



Research Article

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A Bibliometric Analysis of Research on International Student Management in Higher Education Institutions Over the Past Two Decades

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Abstract

This paper provides an in-depth discussion of the current research status, thematic focus and keywords, and impact of the management of international students in higher education through bibliometric analyses. Utilising bibliometric and thematic analyses, the study examined 38 articles in the Web of Science database from 2005 to 2024. The findings revealed an upward trend in research output and academic activity in this field, suggesting a gradual escalation in the level of attention being directed towards it. The thematic analysis method was employed to identify the major themes of international student management in higher education, including internationalised higher education, academic performance and international student satisfaction. These themes reflect the current research hotspots and trends, and point to the direction of future research. The keywords encompass internationalised higher education, academic performance, international student satisfaction, Australia as a destination for international students, and the impact of the promotion of internationalised education on international student satisfaction. These keywords thus reveal the core areas and research priorities of international student management research in universities.

Keywords: Higher Education Management, International Students, Thematic Analysis, Bibliometric Analysis

1. Introduction

In the context of globalisation, international students have gradually become a core topic in higher education research. These students have been shown to function as cultural intermediaries and to facilitate the dissemination of knowledge on a global scale (Altbach, 1991; Altbach & Knight, 2007). The study of this demographic provides insights into their adaptation to new cultural environments and the economic, social, and cultural impacts that international students have on their host countries and educational institutions (Altbach, 1991; McGarvey et al., 2015). International student

management in higher education has been shown to be directly related to the academic success and life satisfaction of international students (Rao, 2017), thus making in-depth research on international student management important both theoretically and practically (Knight, 2004), noting that effective international student management improves student satisfaction and enhances the international competitiveness of educational institutions, thus playing a central role in the internationalisation of higher education. Castiello-Gutiérrez et al. (2021) further argue that the management of international students in HEIs includes the supervision and coordination of services, programmes and resources to facilitate the integration of students into the academic and social environment. In this study, the management of international students in higher education refers to the management and administration of higher education institutions that provide comprehensive support and services to international students. This encompasses the analysis of contextual needs, the allocation of input resources, the management of the process, and the evaluation of the management's effectiveness.

However, with the significant growth in the number of international students globally, from 2 million in 2000 to 6.36 million in 2021 (UNESCO, 2021), HEIs are faced with a number of management challenges. The multicultural backgrounds and linguistic differences of international students have been shown to lead to difficulties in socialisation, acculturation, and academics (Neumann et al., 2023). These difficulties not only affect the academic performance of international students, but also increase the demands on management resources at HEIs and the quality of education (Beregovaya & Kudashov, 2019; Nguyen et al., 2023). Despite the exploration of these issues and the proposal of various management strategies in existing research (Hunter-Johnson, 2022), the majority of research focuses on individual issues and lacks a systematic and comprehensive approach (Gümüş et al., 2020; Hiebl, 2023). Furthermore, UNESCO (2023) emphasised the necessity for national education policies to be integrated in order to enhance the quality of education and achieve sustainable development. The management of international students in higher education institutions remains a lacuna in current research (Zhao et al., 2023). Consequently, there is an urgent need to consolidate existing research findings to identify the core factors and their impacts on the management of international students, and to support the development of scientific and effective management strategies in universities (Khan et al., 2021; Luo et al., 2023).

The present study is an exploration of the current status of research in the field, with a particular focus on understanding the progress and development of research to date. The study employs bibliometric analyses to gain insight into the current state of publication of articles on the management of international students in higher education, as well as the thematic focus and keywords of research in this area. The following research questions have been posed: firstly, to explore the current status of research? What are the thematic focuses of research related to the management of international students in higher education? What are the keywords? The purpose of this study is to explore the thematic focuses and keywords of research related to the management of international students in higher education through bibliometric analyses by understanding the progress and development of research in the scientific literature.

2. Literature Review

A plethora of studies have previously been conducted on the management of international students in higher education institutions (HEIs). These studies have focused on the needs of international students in terms of cultural, linguistic and academic support (Yu, 2013), the effectiveness and adaptability of policies (Freeman & Viarengo, 2014), the impact of external policies and visa regimes (Tavares, 2024), the effectiveness of resourcing (Smith, 2016), and the importance of curriculum design and culturally responsive programmes (Ammigan et al., 2023), the necessity for groundwork management (Di Maria, 2020), the efficacy of service delivery, monitoring and interactive communication (Gibbs et al., 2020), and the significance of timely feedback and adjustment (Fombona et al., 2022). The extant literature suggests that effective resource allocation, curriculum

design, and acculturation programmes can significantly improve international students' adjustment and programme success. Furthermore, international students' interactions with local students contribute to acculturation, which in turn improves academic performance and satisfaction (Szabó et al., 2020). Nevertheless, research concerning the management of international students in higher education institutions (HEIs) remains limited in scope and deficient in terms of systematic organisation (Luo et al., 2023). There are numerous contentious issues and unresolved matters, particularly with regard to the efficacy of management.

The management of international students in higher education necessitates a structured approach. This study employs bibliometrics and thematic analysis to comprehensively review and analyse extant research on international student management, thereby identifying key themes and factors that influence the effectiveness of such management. The study's findings provide a valuable reference point for universities seeking to enhance the effectiveness of international student management.

3. Methodology

The research conducted in this article is a PRISMA-based bibliometric analysis designed to identify, select, evaluate and qualitatively synthesise relevant evidence or findings to understand the role of international student management in higher education (HE) in the scientific literature. The methodological and replicable approach adopted aims to critically assess the scope, nature and quality of evidence for a particular research question by locating all relevant published and unpublished work through a comprehensive search and systematically integrating the search results (Siddaway et al., 2019). Consequently, this study employs the PRISMA approach as a bibliometric analysis method to minimise bias in the reviews and achieve a more systematic review (Satria et al., 2017).

The literature search for this study will be carried out in the WOS database using keywords related to HEIs, management, and international students for topic search, with the timeframe derived from the automatic feedback after the keywords are set, and the language limited to English. Within the database, there are numerous associated keywords classified under the management of international students in universities category, including 'universities AND management AND international students'. The advanced search formula for this study is as follows: TS= (University OR Higher education OR College OR Academy) AND TS= (Management OR Governance) AND TS= (International Student OR Foreign Student OR Overseas Student). To enhance the rigour of the literature analysis and to ensure the comprehensiveness of the articles, the article type was set to 'Article' and the language to English as the search criteria.

