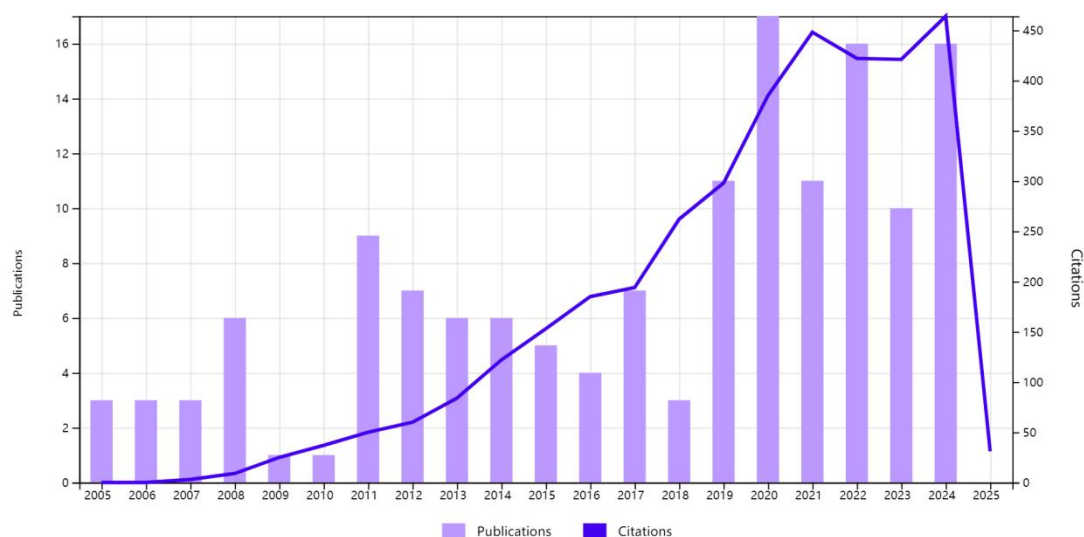


Figure 3. Publication Trends (2005-2024).

Source: UNESCO Institute for Statistics; China had 1,021,303 internationally mobile students in 2021, the highest among all countries.

5.2 Citation Analysis

5.2.1 Countries

Table 2 shows the distribution of documents by country. Of the 31 countries identified, seven met the minimum document threshold of five. The United States ranked first in publication output (60 documents, 1,949 citations), followed by the People's Republic of China (45 documents, 808 citations) and Australia (16 documents, 333 citations). Canada,

England, South Korea, and Germany also contributed notable outputs, with document counts ranging from 5 to 11.

Table 2

Document Distribution by Country

Rank	Country	Documents	Citations
1	United States	60	1,949
2	People's Republic of China	45	808
3	Australia	16	333
4	Canada	11	226
5	England	9	119
6	South Korea	7	63
7	Germany	5	116

At a descriptive level, this distribution broadly aligns with the empirical geography of Chinese international student mobility. China, as the largest source country of internationally mobile students, has strong empirical and policy incentives to examine intercultural adaptation, while major host destinations such as the United States, Australia, Canada, and England continue to attract large concentrations of Chinese students, providing extensive research sites. The predominance of English-speaking countries in the top ranks also reflects the linguistic and publication biases inherent in the Web of Science database, which indexes predominantly English-language journals.

These patterns suggest a concentration of research activity in contexts with high student flows, but do not directly indicate epistemic influence or knowledge circulation. Further interpretation, including potential asymmetries in knowledge production and the structural factors shaping research agendas, is presented in the Discussion.

5.2.2 Institutions

Table 3 reports the institutional distribution of publications. With a minimum threshold of four documents, only six of the 199 organizations entered the core set.

Table 3

Document Distribution by Institutions

Rank	Institution	Documents	Citations
1	Iowa State University	8	332
2	University of Hong Kong	7	223
3	University of Missouri	4	443
4	Tsinghua University	4	155

5	University of Melbourne	4	131
6	University of Kansas	4	98

Table 3 shows that institutional contributions are relatively dispersed, with no single institution dominating the field in terms of publication output. Iowa State University (8 documents) and the University of Hong Kong (7 documents) are the most productive institutions, followed by several universities contributing four documents each, indicating a broadly distributed pattern of knowledge production.

When citation impact is considered, a different pattern emerges. The University of Missouri, despite producing only four publications, ranks first in total citations (443), followed by Iowa State University (332) and the University of Hong Kong (223). This suggests that productivity alone does not determine scholarly impact, as measured by citation counts.

Geographically, leading institutions are predominantly located in major host countries (the United States, Australia, and Hong Kong, a special administrative region of China) alongside mainland China. The predominance of U.S. institutions in the top six (Iowa State University, University of Missouri, University of Kansas) reflects broader patterns of research capacity and student mobility.

5.2.3 Journal Sources

With a minimum source threshold of three documents, seven journals met the criteria. (Table 4).

