

## *Mapping the Field of Quality Assurance and Transnational Higher Education Through a Bibliometrics Analysis*

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### **Abstract**

Quality assurance (QA) has become an increasingly important research subject due to globalization and the consequent international expansion of higher education institutions. Such expansion entails obstacles and challenges since national frameworks for QA and the recognition of qualifications do not cover transnational higher education (TNHE). With enthusiastic debate amongst all stakeholders and academics, further exploration is needed to produce more theoretical guidance and good practicing of QA in future TNHE. Thus, the current paper investigated, based on a literature review, the research content of QA in TNHE. To explore this mapping, 4,562 academic papers from 570 journals published between 1990 and 2023, and indexed in Scopus and Web of Science, were assembled. Co-citation analysis and cluster analysis using VOS viewer were applied to explore the answers to the following research questions: What are the principal topics that handle the gaps in TNHE and QA, and how do they correlate with each other? The bibliometric method was applied to verify the following main research groups: (a) assessment; (b) quality; (c) management; (d) learning-teaching. The results revealed the rearrangement of knowledge structure, emerging topics, and potential future directions of research concerning QA and TNHE. They also indicated that educational string and knowledge management strings are the main topics in this realm, and QA is a research topic of great importance for knowledge creation in overall quality stimulation in TNHE.

Keywords: Quality Assurance, Transnational Higher Education, Co-citation and Cluster Analysis

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## **1. Introduction**

Quality assurance (QA) has become an increasingly important research subject due to globalization and the consequent international expansion of higher education institutions. Such expansion entails obstacles and challenges since national frameworks for QA and the recognition of qualifications do not cover transnational higher education (TNHE). With enthusiastic debate amongst all stakeholders and academics, further exploration is needed to produce more theoretical guidance and good practicing of QA in future TNHE.

In the 1990s, the internationalization of quality assurance and accreditation began with the implementation of the Lisbon Recognition Convention, signifying a significant change in the acknowledgment of qualifications worldwide (<https://www.coe.int/en/web/>). This convention played a crucial role in establishing a more comprehensive approach to recognizing qualifications globally. QA can be regarded as a significant focal point for reform within higher education on a global scale (Bordogna, 2020). QA processes act as a means of accountability employed by both institutions and QA agencies to uphold high-quality standards. TNHE refers to the process in which a higher education institution expands its study programs to foreign countries, assuring the delivery and quality of the programs (Kleibert et al., 2020). QA processes in institutions increase accountability by guaranteeing that the services they offer to society adhere to rigorous standards. Before the advancements in quality assurance, there was a notable emphasis on enhancing internationalization in higher education, with a specific focus on promoting academic mobility (Bovill et al, 2015).

On the other hand, in the context of public policies, the changing dynamics of internationalization and commodification call for QA measures that promote greater responsibility within higher education systems. Thus, mapping quality assurance in transnational higher education is an ongoing and dynamic process that requires collaboration and adherence to research to maintain the highest standards of education across borders.

## **2. Literature Review**

### **2.1 Quality Assurance**

Quality assurance in TNHE is a crucial aspect to ensure that the academic standards, learning outcomes, and student experiences are consistent and aligned across different international locations and institutions (Carvalho et al, 2022). Transnational higher education refers to educational programs or courses offered by one institution (often based in one country) that are delivered in another country, either through partnerships with local institutions or via online platforms (Trifiro, 2018). Accreditation and recognition ensure that the transnational programs are accredited and recognized by relevant education authorities in both the host and home countries is essential. This process may involve complying with specific national or regional accreditation standards.

The governance and quality management of higher education institutions now places significant emphasis on the quality assurance of transnational higher education. Quality assurance has gained immense importance as a reform priority in higher education globally. Despite being a shared primary goal, different countries pursue specific sub-objectives, including enhancing educational quality, ensuring transparency in quality and standards, implementing accreditation mechanisms, and fostering public accountability (Garuana, 2016). The implementation of quality management systems within universities is motivated

by the escalating global competition for both funding and student enrollment, particularly in nations where tuition fees are substantial. Nevertheless, the understanding and evaluation of quality vary across various higher education systems, given the absence of a universally accepted definition of quality. According to Carvalho et al (2022), the concept of quality is multifaceted, leading to confusion, as each person's understanding of quality may vary. Additionally, the objectives and viewpoints on quality also differ among various groups of stakeholders.