In order to reduce bias and exclude irrelevant and low-quality studies, this study developed inclusion and exclusion criteria to select eligible literature for inclusion in the bibliometric analysis process. In this regard, Shaheen et al. (2023) have asserted the necessity for the development of inclusion and exclusion criteria or processes within the systematic review process. These criteria and processes have been shown to assist in the reduction of bias in the extraction of literature and its findings (Márquez et al., 2024). Table 1 presents the inclusion (IC) and exclusion (EC) criteria that were considered during the literature extraction process.

Table 1. Inclusion and exclusion criteria

Inclusion Criteria, IC	Exclusion Criteria, EC
IC1: The article is related to the management of international students in higher education.	EC1: Articles not related to the management of international students in universities
IC2: The article is published in a peer-reviewed academic journal.	EC2: Non-peer-reviewed articles, such as conference papers, reports, news articles, etc.
IC3: The article is published between 2005 and 2024.	EC3: Articles published earlier than 2005 or later than 2024
IC4: The article is in English	EC4: Articles not in English

Inclusion Criteria, IC	Exclusion Criteria, EC
IC5: The article provides full text and abstract	EC5: Articles for which the full text or abstract is not available.
IC6: The article explicitly discusses the context, inputs, processes or outcomes of managing international students.	EC6: Articles that do not explicitly address the above aspects
IC7: The article uses quantitative, qualitative or mixed methodology.	EC7: Non-research articles such as commentaries, opinion pieces or case studies.

In order to further minimise any potential bias in the search for literature sources, Figure 1 presents a PRISMA flowchart of the scientific article screening process. This flowchart quantifies how screening is carried out through the stages specified in the PRISMA statement. The present study searched the literature from the Web of Science (WOS) database and initially identified 319 records. Following the initial screening, records were excluded on the basis of keyword errors, missing DOIs, or misidentification, resulting in a total of 16 records. This left 296 studies. Following a subsequent rigorous screening, 206 irrelevant studies were excluded, leaving 90. At the title and abstract checking stage, a further 12 were excluded due to ineligibility, resulting in 78 documents entering the full text assessment stage. Following a detailed assessment, 40 studies were excluded, leaving 38 for the final analysis. The flowchart is a relevant component of this study, as it transparently and clearly shows the process of searching and selecting literature sources, demonstrating the process of literature review from the initial stage to the final stage. The 38 papers under consideration were selected on the basis that they not only addressed the core themes of international student management, but also systematically explored the related policies, practice patterns and influencing factors. This approach ensured a comprehensive research perspective and empirical support. Despite the relatively small sample size, the study ensured the quality and relevance of the literature through the implementation of strict selection criteria, thereby enhancing the reliability of the study (Page et al., 2021). It has been demonstrated that literature reviews with limited sample sizes can offer significant insights, provided that the screening criteria are scientifically robust (Munn et al., 2014).

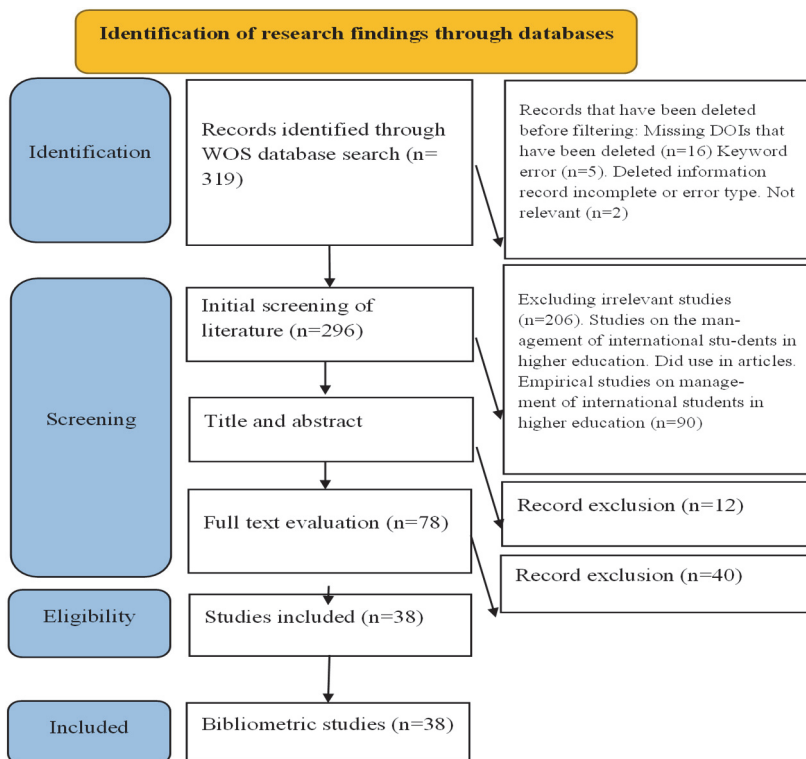


Figure 1. PRISMA flowchart

4. Results

The data presented in Table 2 illustrates the findings from academic research concerning the management of international students in higher education from 2005 to 2024. During the specified time period, a total of 38 relevant documents were identified, originating from 25 distinct academic sources. These documents exhibit an annual growth rate of 7.57%, an average age of 7.43 years, an average of 23.31 citations per document, and a total of 2,244 document references.

The content of the documents covers 127 Keywords Plus and 156 authors' keywords, which may be closely related to international student management strategies, education policies, internationalised education, etc. The authorship of the documents is attributed to 91 individuals. Of these, 14 were single-author documents. The average number of co-authors per document is 2.19, indicating an international co-operation ratio of 14.29%, which is indicative of the prevalence of international collaborative research in the field of international student management research.

The document types comprise primarily 38 journal articles. The data thus obtained provide a macroscopic perspective on the management of international students in colleges and universities, revealing the development trends, research priorities, and the prevalence of international cooperation in this field over the past two decades. These research findings facilitate an in-depth exploration of the intricacies of international student management in higher education through a combination of bibliometric and thematic analyses, and an examination of the factors influencing effectiveness.