Table 4

Document Distribution by Journal Source

Rank	Journal Source	Documents	Citations
1	International Journal of Intercultural Relations	25	1,071
2	Frontiers in Psychology	6	27
3	Journal of Counseling Psychology	5	461
4	Journal of International Students	5	20
5	Higher Education	4	101
6	Counseling Psychologist	3	92
7	International Journal of Environmental Research and Public Health	3	24

Publications are concentrated in a small number of journals, with the International Journal of Intercultural Relations accounting for the largest share (25 documents, 1,071

citations), followed by *Frontiers in Psychology* (6 documents, 27 citations) and the *Journal of Counseling Psychology* (5 documents, 461 citations).

In terms of disciplinary orientation, the majority of core journals are situated in psychology and counseling, with *Higher Education* representing the sole education-focused outlet among the top seven. This distribution reflects the historical dominance of psychological approaches, in which intercultural adaptation is primarily conceptualized as an individual-level process emphasizing stress, well-being, acculturation, and coping (Ward et al., 2001; Berry, 2005). This alignment has supported the development of standardized, measurement-driven frameworks, enabling comparability across contexts and contributing to the empirical consolidation of the field.

When citation impact is considered, the *Journal of Counseling Psychology* ranks first in average citations per document (92.2), followed by the *International Journal of Intercultural Relations* (42.8) and *Higher Education* (25.3), suggesting variation in scholarly influence across journals despite differences in publication volume.

5.2.4 Author Collaboration

A total of 372 authors contributed to the 145 publications in the dataset. The majority of authors (362, or 97.3%) contributed to one or two publications, while 10 authors met the threshold of three or more publications. This distribution suggests that the field is characterized by a large pool of authors with limited sustained output, alongside a small group of more prolific contributors.

Table 5

Top 10 Most-Cited Articles on intercultural adaptation of Chinese international students (2005-2024)

No.	Author(s) & Journal Name	Article title	Number of citations	Key Findings/Recommendations
1	Zhou, Yuefang; Jindal-Snape, Divya; Topping, Keith; Todman, John (2008) <i>Studies in Higher Education</i>	Theoretical models of culture shock and adaptation in international students in higher education	330	Theoretical concepts of culture shock and adaptation are reviewed in this study. The historical development of traditional theories of culture shock led to the emergence of contemporary theoretical approaches, such as culture learning, stress and coping and social identification. These approaches can be accommodated within a broad theoretical framework based on the affective, behavioural and cognitive (ABC) aspects of shock and adaptation.

2	Wang, Chia-Chih D. C.; Mallinckrodt, Brent (2006) Journal of Counseling Psychology	Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students	202	On the basis of a process model of acculturation (Berry, Kim, Minde, & Mok, 1987) and the concept of secure base for interpersonal exploration in adult attachment (Bowlby, 1988), this study hypothesized that sociocultural adjustment difficulties and psychological distress of Chinese international students (N = 104) living in the United States would be positively associated with attachment avoidance and anxiety and negatively associated with both acculturation to the U.S. culture and identification with the home culture. Survey packets contained the Experiences in Close Relationships scale, the Acculturation Index, the Sociocultural Adaptation Scale, and the Brief Symptom Inventory-18. Results suggested that attachment anxiety was negatively associated with students' acculturation to U.S. culture, and that attachment avoidance, attachment anxiety, and acculturation to U.S. culture were significant predictors for students' psycho-social adjustment.
3	Wilson, Jessie; Ward, Colleen; Fischer, Ronald (2013) Journal of Cross-cultural Psychology	Beyond Culture Learning Theory: What Can Personality Tell Us About Cultural Competence?	130	The meta-analytic study examined correlates of cultural competence as assessed by the Sociocultural Adaptation Scale. A total of 17 variables were analyzed from 66 independent studies (N = 10,672). In line with culture learning theory, situational factors such as length of residence ($r = .16$), cultural knowledge ($r = .34$), previous cross-cultural experience ($r = .17$), cultural distance ($r = -.33$), language proficiency ($r = .35$), and contact with host nationals ($r = .29$) were associated with better sociocultural adaptation. The meta-analysis was extended to personality variables, with small to medium effect sizes found for the "Big Five" traits of agreeableness

				($r = .16$), conscientiousness ($r = .22$), openness/flexibility ($r = .29$), extraversion ($r = .29$), and neuroticism ($r = -.32$), and large effect sizes found for more narrowly defined, culture-relevant factors such as cultural empathy ($r = .49$) and cross-cultural self-efficacy ($r = .45$). The findings indicate that both personal and situational factors relate to cultural competence and that personality variables deserve greater attention in future studies of sociocultural adaptation.
4	Li, A; Gasser, MB (2005) International Journal of Intercultural Relations	Predicting Asian international students' sociocultural adjustment: A test of two mediation models	117	Integrating several theoretical perspectives, this paper examined predictors of Asian international students' sociocultural adjustment. A total of 117 students (aged 18–46 years) from 17 Asian countries and regions completed questionnaires about their sociocultural adjustment, contact with the hosts, ethnic identity, and cross-cultural self-efficacy. As hypothesized, contact with the hosts partially mediated the effect of cross-cultural self-efficacy on sociocultural adjustment. The hypothesis that contact with the hosts would mediate the effect of ethnic identity on sociocultural adjustment was not supported.
5	Chirkov, Valery; Vansteenkiste, Maarten; Tao, Ran; Lynch, Martin (2007) International Journal of Intercultural Relations	The role of self-determined motivation and goals for study abroad in the adaptation of international students	111	Two studies with Chinese international students in Belgium and Canada investigated the role of two motivational factors in students' decision to study abroad: the level of self-determined motivation and the content of their goals. A newly developed questionnaire, the Self-regulation Questionnaire—Study Abroad was used to test the hypothesis that self-determined motivation to study abroad would be more beneficial for students' adaptation outcomes than non-self-determined motivation. This hypothesis was generally