At the nation-state level, governments play a crucial role in promoting the global “quality movement” (Zwanikken et al., 2013). The adoption of quality assurance systems in one nation can serve as a model or best practice for others to emulate and implement.

## **2.2 Transnational Higher Education**

Transnational higher education (TNHE) encompasses higher education programs or opportunities that are available and accessible in multiple countries (Wakefield & Dismore, 2015). TNHE is characterized by students studying in a country different from the one where the awarding institution is based (home country). This type of education encompasses various delivery modes, such as franchising, branch campuses, twinning programs, and distance learning arrangements. (Altbach, 2004). Each of these models requires a specific governance framework to ensure effective collaboration, quality standards, and compliance with relevant regulations (Hou,2014).

The diversity of educational systems, cultural differences, and varying legal frameworks across countries make it difficult to ensure consistent and effective quality assurance in TNHE. As a result, maintaining and upholding quality standards in TNHE becomes a complex task for regulatory bodies and institutions involved (Hou et al., 2015). These guidelines have been widely disseminated and discussed, especially among the quality assurance community, and are expected to be a major reference document as transnational education grows in response to international demand.

A notable increase in higher education offerings that are not tied to a specific national education system, is observed in certain regions globally. While this phenomenon is not entirely novel, it has become more prevalent in recent years and has taken on various diverse manifestations. Some higher education institutions, which are part of a national education system, have established branch campuses in foreign countries for a considerable period (De Wit, 2002). And maintaining consistent academic quality across borders is crucial in transnational education. Effective governance in transnational education includes provisions for student support services, including admissions, orientation, counseling, and academic advising (Sella & Lingard, 2013). Governance frameworks should balance the autonomy of each participating institution with the need for collaborative decision-making. The allocation of decision-making authority, such as curriculum development, admissions criteria, and faculty appointments, should be clearly defined and agreed upon by all partners.

## **2.3 Research Questions**

Based on the above findings, we attempt to answer the research question: What are the principal topics that handle the gaps in TNHE and QA, and how do they correlate with each other?

This study was conducted to systematically chart the evolution and substance of the literature on quality assurance (QA) in transnational higher education (TNHE). The goal was to create a comprehensive and multidisciplinary overview of this field. To achieve this, a bibliometric analysis was employed, involving the examination of 1,468 articles sourced from 236 distinct academic journals. Specific search criteria were applied to identify relevant articles published between the years 2012 and 2022.

The analysis utilized VOS viewer to examine social and knowledge structures, enabling us to analyze cognitive structures and networks related to quality assurance within the realm of TNHE. The study also assessed aspects like network size and the growth in the number of publications to determine whether the research field of quality assurance in TNHE is well-defined and coherent, rather than just a collection of disconnected topics. The research sought to provide valuable insights into the state of knowledge in the domain of quality assurance in TNHE and its interconnectedness, contributing to a deeper understanding of the subject within the academic area.

### **3. Research Methodology**

#### **3.1 Co-citation Analysis**

Co-citation is a bibliometric concept used to analyze and understand the relationship between scholarly works based on their citation patterns (Small, 1973). It is a measure of how often two documents are cited together by other works, indicating a degree of similarity or relatedness in the content of the cited documents. By analyzing the frequency of co-citations among literature, scholars can uncover common themes, concepts, and connections that reflect the shared understanding and collaboration among researchers (Trujillo & Long, 2018). The co-occurrence matrix aids in identifying key works and influential ideas that have shaped the field, and this approach contributes to a better understanding of the research landscape and fosters insights into knowledge dissemination and collaboration within the scientific community. According to Braam et al. (1991), bibliometric analysis provides insights into the relationships and interactions within the academic community, helping to understand the dissemination of knowledge, research trends, and the formation of research networks. Thus, among the 1468 articles selected, 438 articles were cited a minimum of two times. These articles were utilized to conduct a co-citation analysis.

VOS Viewer is a software application developed by the Centre for Science and Technology Studies (CWTS) at Leiden University (<https://www.vosviewer.com>). It is used for bibliometric visualization and analysis, particularly for exploring and visualizing bibliographic data and scientific networks. VOS Viewer allows users to create visualizations of scientific collaboration networks, co-citation networks, and co-authorship networks (van Eck & Waltman, 2009). It uses bibliographic data, such as publications, authors, and citations, to create maps and visual representations that help researchers gain insights into research trends, collaborations, and the structure of scientific knowledge in a particular field. In this study, the researchers utilized VOS Viewer to perform co-citation analysis, which is a fundamental quantitative method. This approach allowed them to explore research questions by examining selected journal articles and identifying the connections and relationships between cited works.