Table 2. Status of research

Category	Data
Time Span	2005:2024
Source (journals, books, etc.)	25
Documents	38
Annual growth rate %	7.57
Average age of documents	7.43
Average number of citations per document	23.31
Citation	2244
Document content	
Keyword Plus (ID)	127
Author Keywords (DE)	156
Author	
Authors of single-authored documents	91
Author Collaboration	
Single-author documents	14
Co-authors per document	2.19
International co-authors %	14.29
Type of document	
Article	38

Pursuant to the findings of the R language analysis, the data presented in Figure 2 was obtained. The ensuing analysis will address the number of academic articles published in each year. The number of academic articles published on the management of international students in higher education has shown some fluctuation over the period from 2005 to 2024. 1 article was published in 2005, followed by no publication between 2006 and 2008. 2 articles were published in 2009, while the number of publications per year ranged from 1 to 3 between 2010 and 2014. Two articles were published in 2015, and 2016 saw the publication of one article. The number of publications increased to three in 2017 and peaked in 2018 with seven publications, making it the most active year in terms of publications during that timeframe. In 2019, four articles were published, while 2020 and 2022 saw the publication of two and five articles, respectively. It is noteworthy that no relevant papers were published in 2021; however, four more articles were published in the subsequent years of 2023 and 2024, respectively. The annual publication data over this 20-year period demonstrates a cyclical shift in academic interest in the topic of managing international students in higher education. This trend signifies a favourable uptick in both research output and academic activity in the management of international students in higher education over the recent years. This increase can be attributed to the expansion of research activity in the field, increased researcher engagement, and rising research interest within the field.

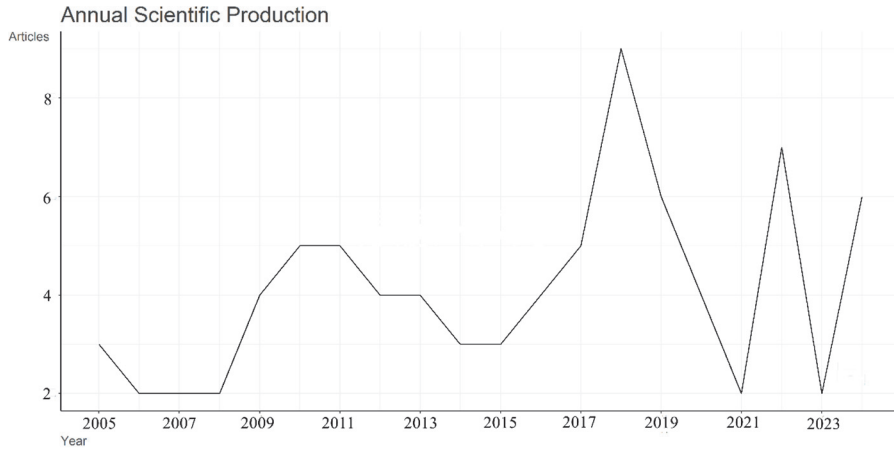


Figure 2. Number of papers published per year

As demonstrated in Figure 3, the data set includes the top 10 academic institutions and their respective publication counts. Of particular note is the data in Figure 4.2, which highlights the academic institutions with the highest number of articles published in the research area of managing international students in higher education. Notably, the University of California, Riverside and the University of Queensland are tied for the highest number of articles published, with three articles each. Subsequent to these are Northumbria University, University of California System, and Lingnan University, with 2 articles each. Additionally, the following institutions, Bilecik Seyh Edebi University, Bishops University, Black Hills State University, Bradley University and California State Polytechnic University Pomona, each published a single article. The University of California, Pomona also published one article. The data presented here delineate the active engagement and scholarly contributions of the aforementioned institutions in the body of knowledge on international student management in higher education.

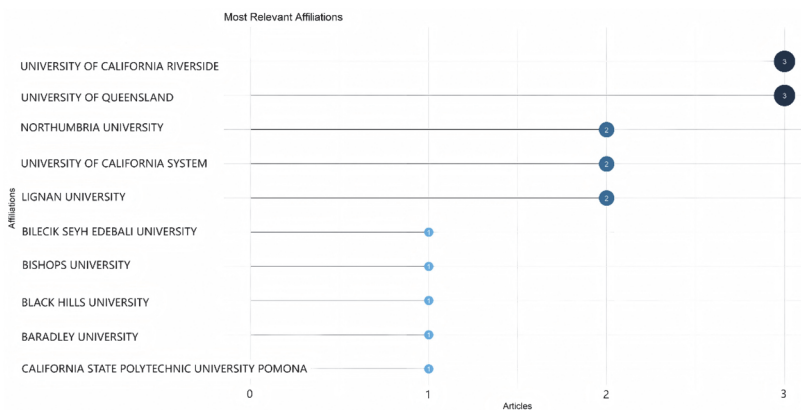


Figure 3. Top 10 research institutions in terms of number of articles published

In this study, a thematic analysis approach was adopted in order to reveal the themes and trends of international student management research. This was achieved through keyword co-occurrence

analysis with the help of the Bibliometrix tool. A library of excluded words and synonyms was imported into the analysis, and relevant parameters (e.g. number of words, minimum cluster frequency, number of tags, etc.) were set, and clustering analysis was performed in conjunction with the Walktrap random walk algorithm to optimise the results and improve clarity of interpretation (Aria & Cuccurullo, 2017; Fortunato, 2010; Pons & Latapy, 2005).

The visual analysis enabled the researcher to identify different categories of themes, including the upper right quadrant (Q1) for Motor Themes, the upper left quadrant (Q2) for Niche Themes, the lower left quadrant (Q3) for Emerging Themes, and the lower right quadrant (Q4) for Declining Themes. (Q2), Emerging Themes in the lower left quadrant (Q3) and Declining Themes in the lower right quadrant (Q4). Segmented Themes are typically those that are of research interest in a particular area but occur less frequently. By contrast, major themes occupy a central position within the research domain and manifest more frequently. Emerging themes represent trends that have recently begun to gain attention and may foreshadow future research directions. Conversely, declining themes are those that were important in the past but are currently receiving less attention.

As illustrated in Figure 4, the themes are as follows. The themes of international student management in higher education institutions (HEIs) encompass the following: internationalisation of higher education, academic performance, Australia (as a study abroad destination), internationalisation, student satisfaction, and related domains. In this context, the internationalisation of higher education is becoming a core strategy for universities around the world to enhance the quality of education and academic reputation, not only by broadening students' global perspectives, but also by strengthening their intercultural competence. In this regard, Australia's tertiary education system, renowned for its superior quality of teaching and learning, is a major draw for international students seeking a world-class education in a dynamic and culturally diverse academic environment. Academic performance, a pivotal indicator of subject mastery, plays a critical role in students' future education and career development. Concurrently, the internationalisation of curricula and campuses has been demonstrated to enhance the student experience, equipping students with the awareness and skills required to thrive in a globalised world. Consequently, student satisfaction emerges as a pivotal metric of educational service success, reflecting the efficacy of the university in aligning with students' needs and fostering a conducive learning environment.