				supported. Using the Goals for Study Abroad Scale, the two-factor structure of students' goals was discovered. It consisted of a 'Preservation factor', which reflects the goals of avoiding disadvantageous conditions in the home country, and a 'Self-development factor', which reflects the goal of pursuing good education and better career opportunities abroad. The preservation goals were negatively related with cultural adaptation indicators. The level of self-determination and the goals to study abroad had an independent effect on cultural adaptation of the students.
6	Wang, Kenneth T.; Heppner, Puncky Paul; Fu, Chu-Chun; Zhao, Ran; Li, Feihan; Chuang, Chih-Chun (2012) Journal of Counseling Psychology	Profiles of Acculturative Adjustment Patterns Among Chinese International Students	102	This study empirically identify distinct acculturative adjustment patterns of new international students over their first 3 semesters in the United States. The sample consisted of 507 Chinese international students studying in the United States. Using psychological distress as an indicator of acculturative adjustment, measured over 4 time points (prearrival, first semester, second semester, and third semester), 4 distinct groups of student adjustment trajectories emerged: (a) a group exhibiting high levels of psychological distress across each time point (consistently distressed; 10%), (b) a group with decreasing psychological distress scores from Time 1 to Time 2 (relieved; 14%), (c), those with a sharp peak in psychological distress at Time 2 and Time 3 (culture-shocked; 11%), and (d) a group with relatively consistent low psychological distress scores (well-adjusted; 65%). Moreover, significant predictors of a better acculturative adjustment pattern included having higher self-esteem, positive problem-solving appraisal, and lower maladaptive perfectionism prior to

				the acculturation process. In addition, during the first semester of studying in the United States, having a balanced array of social support and using acceptance, reframing, and striving as coping strategies were associated with a better cross-cultural transition.
7	Forbush, Eric; Foucault-Welles, Brooke (2016) International Journal of Intercultural Relations	Social media use and adaptation among Chinese students beginning to study in the United States	90	Using an online questionnaire administered to 120 Chinese international college students studying in the U.S., this study explored the potential impact that the utilization of Social Networking Sites (SNSs) could have on the construction of such social networks, when used during study abroad preparation. It is found that students who used SNSs more often during their study abroad preparations had larger, more diverse social networks abroad, compared with students who used SNSs less often or not at all. Students with more diverse social networks reported significantly higher levels of social and academic adaptation in the host culture.
8	Yan, Kun; Berliner, David C. (2011) ASIA Pacific Education Review	Chinese international students in the United States: demographic trends, motivations, acculturation features and adjustment challenges	84	This study examines what Chinese international students' demographic trends are over decades, what their motivations are for studying in the United States, what the unique features of their group acculturation process are, and what special challenges they face in U.S. universities that are different from what they might face in Chinese universities. This study reveals that the life of Chinese students in the United States is not easy and they have to endure multifaceted life-stresses. These results can be used to help Chinese international students adapt to the American educational environment and improve the services and programs American universities deliver to their foreign students.
9	Zhang, Jing;	Acculturation and	83	This study was the first to illuminate

	Goodson, Patricia (2011) International Journal of Intercultural Relations	psychosocial adjustment of Chinese international students: Examining mediation and moderation effects		mechanisms linking acculturation and psycho-social adjustment among Chinese international students in the United States by examining the mediating and moderating roles of social interaction and social connectedness with host nationals. Results showed social connectedness with Americans mediated the links between adherence to the host culture (acculturation dimension) and psycho-social adjustment (i.e., depression and sociocultural adjustment difficulties). Social interaction with Americans moderated the association between adherence to the home culture (acculturation dimension) and depression.
10	Chirkov, V. I.; Safdar, S.; de Guzman, J.; Playford, K. (2008) International Journal of Intercultural Relations	Further examining the role motivation to study abroad plays in the adaptation of international students in Canada	78	This study investigated international students samples from three Canadian Universities at the beginning of an academic year (N = 228) and at the end of the same year (N = 72). The results supported the hypotheses that autonomous motivation to study abroad is a predictor of students' various adjustment outcomes at different times of the academic year and that the preservation goals have a weaker negative effect upon the adjustment outcomes and this effect is relatively independent from the effect of autonomy. These results are consistent with the previous study of Chinese international students in Belgium and Canada (Chirkov, V.I., et.al, 2006). The role that gender, marital status and country of origin play in moderating these relations is also studied and discussed. The main conclusion further justifies the importance of motivation in understanding the adjustment dynamics of various groups of migrants.

Table 5 lists the 10 most-cited articles in the dataset and identifies influential core publications that underpin the field's intellectual structure and thematic evolution. While these studies are highly cited, their collective profile reveals not only areas of consolidation but also important limitations in the field's development.