## **3.2 Web of Science**

Web of Science is a widely recognized and competitive citation database used worldwide for academic research (<https://www.webofscience.com>). Its core collection, known as the three classical journal citation indexes, includes the Science Citation Index Expanded, Social Sciences Citation Index, and Arts and Humanities Citation Index. These indexes are highly popular and extensively utilized by scholars in various academic disciplines. In this study, the researchers opted for a different approach to article selection. Instead of choosing journals and subject categories, WoS citation databases and specific search strings were employed to select relevant articles. This alternative method allowed them to focus on specific research questions and uncover insights based on the retrieved articles, diverging from the more conventional approach of journal and subject category selection. (Zhu & Liu, 2020).

The researchers performed a comprehensive search using specific phrases within the titles, keywords, and abstracts of articles. These search strings were formulated based on a glossary that comprised essential terms along with their corresponding definitions. This approach ensured a systematic and structured exploration of the relevant academic literature (Vlasceanu, 2007). Among the 21 different search phrases that were tested, only 9 of them produced pertinent and applicable data. These specific search strings were aligned with the terms and definitions outlined in Vlasceanu's glossary, indicating their effectiveness in retrieving relevant academic information for the study (2007). Selection of search strings includes accreditation, transnational education, studying; accreditation, transnational education, teaching; accreditation, transnational education, studying; competition, transnational education, studying, quality; competition, transnational education, teaching; competition, transnational education, studying; quality; competition, transnational education, teaching, quality; enhancement, transnational education, studying, quality; enhancement, transnational education, teaching, quality; enhancement, transnational education, studying, quality.

## **4. Results and Discussion**

### **4.1 Core Journals for Quality Assurance of Transnational Higher Education**

The research identified three distinct zones of journals based on geophysics and lubrication. Figure 1 presents empirical evidence indicating an unequal distribution among these zones. Zone 1, which pertains to higher education, comprises core journals and accounts for approximately one-third of all articles published. In Zone 2, scattered three sub-zone articles have been published in journals of *Studies in Higher Education Research*, *British Journal of Education*, and *Teaching in Higher Education*. The last zone of the articles is distributed in the *Asia Pacific Education Review*.

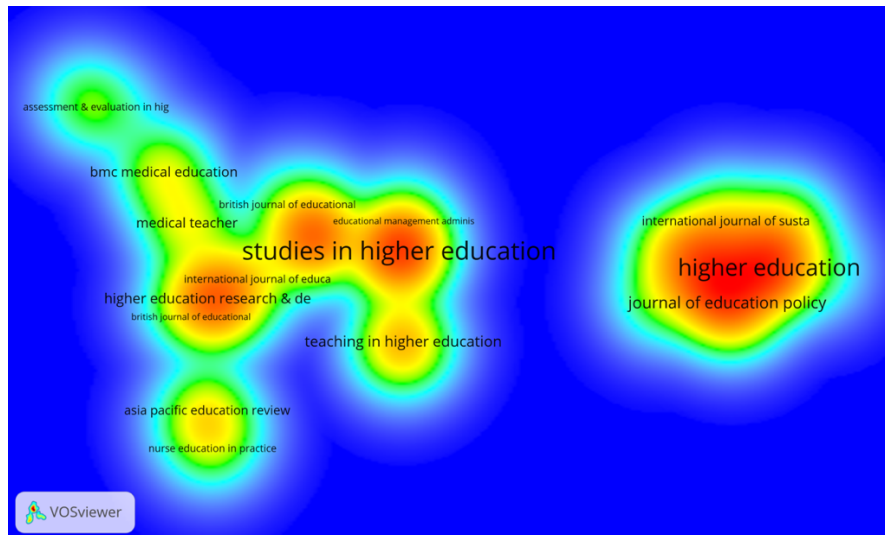


Figure 1: Core journals for publication of quality assurance of transnational higher education

#### 4.2 Co-citation Analysis

By analyzing co-citations, the QA of TNHE can be visually represented by studying the subjects, groupings of subjects (topic clusters), and the relationships linking these subjects and clusters, as depicted in Figure 2. This diagram is produced using the VOS Viewer software, which employs a visualization technique akin to multi-dimensional scaling, to display similarities. Within the diagram, there are four distinct groupings (clusters) as evident in Figure 2. Lines on the map indicate the interconnections between these clusters. In the visual representation depicted in Figure 2, articles are linked in space based on author names. Larger font sizes for names indicate greater centrality within the network.