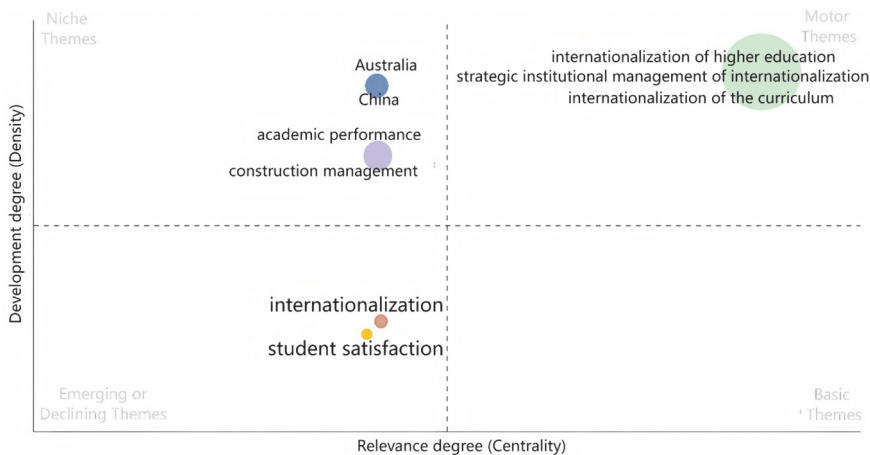


Figure 4. Thematic analysis

Furthermore, in the thematic clustering map of international student management in higher education institutions (HEIs), the research themes were distributed across four quadrants according

to their level of development and relevance. The upper right quadrant, which is centred on 'Motor Themes', comprises Internationalisation of Higher Education, Strategic Institutional Management of Internationalization, and Internationalisation of the Curriculum. These form the foundation of internationalisation in contemporary higher education. In the context of globalisation, internationalisation has become a pivotal issue in the strategic development of HEIs, involving a combination of policy formulation, resource allocation and service quality. The Upper Left Quadrant (Niche Themes) encompasses more specialised yet well-established research domains, characterised by the core keywords Australia (as a study destination), China, Academic Performance and Construction Management. These keywords underscore the endeavours of Australian and Chinese higher education institutions (HEIs) to internationalise their educational offerings, alongside academic performance and construction management. These themes underscore the endeavours of Australian and Chinese universities to advance internationalisation of education, and the pivotal role of academic performance and construction management in fostering the comprehensive international student experience. While these themes have been extensively researched, they have not yet been widely applied. The lower right quadrant (Basic Themes) pertains to fundamental research directions, with Internationalisation and Student Satisfaction serving as core keywords. Internationalisation, as a strategic direction for university development, and student satisfaction, as a key indicator of education quality, complement each other to promote higher quality education and management services for international students. The lower left quadrant (Emerging or Declining Themes) does not present a clear theme, indicating an absence of emerging or declining research trends in the field. The distribution of these quadrants thus reveals the different levels and directions of research on the management of international students in universities.

In the upper right quadrant (Q₁) of the Motor Themes, 'Internationalisation of Higher Education' is a central theme in the research field, with widespread interest and frequent discussion, reflecting its importance and overall relevance in international student management research. The theme encompasses the domains of internationalised curriculum design, student and staff mobility, internationalisation of study and research, and study abroad programmes, with a focus on strategic internationalisation management for global education development. The challenges of balancing economic interests and educational equity in internationalisation at community colleges (Viggiano et al., 2018); the implementation of international collaborative education programs and their impact on students' cultural values (Li & Rivers, 2018); factors influencing study abroad intentions and the enhancement of students' competencies through study abroad experiences (Stroud, 2010); and higher education institutions' support of international students' diversity (Merola et al., 2019); teachers' professional training needs in the process of internationalisation (Karky, 2013); adjustments in teaching methods and assessment strategies for international students as a result of internationalisation of higher education institutions' curricula (Yemini & Giladi, 2015); strategies of Asian countries to cope with the increased mobility of international students and their impact on brain drain; strategies of Asian countries to cope with the increased mobility of international students and its (Chan, 2012); the transformation of internationalisation of higher education in the context of epidemics and its impact on student mobility and quality of education (Mok, 2022); and the effectiveness of internationalisation programmes in terms of academic support and cultural adaptation (Merola et al., 2019; Yemini & Giladi, 2015). The extant literature indicates that the internationalisation of higher education plays a pivotal role in promoting academic innovation, fostering intercultural exchange, and addressing the challenges of globalisation from different perspectives.

In the upper left quadrant (Q₂) of Niche Themes, research is concentrated on specific areas or niches, characterised by a high density but low centrality, frequently in more specialised domains. This quadrant encompasses two themes: Australia (International Student Destinations) and Academic Performance. The Australia (International Student Destinations) theme explores the management strategies employed by Australian universities in relation to the Chinese international student population. Relevant studies include: the context of Australia as a preferred destination for

international students in the Asia-Pacific region (Macionis et al., 2019); the cooperation and challenges of internationalisation of higher education between Australia and China (Hong, 2018); and the adaptation of courses and services by Australian universities to the needs of Asian students (Purkayastha & Huber, 2024); and centralised services and educational innovations in international student management in Chinese universities (Liu & Lin, 2016). These studies reveal the opportunities for cooperation and the far-reaching effects of cultural integration in the management of international students in universities in both countries. The Academic Performance theme focuses on academic engagement and the internationalisation of professional fields in the context of globalisation. Relevant studies include: the association between university students' behavioural patterns and academic performance (Lim et al., 2022); the stress faced by Australian construction management postgraduate students and its impact on academic performance (Kamardeen & Sunindijo, 2018); and the promotion of internationalisation in the field of construction management in the context of the Belt and Road Policy (Belt and Road Policy). The impact of internationalisation on the field of construction management in the context of the Belt and Road Policy has been a subject of considerable interest in academic discourse. In a study conducted by Chen and Zhang (2018), the internationalisation of the construction management field under the Belt and Road Policy was examined. Similarly, Soibelman et al. (2011) explored the development of intercultural cooperation skills in the construction management profession in the context of globalisation. These studies underscore the significance of internationalised education in enhancing students' academic performance and intercultural competence.