At the theoretical level, the most-cited works are largely organized around a relatively narrow set of paradigms, primarily drawn from psychology. These include culture shock and adjustment models, acculturation theory, stress-and-coping frameworks, and culture learning approaches (Ward et al., 2001; Berry, 2005). Together, these paradigms conceptualize intercultural adaptation predominantly as an individual-level process of psychological adjustment. More recent influential studies extend this foundation by incorporating constructs such as motivation, personality traits, and digitally mediated adaptation; however, these extensions largely remain within an individualistic analytical frame rather than fundamentally reconfiguring the underlying assumptions (Marginson, 2021).

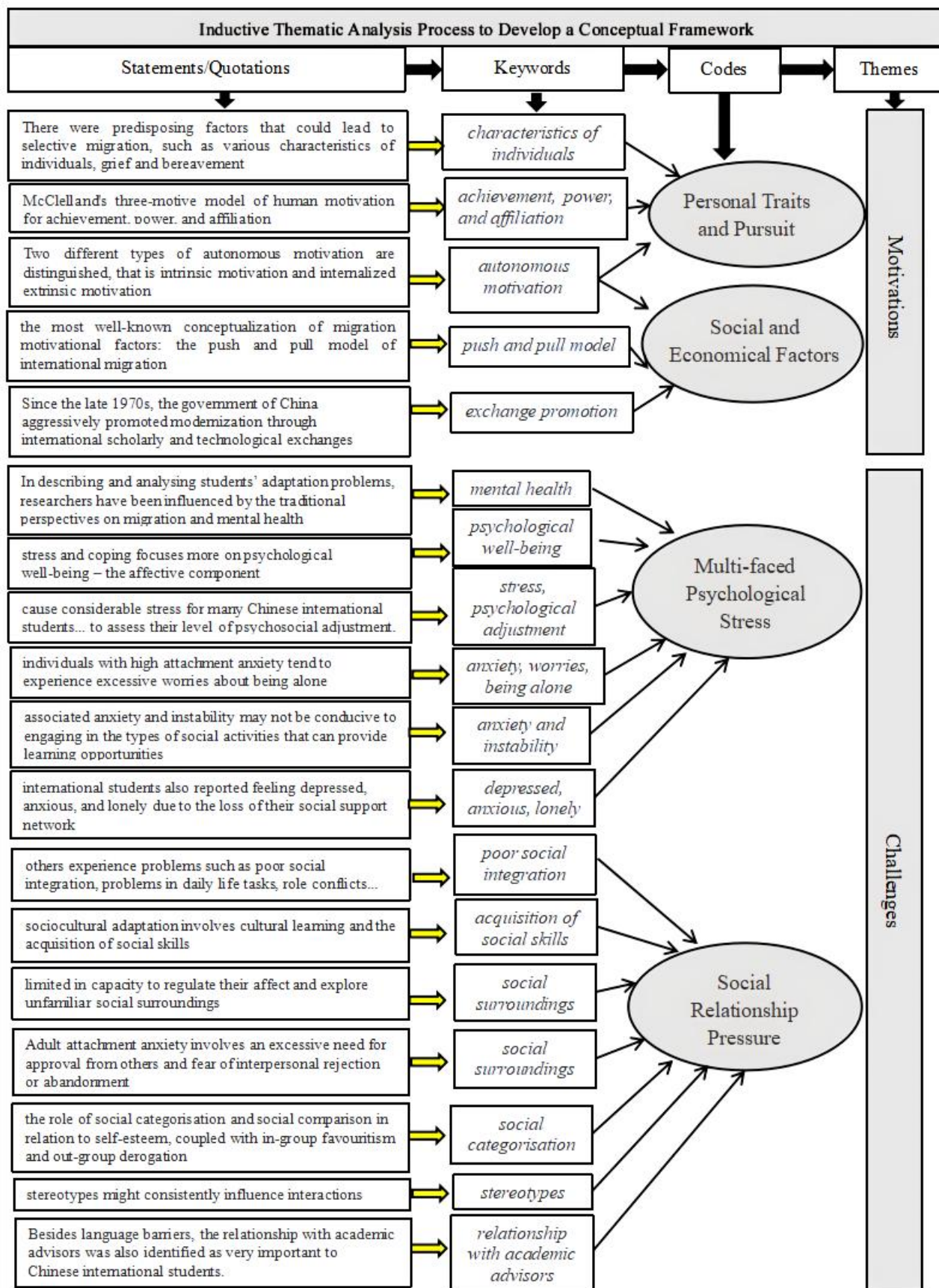
At the methodological level, the literature exhibits a high degree of uniformity. Most of the highly cited studies rely on questionnaire-based quantitative designs, often employing standardized psychometric scales to measure adaptation outcomes. While this methodological consistency has facilitated the accumulation of knowledge and comparability across studies, it also reinforces a measurement-driven orientation that may privilege readily quantifiable dimensions of experience over more complex, contextually embedded processes (Ward et al., 2001). As a result, qualitative, longitudinal, and mixed-method approaches remain comparatively underrepresented among the most influential publications.