The Motivation-Cluster (represented in yellow) and the Governance-Management-Cluster (in green) as well as the Learning-Teaching-Cluster (in blue) exhibit robust interconnections with each other. In contrast, the Commercialization-Market-Cluster (depicted in red) demonstrates weaker links to the remaining clusters. The limited number of lines connecting the Commercialization-Market-Cluster to the other three clusters indicates a lower degree of connectivity. This configuration suggests that discussions surrounding the quality assurance of TNHE are characterized by a loose coupling of four distinct topics in scientific communication.

Initially, a preliminary comprehension of the subjects encompassed within each cluster was attained through the execution of a word count analysis applied to the titles of the articles. This approach holds academic significance as it aids in discerning the overarching themes of the articles before engaging in a more comprehensive analysis. Subsequently, a closer examination of the articles led to the identification of key categories within each cluster. Through the classification of the top six most frequently cited articles, the primary themes of each cluster became apparent, and the subjects gained increased subtlety without the necessity of introducing novel categories. Within the Motivation Cluster, the discussion revolves around methodological analysis concerning the validity and impact of quality assurance in TNHE. Furthermore, the distribution of articles across journals reveals that a significant portion of learning-teaching articles were published in the years 2007 and 2012.

Motivations and efforts to monitor international initiatives and ensure quality are integral to the international higher education environment. (Altbach & Knight, 2007; Wilkins et al., 2011). A core perspective of the motivations cluster regards Quality assurance helps to maintain consistent educational standards across different locations and institutions. It ensures that the educational programs offered in transnational settings meet the same level of quality as those offered domestically. This motivation arises from the belief that students should receive a comparable quality of education regardless of the geographical location of the institution. Another strand of literature in the motivation cluster develops a framework for quality assurance to protect the interests of students who pursue education in transnational settings. The discussion of Motivation as a belief in quality assurance also created a link to the governance and management cluster, which is the second largest cluster on this map.

Another significant observation that arose pertains to the significance of governance and management, grounded in transnational directives and global QA agencies. However, this approach introduces certain challenges associated with the domestic context within TNHE functions. This is because international and regional quality assurance mechanisms often adopt broader criteria to accommodate the diverse array of institutions, potentially overlooking national particularities (Castle & Kelly, 2004). Coleman (2003) also explored the quality assurance body differences by comparing British Quality Assurance Agency and Australian Universities Quality Agency. This cluster is closely related to the teaching and learning cluster. Because governance in transnational higher education requires ongoing monitoring and evaluation to assess the effectiveness and quality of the programs. Regular reviews, assessments, and evaluations help identify areas for improvement and ensure the continuous enhancement of the educational experience for students learning and teaching delivery. Also, some research explored transnational programs that are accredited or recognized by relevant quality assurance agencies. This helps to validate the quality and credibility of the programs offered, both in the host country and the sending country.

Among the clusters, the teaching-learning cluster stands as the most compact. Its primary categories encompass assessment, learning, students, quality, teaching, education, and evaluation. The article with the most citation in the cluster is that by Knight (2015), who explored a framework that differentiates between collaborative TNHE and independent TNE modes of delivery. Gribble and Ziguras (2003) investigate the existing pre-departure cross-cultural training offered by Australian universities to enhance comprehension regarding the sufficiency of the assistance provided to Australian educators engaged in offshore teaching. Other research focuses on learning skills and outcomes. For example, Dai et al. (2019) investigated diverse techniques encompassing self-assessment, peer assessment, and co-assessment. This comprehensive exploration delineates the individual contributions of these assessment methodologies towards the advancement of educational excellence, harmoniously aligned with the principles of lifelong learning. This implies a scholarly examination of how these assessment strategies impact and improve the educational process while being consistent with the overarching philosophy of continuous and lifelong learning. While there are numerous challenges associated with TNHE, such as issues related to qualification recognition across national higher education systems, it continues to be an appealing option for various stakeholders. Students find TNHE attractive as it enables them to obtain a foreign degree while studying in their country of residence. Higher education institutions (HEIs) view TNHE as an opportunity to expand their market and reach a broader audience. Additionally, governments, in response to the increasing demand for higher education, see TNHE as a potential solution to address the difficulties they encounter (Altbach & Knight, 2007).