In the Emerging Themes in the lower left quadrant (Q₃), the focus of the research is on new trends and rising research interest in the academic field. The research is divided into two themes: Internationalisation and Student Satisfaction. The promotion of internationalisation has had a significant impact on international student satisfaction. By providing internationalised educational resources and optimising international student services, universities are aiming to increase the overall satisfaction of international students. This is with a view to becoming more competitive in the global education market. Internationalisation has prompted the management of international students in higher education institutions (HEIs) to adopt a more diverse and inclusive approach, necessitating the provision of teaching and services that meet international standards to enhance international students' academic achievement and intercultural communication skills. Relevant studies include: Taiwan's universities have implemented bilingual education policies to attract international students, but international students face challenges in adapting to new environments (Lau & Lin, 2017). In the context of China's 'double first-class' policy, universities are developing strategies to promote internationalisation through international education experiences to enhance academic reputation and influence (Delgado-Márquez et al., 2013). Student satisfaction is one of the core objectives of international student management in higher education institutions (HEIs), which involves satisfaction with course content, teaching quality, campus life and support services. Relevant studies include Korean universities' efforts to improve international student satisfaction and retention by evaluating resource inputs and establishing feedback mechanisms (Alemu & Cordier, 2017). As posited by Chu et al. (2018), English-taught programmes that boast high satisfaction amongst international students with regard to course content and teacher competence are marred by an insufficiency of extracurricular social activities and management services, which have a deleterious effect on the overall learning experience.

Table 3. Table of keyword subject labels for study authors

Author Keywords	Theme	Thematic Tags.
Australia	1	Australia
China	1	Australia
Internationalization of Higher Education	2	Internationalization of Higher Education
Strategic Institutional Management of Internationalization	2	Internationalization of Higher Education

Author Keywords	Theme	Thematic Tags.
Internationalization of the Curriculum	2	Internationalization of Higher Education
Mobility of Students and Academic Staff	2	Internationalization of Higher Education
Learning and Research	2	Internationalization of Higher Education
Study Abroad	2	Internationalization of Higher Education
Academic Performance	3	Academic Performance
Construction Management	3	Academic Performance
Internationalization	4	Internationalization
Student Satisfaction	5	Student Satisfaction

4. Discussion and Conclusion

This study systematically compiles the current research status, thematic focus, and keywords of international student management in universities and colleges between 2005 and 2024. Specifically, between 2005 and 2024, there were 38 documents from 25 different academic sources. These documents exhibit an annual rate of 7.57%, an average age of 7.43 years, an average of 23.31 citations per document, and a total of 2,244 references. These data provide evidence to suggest that research in the field of international student management in higher education is gradually receiving more attention, and research output and academic activity are on the rise. The document's content encompasses 127 Keywords Plus and 156 authors' keywords, which may be closely related to international student management strategies, education policies, internationalisation education, and so forth. The document was authored by 91 individuals. Of these, 14 were single-author documents, with an average of 2.19 co-authors involved in each document. This indicates an international cooperation ratio of 14.29%, reflecting the prevalence of international collaboration in research within the field of international student management.

Furthermore, the following section presents the top 10 academic institutions and their corresponding number of articles published. A tie for the highest number of publications was observed between the University of California, Riverside and the University of Queensland, with each institution publishing three articles. Northumbria University, the University of California System, and Lingnan University closely followed, each with two articles. Furthermore, Bilecik Seyh Edebi University, Bishops University, Black Hills State University, Bradley University, and California State Polytechnic University Pomona each published a single article. The data presented here delineate the active participation and scholarly contributions of the aforementioned institutions in the body of knowledge on the management of international students in higher education.

This study employs bibliometric and thematic analyses to identify the thematic focus and keywords of international student management in higher education institutions. Thematic analysis identifies the following motor themes: internationalization of higher education, academic performance, student satisfaction, and so on. These themes reflect current hotspots and trends in research and also point to the direction of future research. Motor Themes: Internationalization of Higher Education: This theme encompasses the domains of internationalized curriculum design, student and faculty mobility, internationalization of study and research, and study abroad programs. The extant literature posits that higher education institutions adopt internationalization strategies to enhance global competitiveness, and that the degree of internationalization is strongly associated with student satisfaction (Chong Pui, 2014). Academic Performance: In the context of globalization, academic performance is recognized as a pivotal factor influencing students' future educational and professional development (Finn et al., 2022). Student Satisfaction: International students' satisfaction is typically influenced by factors such as program content, teaching quality, campus life, and support services (Yilmaz & Temizkan, 2022).

Niche Themes: Australia as a Study Destination: Australia is one of the major destinations for international students from China, and research has highlighted the management strategies of Australian tertiary institutions for international students, such as acculturation support, scholarship

policies, and employment opportunities (Franco et al., 2019). Academic Performance: Consistent with the dominant theme, academic performance continues to be a key concern in the management of international students. Research has found that teaching methods, academic support, and faculty professionalism in higher education institutions all affect the academic success of international students (Kalim et al., 2022). Emerging Themes: Internationalization: In recent years, the impact of internationalized education on international students' satisfaction has become a hot topic of research. Higher education institutions have been found to enhance overall satisfaction by providing internationalized education resources and optimizing services for international students (Paswan & Ganesh, 2009). Student Satisfaction: Support services, academic environment, and intercultural communication have been identified as key factors influencing the satisfaction of international students (Alemu & Cordier, 2017).

This study identifies major themes and keywords in the management of international students in higher education institutions. These themes reflect current research hotspots and trends and also point to directions for future research. Internationalized higher education covers areas such as internationalized curriculum design, student and staff mobility, internationalization of study and research, and study abroad programs. Research has demonstrated that higher education institutions adopt internationalization strategies to enhance global competitiveness while also promoting students' intercultural adaptation and academic development (Dauber & Spencer-Oatey, 2023). Academic performance focuses on the internationalization of academic engagement and professional fields in the context of globalization, emphasizing the importance of academic performance for students' future educational and professional development. Research has identified that the academic performance of international students is influenced by academic support, language proficiency, and cultural adaptability (Rienties et al., 2012).

International student satisfaction is influenced by satisfaction with program content, teaching quality, campus life, and support services, emphasizing student satisfaction as an important indicator of the success of educational services (Pedro et al., 2024). The provision of appropriate support services (e.g., counseling, academic guidance, and cultural adaptation training) has been found to have a significant impact on increasing international students' satisfaction and sense of belonging (Yuan et al., 2024).

Additionally, Australia (a popular destination for international students) has been identified as a segmented theme. Australian higher education institutions have developed specific management strategies for the Chinese international student population, emphasizing cross-cultural adjustment support and career guidance (Cao & Meng, 2022). Internationalization, as an emerging theme, deals with the impact of the advancement of internationalized education on international student satisfaction, emphasizing the commitment of higher education institutions to enhance the overall satisfaction of international students through the provision of internationalized educational resources and the optimization of international student services (Hou et al., 2023).