At the empirical level, there is a clear focus on Chinese international students in U.S.-based settings, with fewer studies conducted in Canada and Europe. This pattern indicates a strong geographical and epistemic dominance of U.S.-centered research contexts, where both data access and theoretical framing are shaped by host-country academic environments. As argued in the international student mobility literature, such concentration reflects broader hierarchies in global knowledge production, where Anglophone systems disproportionately shape research agendas and scholarly visibility (Marginson, 2022). Consequently, the field's most influential knowledge base is grounded in a limited set of institutional and cultural contexts, raising questions about the transferability of its dominant frameworks.

Importantly, across these dimensions, there is a relative absence of perspectives that foreground structural inequality and institutional power relations. Issues such as policy regimes, racialization, academic hierarchies, and unequal access to resources are rarely central in the most-cited works, which tend instead to emphasize individual adaptation capacities. From a sociological and critical perspective, this reflects a broader tendency to individualize adaptation while under-theorizing the structural conditions that shape student experiences (Stein & de Andreotti, 2022). As a result, the field's intellectual core, while

coherent, remains theoretically and methodologically constrained, with limited engagement with alternative paradigms.

The six-step thematic analysis process for conceptual model development (Naeem et al., 2023) was subsequently employed to synthesize these influential contributions into the study's main thematic structure. However, the patterns identified above indicate that this synthesis rests on a knowledge base that is both cumulative and selectively bounded, highlighting the need for greater theoretical diversification and methodological pluralism in future research.



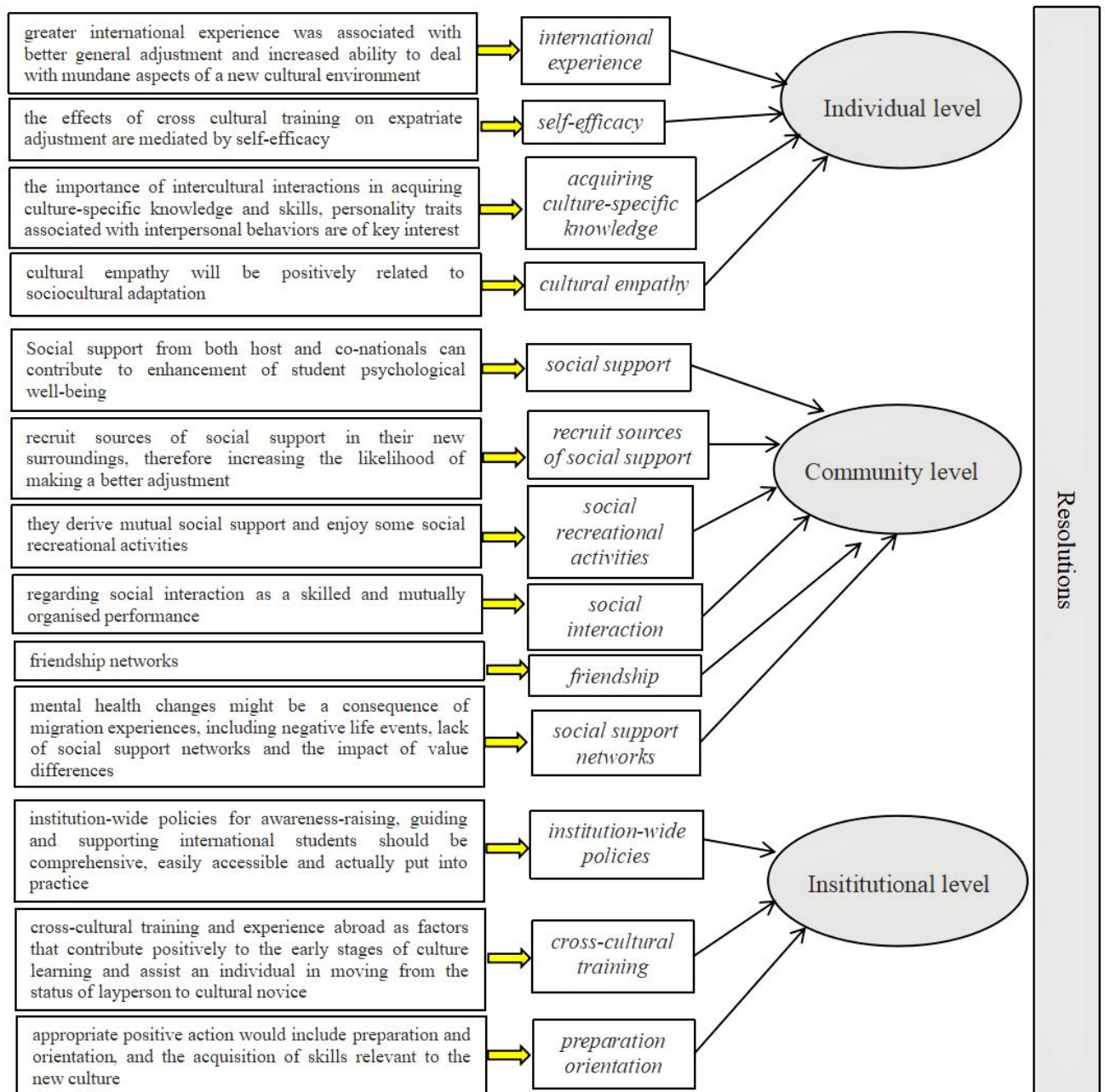


Figure 4. Inductive Thematic Analysis Process

Source: Authors' own work.