The fourth cluster is distinct from the other three clusters due to its focus on a different topic, as the articles within this cluster do not address the quality of TNHE. Within this fourth cluster, the key categories revolve around commercialization and the market.

Under the framework of academic capitalism, TNHE seeks to maximize financial resources by leveraging its intellectual property, research findings, and reputation to generate income through standard quality delivery (Slaughter, 2004). By implementing robust quality assurance processes, organizations signal their commitment to delivering high-quality products or services. This can enhance their reputation, build trust with stakeholders, and attract customers or partners. Quality assurance mechanisms, such as certifications or audits, can serve as symbols of legitimacy and differentiate organizations in the educational market (DiMaggio & Powell, 2016). They regard students as customers of universities, emphasizing that students are perceived as the primary clientele. In this context, various pertinent factors, including students' needs and preferences, should be integrated into the quality assurance framework within TNHE. This viewpoint underscores the importance of aligning educational practices with student expectations and experiences to enhance overall quality.

Through a succinct examination of the content prevalent in the most frequently referenced articles across the four identified clusters, it is possible to perceive interrelated themes. These thematic connections originate from discussions encompassing the definitions, assessments, quantifications, and administration of quality. To illustrate, the exploration of motivation within the first cluster is intricately interwoven with the dialogue concerning teaching and learning within the quality management cluster. Notably, the most pronounced linkage between the teaching and learning cluster and the governance and management cluster lies in the pointed critique of quality assurance mechanisms in transnational higher education functioning as steering mechanisms.

In contrast, the Commercialization-Market cluster assumes a distinctive perspective compared to the other three clusters. This divergence arises because the articles within the Commercialization-Market cluster abstain from engaging with the subject of teaching and learning quality. Instead, the central emphasis within the commercialization cluster revolves around the multifarious strategies adopted by organizations to manifest their dedication to delivering exceptional products or services. This underscores the intricate relationships between various thematic clusters while highlighting the divergent focus and perspectives within each, contributing to a comprehensive understanding of the discourse on quality in higher education.