Thematic analysis and the identification of keywords have been shown to provide concrete guidance for higher education institutions to optimize their management strategies, as well as to provide researchers with rich research directions and theoretical foundations. The study of internationalized higher education has helped deepen the understanding of how higher education institutions can enhance the quality of education through curriculum design and policy implementation and has provided other researchers with a framework for analyzing and improving the internationalization strategies of higher education institutions. Research on academic performance has underscored the pivotal role of academic support and program design in the success of international students, thereby providing researchers with methods to assess and enhance the academic performance of international students. Research on international student satisfaction has revealed key factors affecting the overall experience of international students, including academic support, social integration, language adaptation, and psychological well-being. A case study of Australia's internationalization strategy for higher education reveals commonalities and differences in successful practices in the management of international students across countries and regions

(Hong, 2020). Research on internationalization has provided direction to explore emerging trends and innovative strategies, encouraging researchers to focus on the impact of new technologies such as online education and distance learning on the management of international students. The findings of research in these areas suggest that higher education institutions may enhance the quality of education, increase international competitiveness, and provide enhanced support and services to international students.

5. Limitations and Future Research

Whilst the present study provides valuable insights through its bibliometric analysis, it is important to acknowledge two key methodological limitations regarding language coverage and database selection. The exclusive reliance on English-language publications from the Web of Science (WOS) database may have systematically excluded significant research published in other languages, particularly in disciplines where non-English scholarship contributes substantially to the field. This restriction in language may potentially introduce a bias in the findings by underrepresenting regional perspectives and research traditions documented in languages such as Chinese, Spanish, and French. Furthermore, while the Web of Science (WOS) database offers comprehensive coverage of high-quality English-language journals, its scope is inherently limited in comparison to more inclusive databases. The study could be strengthened by incorporating additional data sources such as Scopus (for broader multidisciplinary coverage), Google Scholar (for grey literature and emerging publications), and CNKI (for Chinese-language research). In future studies, the implementation of multilingual search strategies and the integration of these complementary databases should be considered in order to achieve more comprehensive and representative literature coverage. In addition, although the quality and relevance of the 38 papers included in the study were ensured by the rigorous screening of papers through the PRISMA process, the small sample size may affect the generalisability of the findings. Hence, future research could expand the search or combine quantitative and qualitative methods to delve deeper into key topics. Finally, although bibliometric analysis methods can reveal research hotspots, they are limited by data size and analysis tools.

Hence, future research could combine text mining and machine learning techniques to explore more detailed research topics and potential relationships. In conclusion, the present study provides a valuable reference point for the field of international student management, and future research could incorporate multivariate data and methods in order to more comprehensively reveal the core topics and trends in the field. It is recommended that future research directions include a more in-depth examination of the impact of digital education and the management of international students in the post-pandemic era.

References

- Alemu, A. M., & Cordier, J. (2017). Factors influencing international student satisfaction in Korean universities. *International Journal of Educational Development*, 57, 54-64. <https://doi.org/10.1016/j.ijedudev.2017.08.006>
- Altbach, P. G. (1991). Impact and adjustment: foreign students in comparative perspective. *Higher Education*, 21(3), 305-323. <https://doi.org/10.1007/BF00132723>
- Altbach, P. G., & Knight, J. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education*, 11(3-4), 290-305. <https://doi.org/10.1177/1028315307303542>
- Ammigan, R., Veerasamy, Y. S., & Cruz, N. I. (2023, 2023/04/03). 'Growing from an acorn to an oak tree': a thematic analysis of international students' cross-cultural adjustment in the United States. *Studies in Higher Education*, 48(4), 567-581. <https://doi.org/10.1080/03075079.2022.2150757>
- Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959-975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Beregovaya, O. A., & Kudashov, V. I. (2019). The problems of linguistic and academic adaptation of international students in Russia. *Интеграция образования*, 23(4), 628-640. <https://doi.org/10.15507/1991-9468.097.023.201904.628-640>