6. Discussion

To strengthen the integration between bibliometric findings and conceptual development, this study interprets the observed patterns at a conceptual level and links them to a theoretically informed, multi-level perspective of intercultural adaptation. Rather than deriving themes from formal co-occurrence clustering, thematic patterns were identified through an integrative reading of high-frequency keywords and synthesis of top-cited publications (Figure 4). Following Naeem et al. (2023), the thematic analysis of top-cited

articles (Table 5) was aligned with major keyword patterns, and the resulting evidence-to-concept alignment (Table 6) was derived.

Table 6

Evidence-to-framework alignment

Indicative Research Theme	Main Evidence in This Study	Framework Linkage (micro–meso–macro)
Psychosocial adjustment (stress, depression, wellbeing; counseling focus)	High-frequency adjustment-related keywords; publications in psychology-oriented journals	Micro: coping, self-esteem, attachment; Meso: counseling/support services
Language and academic integration	Thematic patterns observed in influential publications	Micro: language proficiency, learning strategies; Meso: academic writing support, supervision
Institutional support and social connectedness	Recurring themes (social support, connectedness); country/institution patterns	Meso: institutional responsiveness; Macro: inclusion climate, discrimination
Digital adaptation and post-2020 mobility disruptions	Recent research trends and publication growth	Cross-level context: digital platforms mediate interactions between micro-level social networks and meso-level support access

The evidence summarized in Table 6 demonstrates how dominant research themes identified in the bibliometric analysis can be systematically linked to different levels of the adaptation process. First, themes related to psychosocial adjustment, such as stress, depression, and well-being, are primarily situated at the micro level, focusing on individual coping strategies, self-esteem, and emotional regulation, while also connecting to meso-level support systems such as counseling services. Second, language and academic integration span both micro and meso levels, reflecting the interaction between individual competencies (e.g., language proficiency and learning strategies) and institutional provisions (e.g., academic writing support and supervisory practices). Third, institutional support and social connectedness are more strongly associated with meso- and macro-level dynamics, highlighting the role of institutional responsiveness alongside broader sociocultural conditions, including inclusion climates and experiences of discrimination. Finally, the emergence of digital adaptation and post-2020 mobility disruptions reflects a cross-level

phenomenon that links individual social practices, institutional arrangements, and global structural changes.

After conceptualization, informed by the interpretation of keywords, codes, and themes, the researcher develops a conceptual framework that encapsulates all findings and insights derived from the data (Figure 5).

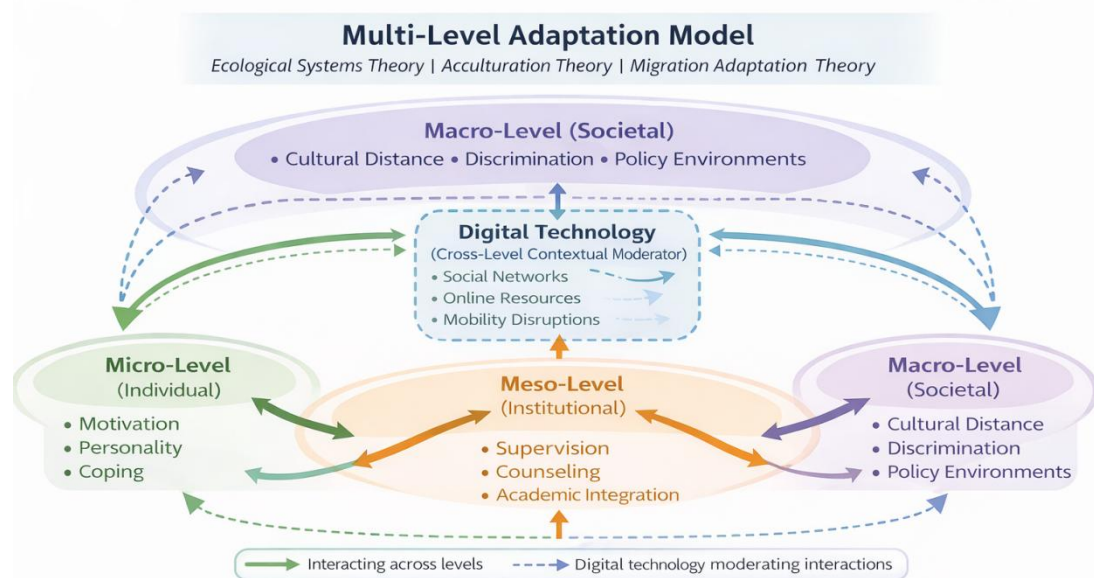


Figure 5. A Multi-Level Framework of Intercultural Adaptation

Source: Authors' own work.