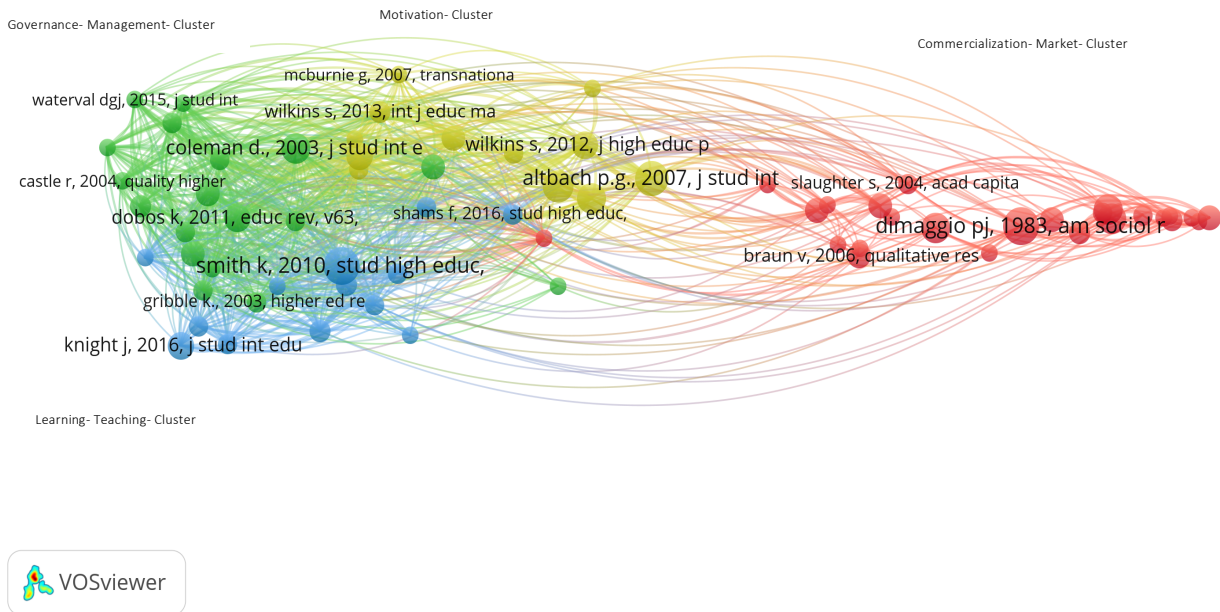


Figure 2: Co-citation analysis

### 4.3 Publication Rate and Cluster Affiliation

Figure 3 displays a relatively moderate pace of publication spanning from 2000 to 2013. After 2013, a notable and sudden upsurge in the volume of articles is discernible, culminating in a subsequent gradual decline in the publication rate. In terms of numerical count, the number of articles focusing on the quality assurance of TNHE escalated annually from under 10 to over 20 articles in 2013, indicating an evident surge in publication output. However, assessing this increase in the publication rate alone does not suffice to categorize the quality assurance of transnational higher education as an established research field. A disciplinary area is estimated to comprise a maximum of 100 scholars who publish annually (Price, 1986). Considering the growth trajectory of scholarly publications in recent decades, contemporary studies have indicated varying thresholds ranging from 250 to 600 authors who contribute to a field's literature yearly (Price, 1986). This indicated that more and more research focus on the realm of QA and TNHE, however, is still not a research subject. The period of relatively moderate publication rate observed between 2000 and 2013 signifies a consistent expansion of research. Beginning in 2016, a sudden surge in article numbers becomes apparent, followed by a subsequent gradual decline in the publication rate. This pattern indicates that the field of research concerning QA and TNHE has been consistently burgeoning, except for the period marked by the impact of COVID-19.

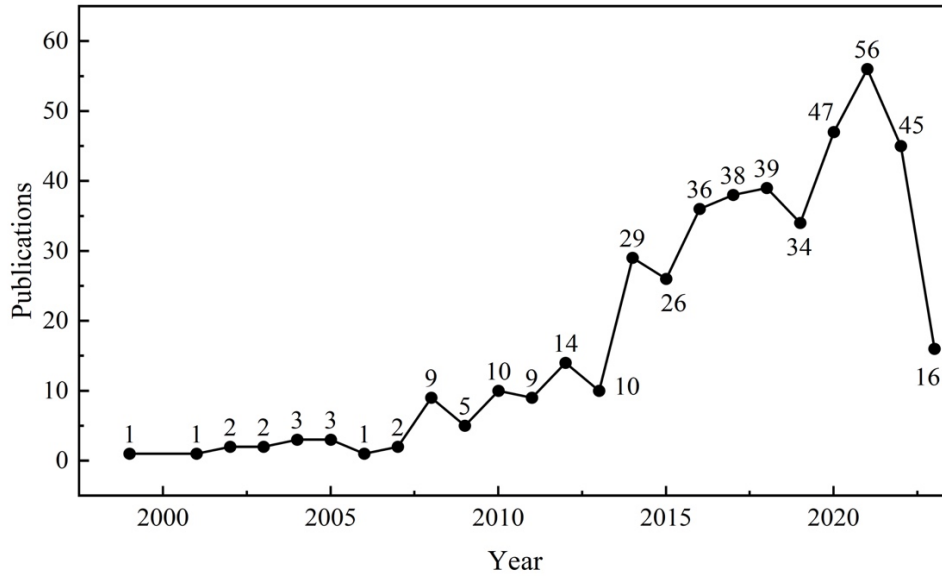


Figure 3: Publication number of articles

According to the cluster affiliation of the authors in Figure 4, most authors are situated in European and Asian countries. This could be due to the more TNHE suppliers and receivers in these countries. Because maintaining consistent academic quality across borders is crucial in transnational education, governance mechanisms include joint academic boards, shared curriculum development, faculty exchange programs, and regular quality audits to ensure compliance with agreed-upon standards, which is also an outline of the QA mechanism for both partners.