- Cao, C., & Meng, Q. (2022). A systematic review of predictors of international students' cross-cultural adjustment in China: current knowledge and agenda for future research. *Asia Pacific Education Review*, 23(1), 45-67.
- Castiello-Gutiérrez, S., Hoyer, K. A. R., García, H. A., & McNaughtan, J. (2021). Educators, not bureaucrats: how managerial professionals at international student services centers engage in job crafting and create meaning in their work. *Studies in Higher Education*, 46(11), 2167-2182. <https://doi.org/10.1080/03075079.2020.1716317>
- Chen, Y., & Zhang, Z. (2018). Relationship between internationalization of higher education and the further study trend of overseas students. *Educational Sciences: Theory & Practice*, 18(6). <https://doi.org/10.12738/estp.2018.6.239>
- Chong Pui, Y. (2014). Internationalization of Higher Education: A Literature Review on Competency Approach. *International journal of Asian social science*, 4(2), 258-273. [http://www.aessweb.com/pdf-files/ljass-%204\(2\)%20258-273.pdf](http://www.aessweb.com/pdf-files/ljass-%204(2)%20258-273.pdf)
- Chu, H.-N. R., Lee, W. S., & O'Brien, P. W. (2018). Student Satisfaction in an Undergraduate International Business EMI Program: A Case in Southern Taiwan. *Journal of Studies in International Education*, 22(3), 198-209. <https://doi.org/10.1177/1028315317748525>
- Dauber, D., & Spencer-Oatey, H. (2023). Global communication skills: Contextual factors fostering their development at internationalised higher education institutions. *Studies in Higher Education*, 48(7), 1082-1096. <https://doi.org/10.1080/03075079.2023.2182874>
- Delgado-Márquez, B. L., Escudero-Torres, M. Á., & Hurtado-Torres, N. E. (2013). Being highly internationalised strengthens your reputation: an empirical investigation of top higher education institutions. *Higher Education*, 66(5), 619-633. <https://doi.org/10.1007/s10734-013-9626-8>
- Di Maria, D. (2020). A Basic Formula for Effective International Student Services. *Journal of International Students*, 10(3), xxv-xxviii. <https://doi.org/10.32674/jis.v10i3.2000>
- Finn, M., Mihut, G., & Darmody, M. (2022). Academic satisfaction of international students at Irish higher education institutions: The role of region of origin and cultural distance in the context of marketization. *Journal of Studies in International Education*, 26(5), 572-589. <https://doi.org/10.1177/10283153211027009>
- Fombona, J., Pascual, M. A., & Listopadzka, E. (2022). International Projects as a New Way to Solve Global Problems, Case Study of a European Project. *Sustainability*, 14(17). <https://doi.org/10.3390/su141711006>
- Fortunato, S. (2010). Community detection in graphs. *Physics Reports*, 486(3), 75-174. <https://doi.org/10.1016/j.physrep.2009.11.002>
- Franco, M., Hsiao, Y.-S., Gnilk, P. B., & Ashby, J. S. (2019). Acculturative stress, social support, and career outcome expectations among international students. *International Journal for Educational and Vocational Guidance*, 19, 275-291. <https://doi.org/10.1007/s10775-018-9380-7>
- Freeman, R. B., & Viarengo, M. (2014). School and family effects on educational outcomes across countries. *Economic Policy*, 29(79), 395-446. <https://doi.org/10.1111/1468-0327.12033>
- Gibbs, R., Güneri, O. Y., Pankau, T., & Bikos, L. (2020). Birds of a Feather Fare Less Well Together: Modeling Predictors of International Student Adaptation. *Sustainability*, 12(6). <https://doi.org/10.3390/su12062317>
- Gümüş, S., Gök, E., & Esen, M. (2020). A Review of Research on International Student Mobility: Science Mapping the Existing Knowledge Base. *Journal of Studies in International Education*, 24(5), 495-517. <https://doi.org/10.1177/1028315319893651>
- Hiebl, M. R. W. (2023). Sample Selection in Systematic Literature Reviews of Management Research. *Organizational Research Methods*, 26(2), 229-261. <https://doi.org/10.1177/1094428120986851>
- Hong, M. (2018). Public university governance in China and Australia: a comparative study. *Higher Education*, 76(4), 717-733. <https://doi.org/10.1007/s10734-018-0234-5>
- Hong, M. (2020). A comparative study of the internationalization of higher education policy in Australia and China (2008-2015). *Studies in Higher Education*, 45(4), 768-779. <https://doi.org/10.1080/03075079.2018.1553154>
- Hou, M. H., Yu, J., & Katsumoto, S. (2023). Theoretical approaches to the study of international students. *Critical Internationalization Studies Review*, 2(1), 14. <https://criticalinternationalization.net/2022/04/19/theoretical-approaches-to-the-study-of-international-students/>
- Hunter-Johnson, Y. (2022). A leap of academic faith and resilience: Nontraditional international students pursuing higher education in the United States of America. *Journal of International Students*, 12(2). <https://doi.org/10.32674/jis.v12i2.1986>
- Kalim, U., Tran, P. Q. B., Bibi, S., & Khamphouvong, L. (2022). Impact of Academic and Non-Academic Service Quality on International Students Satisfaction in Chinese Universities. *Journal of Education and Learning*, 11(6), 86-95. <https://doi.org/10.5539/jel.v11n6p86>

- Kamardeen, I., & Sunindijo, R. Y. (2018). Stressors Impacting the Performance of Graduate Construction Students: Comparison of Domestic and International Students. *Journal of Professional Issues in Engineering Education and Practice*, 144(4), 04018011. [https://doi.org/10.1061/\(ASCE\)EI.1943-5541.0000392](https://doi.org/10.1061/(ASCE)EI.1943-5541.0000392)
- Karky, N. (2013). International Students in an Indian Technical University: Faculty Counselors' Preparedness and Perspectives. *Journal of Studies in International Education*, 17(1), 39-54. <https://doi.org/10.1177/1028315312453744>
- Khan, A. M., Patra, S., Gupta, P., Sharma, A. K., & Jain, A. K. (2021). Rapid transition to online teaching program during COVID-19 lockdown: Experience from a medical college of India. *Journal of Education and Health Promotion*, 10(1), 99. https://doi.org/10.4103/jehp.jehp_606_20
- Knight, J. (2004). Internationalization Remodeled: Definition, Approaches, and Rationales. *Journal of Studies in International Education*, 8(1), 5-31. <https://doi.org/10.1177/1028315303260832>
- Lau, K., & Lin, C.-Y. (2017). Internationalization of higher education and language policy: the case of a bilingual university in Taiwan. *Higher Education*, 74(3), 437-454. <https://doi.org/10.1007/s10734-016-0055-3>
- Li, L., & Rivers, G. J. (2018). An inquiry into the delivering of a British curriculum in China. *Teaching in Higher Education*, 23(7), 785-801. <https://doi.org/10.1080/13562517.2017.1421626>
- Lim, H., Kim, S., Chung, K.-M., Lee, K., Kim, T., & Heo, J. (2022). Is college students' trajectory associated with academic performance? *Computers & Education*, 178, 104397. <https://doi.org/10.1016/j.compedu.2021.104397>
- Liu, W., & Lin, X. (2016). Meeting the Needs of Chinese International Students: Is There Anything We Can Learn From Their Home System? *Journal of Studies in International Education*, 20(4), 357-370. <https://doi.org/10.1177/1028315316656456>
- Luo, Y., Marina, L., & Andrei, P. (2023). International Student Mobility: A Systematic Review and Research Agenda. *International Journal of Consumer Studies*, 47(3), 852-887. <https://doi.org/10.1111/ijcs.12911>
- Macionis, N., Walters, G., & Kwok, E. (2019). International tertiary student experience in Australia: A Singaporean perspective. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 25, 100174. <https://doi.org/10.1016/j.jhlste.2018.10.002>
- Márquez, L., Henriquez, V., Chevreux, H., Scheihing, E., & Guerra, J. (2024). Adoption of learning analytics in higher education institutions: A systematic literature review. *British Journal of Educational Technology*, 55(2), 439-459. <https://doi.org/10.1111/bjet.13385>
- McGarvey, A., Brughha, R., Conroy, R. M., Clarke, E., & Byrne, E. (2015). International students' experience of a western medical school: a mixed methods study exploring the early years in the context of cultural and social adjustment compared to students from the host country. *BMC Medical Education*, 15(1), 111. <https://doi.org/10.1186/s12909-015-0394-2>
- Merola, R. H., Coelen, R. J., & Hofman, W. H. A. (2019). The Role of Integration in Understanding Differences in Satisfaction Among Chinese, Indian, and South Korean International Students. *Journal of Studies in International Education*, 23(5), 535-553. <https://doi.org/10.1177/1028315319861355>
- Mok, K. H. (2022). Impact of COVID-19 on Higher Education: Critical Reflections. *Higher Education Policy*, 35(3), 563-567. <https://doi.org/10.1057/s41307-022-00285-x>
- Munn, Z., Moola, S., Riitano, D., & Lisy, K. (2014, Aug). The development of a critical appraisal tool for use in systematic reviews addressing questions of prevalence. *Int J Health Policy Manag*, 3(3), 123-128. <https://doi.org/10.1517/ijhpm.2014.71>
- Neumann, H., Kozak, S., & Gil, L. (2023). The impact of academic acculturation and language proficiency on international students' university experience and academic success: A longitudinal study. *The Canadian Modern Language Review*, 79(2), 121-140. <https://doi.org/10.3138/cmlr-2021-0055>
- Nguyen, A., Tran, L., & Duong, B.-H. (2023). Higher education policy and management in the post-pandemic era. *Policy Futures in Education*, 21(4), 330-334. <https://doi.org/10.1177/14782103231158171>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., Stewart, L. A., Thomas, J., Tricco, A. C., Welch, V. A., Whiting, P., & Moher, D. (2021, 2021/03/29). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Systematic reviews*, 10(1), 89. <https://doi.org/10.1186/s13643-021-01626-4>
- Paswan, A. K., & Ganesh, G. (2009). Higher education institutions: Satisfaction and loyalty among international students. *Journal of Marketing for Higher Education*, 19(1), 65-84. <https://doi.org/10.1080/08841240902904869>
- Pedro, E., Alves, H., & Leitão, J. (2024). Sustainable development practices in public higher education: A new conceptual framework for nurturing student satisfaction and reinforcing attractiveness to international students. *Sustainable Development*, 32(3), 2565-2582. <https://doi.org/10.1002/sd.2798>