A major contribution of this study is the development of a conceptual framework that integrates micro (individual), meso (institutional), and macro (societal) levels of adaptation, based on three complementary theoretical traditions. First, ecological systems theory provides a foundational perspective on adaptation as a dynamic process shaped by interactions across nested contexts, linking individual characteristics to institutional environments and broader sociocultural structures. Second, migration adaptation perspectives highlight the role of mobility trajectories, structural constraints, and opportunity systems in shaping adaptation experiences across different national and institutional settings. Third, the framework builds on classical acculturation theories, particularly Berry's model of acculturation strategies and Kim's stress–adaptation–growth dynamic, which have long emphasized the psychological processes underlying cross-cultural adjustment.

Rather than replacing these foundational models, the present framework reinterprets and extends them by shifting the analytical focus from predominantly individual-level adjustment outcomes to the interaction among micro-level resources (e.g., motivation, coping, language proficiency), meso-level institutional processes (e.g., supervision, counseling, academic support), and macro-level sociocultural conditions (e.g., cultural distance, discrimination,

policy environments). In doing so, the framework highlights the ecological complexity of adaptation and responds to the increasing need for integrative perspectives in international student mobility research.

A notable development identified in the bibliometric analysis is the emergence of digital technology and post-2020 mobility disruptions as an increasingly prominent theme. Rather than conceptualizing digital adaptation as a separate dimension of intercultural adaptation, this study positions digital mediation as a cross-level contextual condition that reshapes adaptation processes across micro, meso, and macro levels.

At the micro level, digital platforms facilitate the formation and maintenance of social networks, enabling emotional support and identity negotiation across transnational spaces. At the meso level, they transform how institutional support is delivered, including online supervision, virtual classrooms, and remote counseling services. At the macro level, global disruptions, most notably the COVID-19 pandemic, have accelerated the integration of digital infrastructures into international education systems, thereby altering the structural conditions under which adaptation unfolds. In this sense, digital mediation functions as a contextual amplifier of existing adaptation processes rather than as a distinct domain of adaptation.

7. Conclusion

This study contributes to understanding Chinese international students' intercultural adaptation by providing a systematic bibliometric overview of the field, based on data from the Web of Science Core Collection (2005–2024). Rather than offering a purely descriptive account of publication trends, the analysis identifies how the field has been structured over time and how its thematic focus has gradually evolved.

The findings suggest that research in this area has been predominantly grounded in psychology-oriented adjustment frameworks and characterized by a strong emphasis on individual-level, survey-based approaches. At the same time, patterns observed in keyword trends and influential publications indicate a gradual shift toward more relational and context-sensitive perspectives, with increasing attention to social connectedness, institutional conditions, and digitally mediated forms of adaptation. This shift points to a growing recognition of intercultural adaptation as a contextually embedded and multi-layered process.

Building on these observations, the study proposes a conceptually grounded and preliminary multi-level framework that links micro-level individual resources, meso-level institutional arrangements, and macro-level sociocultural contexts, while positioning digital mediation and study destination as cross-level contextual conditions shaping adaptation processes. In doing so, the study contributes to a more ecologically informed understanding of intercultural adaptation.

Methodologically, the study demonstrates the value of combining descriptive bibliometric analysis with thematic synthesis of influential literature. This approach enables both a structured overview of research patterns and a theoretically informed interpretation of

conceptual developments, offering a useful strategy for synthesizing fragmented bodies of literature.

Overall, the study reframes intercultural adaptation from a predominantly individual-level psychological perspective toward a more integrated, multi-level, and contextually situated understanding. While the proposed framework remains conceptual and requires further empirical validation, it provides a foundation for future research to explore the interactions between individual, institutional, and structural factors in shaping adaptation processes.

8.Limitations and recommendations

This study has several limitations that should be acknowledged when interpreting the findings. First, the dataset was retrieved exclusively from the Web of Science Core Collection and limited to English-language journal articles. This introduces a potential bias toward English-language dominance, as relevant studies published in other languages or indexed in alternative databases (e.g., Scopus or regional databases) may not be fully captured, thereby narrowing the representativeness of the knowledge base.

Second, citation-based bibliometric indicators are subject to both citation time-lag bias and self-citation bias. Recently published studies may appear less influential due to insufficient time to accumulate citations, while citation counts may also be influenced by author or journal self-citation practices. In addition, citation patterns are shaped by disciplinary conventions and database coverage; therefore, citation counts should be interpreted as indicators of visibility and academic diffusion rather than direct measures of research quality.

Third, the analysis period (2005–2024) does not include complete data for 2025. Because the dataset was retrieved in early 2025, this year was excluded to avoid distortions caused by incomplete indexing and partial-year citation accumulation, which could otherwise bias temporal trend analysis.

Fourth, as the study adopts a descriptive bibliometric approach, the analysis focuses on publication patterns and research participation rather than network-based relationships between concepts or authors. As such, the findings provide a structured overview of the field but do not capture deeper relational structures that may emerge through more advanced bibliometric techniques.

Finally, while the thematic synthesis of influential publications enabled a more interpretive understanding of key research themes and informed the development of a conceptual framework, this stage remains subject to researcher interpretation in coding, categorization, and conceptual alignment.

Future research could address these limitations by incorporating multiple databases and multilingual sources to reduce language and indexing bias, and by updating the dataset once full-year citation data becomes available. In addition, greater methodological

diversification—including qualitative, longitudinal, and mixed-method approaches—would help to further examine and empirically validate the proposed multi-level framework. Comparative studies across different higher education destinations, particularly in Asia, could also provide deeper insights into contextual variation, while extending the analysis to other international student groups would help assess the framework's broader applicability.

References

- Andrade-Arenas, L., Bogdanovich, M. M. M., Hernández Celis, D., Jaico, K. R., & Peña, G. B. A. (2023). University learning style model: Bibliometrics and systematic literature review. *International Journal of Evaluation and Research in Education*, 12(4), 2302–2315.
- Andrade, M. S. (2006). International students in English-speaking universities: Adjustment factors. *Journal of Research in International Education*, 5(2), 131–154.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–34.
- Berry, J.W. (2005). Acculturation. In *Culture and human development* (pp.263-273). Psychology Press.
- Calikoglu, A. (2018). International student experiences in non-native-English-speaking countries: Postgraduate motivations and realities from Finland. *Research in Comparative and International Education*, 13(3), 439–456.
- Chirkov, V., Safdar, S., de Guzman, D. J., & Playford, K. (2008). Further examining the role motivation to study abroad plays in the adaptation of international students in Canada. *International Journal of Intercultural Relations*, 32(5), 427–440.
- Chirkov, V., Vansteenkiste, M., Tao, R., & Lynch, M. (2007). The role of self-determined motivation and goals for study abroad in the adaptation of international students. *International Journal of Intercultural Relations*, 31(2), 199–222.
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296.
- Forbush, E., & Foucault-Welles, B. (2016). Social media use and adaptation among Chinese students beginning to study in the United States. *International Journal of Intercultural Relations*, 50, 1–12.
- Gullahorn, J. T., & Gullahorn, J. E. (1963). An extension of the U-curve hypothesis. *Journal of Social Issues*, 19(3), 33–47.
- Kamalova, L. A., Umbetova, M. Z., & Putulyan, N. S. (2020). Technologies and practices of linguistic and sociocultural adaptation of foreign students during their studies at the university. *Contemporary Educational Technology*, 13(1), ep288.

- Kim, Y. Y. (2001). *Becoming intercultural: An integrative theory of communication and cross-cultural adaptation*. Sage.
- Li, A., & Gasser, M. B. (2005). Predicting Asian international students' sociocultural adjustment: A test of two mediation models. *International Journal of Intercultural Relations*, 29(5), 561–576.
- Lysgaard, S. (1955). Personal contact and change in intergroup attitudes. *Acta Psychologica*, 11(1), 189–194.
- Marginson, S. (2021). Global science and national comparison: Beyond bibliometrics and scientometrics. *Comparative Education*, 57(2), 231–245.
- Marginson, S. (2022). High participation systems of higher education. *The Journal of Higher Education*, 93(2), 1–25.
- Matschke, C. (2022). The impact of social support on social identity development and well-being in international exchange students. *Journal of Cross-Cultural Psychology*, 53(10), 1307–1334.
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Bmj*, 339.
- Mok, K. H., Xiong, W., & Ke, G. (2021). Internationalisation of higher education and student mobility in East Asia. *Higher Education Policy*, 34(2), 1–20.
- Naeem, M., Ozuem, W., Howell, K., & Ranfagni, S. (2023). A step-by-step process of thematic analysis to develop a conceptual model in qualitative research. *International Journal of Qualitative Methods*, 22, 1–18.
- Oberg, K. (1960). Cultural shock: Adjustment to new cultural environments. *Practical Anthropology*, 7(4), 177–182.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ... & Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Bmj*, 372.
- Stein, S., Andreotti, V., Suša, R., Ahenakew, C., & Čajková, T. (2022). From “education for sustainable development” to “education for the end of the world as we know it”. *Educational Philosophy and Theory*, 54(3), 274–287.
- Van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.
- Wang, C. C. D., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology*, 53(4), 422–433.
- Wang, K. T., Heppner, P. P., Fu, C. C., Zhao, R., Li, F., & Chuang, C. C. (2012). Profiles of acculturative adjustment patterns among Chinese international students. *Journal of Counseling Psychology*, 59(3), 424–436.
- Ward, C., & Kennedy, A. (1999). The measurement of sociocultural adaptation. *International Journal of Intercultural Relations*, 23, 659–677.

- Wilson, J., Ward, C., & Fischer, R. (2013). Beyond culture learning theory: What can personality tell us about cultural competence? *Journal of Cross-Cultural Psychology*, 44(6), 900–927.
- Xu, X. (2020). How do global university rankings influence the decision-making of prospective international students? *Higher Education*, 79(5), 889–907.
- Yan, K., & Berliner, D. C. (2011). Chinese international students in the United States: Demographic trends, motivations, acculturation features and adjustment challenges. *Asia Pacific Education Review*, 12, 173–184.
- Zhang, J., & Goodson, P. (2011). Acculturation and psychosocial adjustment of Chinese international students: Examining mediation and moderation effects. *International Journal of Intercultural Relations*, 35(5), 614–627.
- Zhou, Y., Jindal-Snape, D., Topping, K., & Todman, J. (2008). Theoretical models of culture shock and adaptation in international students in higher education. *Studies in Higher Education*, 33(1), 63–75.