- Pons, P., & Latapy, M. (2006). Computing communities in large networks using random walks. *Journal of graph algorithms and applications*, 10(2), 191-218. <https://doi.org/10.7155/jgaa.00124>
- Rao, P. (2017). Learning challenges and preferred pedagogies of international students. *International Journal of Educational Management*, 31(7), 1000-1016. <https://doi.org/10.1108/IJEM-01-2016-0001>
- Rienties, B., Beusaert, S., Grohnert, T., Niemantsverdriet, S., & Kommers, P. (2012). Understanding academic performance of international students: The role of ethnicity, academic and social integration. *Higher Education*, 63, 685-700. <https://doi.org/10.1007/s10734-011-9468-1>
- Satria, D., Sensuse, D. I., & Noprisson, H. (2017, October). A systematic literature review of the improved agile software development. In *2017 International Conference on Information Technology Systems and Innovation (ICITSI)* (pp. 94-99). IEEE.
- Shaheen, N., Shaheen, A., Ramadan, A., Hefnawy, M. T., Ramadan, A., Ibrahim, I. A., Hassanein, M. E., Ashour, M. E., & Flouty, O. (2023). Appraising systematic reviews: a comprehensive guide to ensuring validity and reliability. *Frontiers in Research Metrics and Analytics*, 8. <https://doi.org/10.3389/frma.2023.1268045>
- Siddaway, A. P., Wood, A. M., & Hedges, L. V. (2019). How to Do a Systematic Review: A Best Practice Guide for Conducting and Reporting Narrative Reviews, Meta-Analyses, and Meta-Syntheses. *Annual review of psychology*, 70, 747-770. <https://doi.org/10.1146/annurev-psych-010418-102803>
- Smith, C. (2016). International Student Success. *Strategic Enrollment Management Quarterly*, 4(2), 61-73. <https://doi.org/10.1002/sem3.20084>
- Soibelman, L., Sacks, R., Akinci, B., Dikmen, I., Birgonul, M. T., & Eybpoosh, M. (2011). Preparing Civil Engineers for International Collaboration in Construction Management. *Journal of Professional Issues in Engineering Education and Practice*, 137(3), 141-150. [https://doi.org/10.1061/\(ASCE\)EI.1943-5541.0000044](https://doi.org/10.1061/(ASCE)EI.1943-5541.0000044)
- Stroud, A. H. (2010). Who Plans (Not) to Study Abroad? An Examination of U.S. Student Intent. *Journal of Studies in International Education*, 14(5), 491-507. <https://doi.org/10.1177/1028315309357942>
- Szabó, Á., Z. Papp, Z., & Nguyen Luu, L. A. (2020). Social contact configurations of international students at school and outside of school: Implications for acculturation orientations and psychological adjustment. *International Journal of Intercultural Relations*, 77, 69-82. <https://doi.org/10.1016/j.ijintrel.2020.05.001>
- Tavares, V. (2024). Feeling excluded: international students experience equity, diversity and inclusion. *International Journal of Inclusive Education*, 28(8), 1551-1568. <https://doi.org/10.1080/13603116.2021.2008536>
- UNESCO. (2021). *Other policy relevant indicators : Net flow of internationally mobile students* <https://data.uis.unesco.org/index.aspx?queryid=3804>
- UNESCO. (2023). *Global Sustainable Development Report 2023*. <https://sdgs.un.org/gedr/gedr2023>
- Viggiano, T., López Damián, A. I., Morales Vázquez, E., & Levin, J. S. (2018). The Others: Equitable Access, International Students, and the Community College. *Journal of Studies in International Education*, 22(1), 71-85. <https://doi.org/10.1177/1028315317725883>
- Yemini, M., & Giladi, A. (2015). Internationalization Motivations and Strategies of Israeli Educational Administration Programs. *Journal of Studies in International Education*, 19(5), 423-440. <https://doi.org/10.1177/1028315315579240>
- Yilmaz, K., & Temizkan, V. (2022). The effects of educational service quality and socio-cultural adaptation difficulties on international students' higher education satisfaction. *Sage Open*, 12(1), 21582440221078316. <https://doi.org/10.1177/21582440221078316>
- Yu, B. (2013). Asian international students at an Australian University: mapping the paths between integrative motivation, competence in L2 communication, cross-cultural adaptation and persistence with structural equation modelling. *Journal of Multilingual and Multicultural Development*, 34(7), 727-742. <https://doi.org/10.1080/01434632.2013.796957>
- Yuan, X., Yang, Y., & McGill, C. (2024). The impact of academic advising activities on international students' sense of belonging. *Journal of International Students*, 14(1), 424-448. <https://doi.org/10.32674/jis.v14i3.5227>
- Zhao, L., Song, Y., & Xu, Q. (2023). Effects of Chinese academic management environments on international students' academic experiences. *Journal of Higher Education Policy and Management*, 45(6), 641-657. <https://doi.org/10.1080/1360080X.2023.2232538>