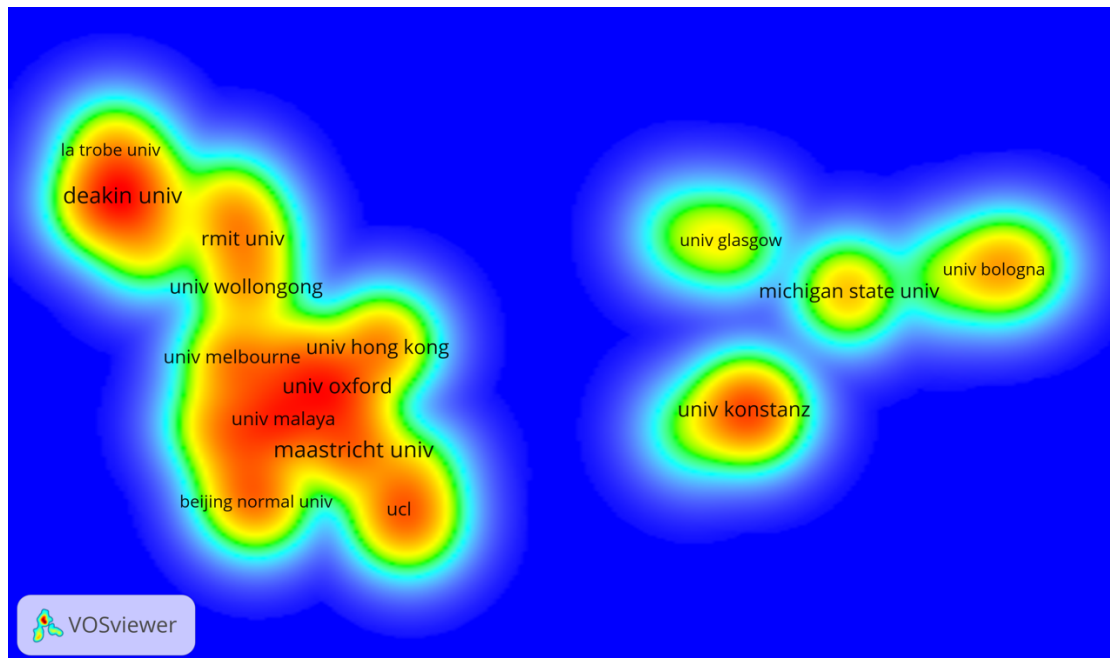


Figure 4: Cluster affiliation of the authors

## 5. Conclusion - Recommendations and Limitations

As discussed earlier, it is premature to definitively characterize quality assurance in TNHE as a fully developed research topic. Nevertheless, the empirical evidence presented in this paper

suggests various indicators that point toward the mapping nature of QA in TNHE. An additional signal that reinforces the perception of quality assurance in TNHE as a mapping field is derived from the publication rate. The linear decline in the publication rate can be attributed to the impact of the Covid-19 pandemic, as observed by Wang and Kim (2023).

Taking a comprehensive view of the four clusters, governance appears to encompass the overarching theme of quality assurance in transnational higher education, as highlighted by Dobbins and Knill (2017). This is particularly evident in the Motivation- Cluster, the Teaching- Learning- Cluster, and the Governance- Management- Cluster. The interplay between these clusters indicates a dual form of governance. The first involves top-down management driving governance in teaching and learning within the Commercialization-Market-Cluster and Governance-Management-Cluster. The second mode of governance is represented by the Teaching-Learning-Cluster and Motivation-Cluster, exemplifying a bottom-up form of governmentality led by individual academics. It remains intriguing to observe how these two governance approaches converge within the research domain of TNHE quality assurance.

A notable challenge emerges when a TNHE provider operates independently and lacks affiliation with any established higher education system. This situation places the provider outside the established framework of quality assurance and accreditation, leading to difficulties in ensuring the credibility and quality of TNHE offerings. This gap in oversight raises significant concerns about how these qualifications are perceived by employers and society at large. The assurance of TNHE quality becomes imperative to uphold the reputation and international recognition of qualifications granted by these providers. Establishing robust quality assurance mechanisms becomes essential to uphold the value and trustworthiness of TNHE degrees, ensuring they meet the required standards and are respected both within and beyond national borders. (Tran et al., 2022). To realize the learning outcomes, the curriculum of the transnational programs is aligned with those of the home institution. This alignment ensures that students receive the same level of education regardless of the location of the program delivery. Stakeholders need to provide adequate student support services to ensure that students have access to resources and assistance regardless of their location (Bolton & Nie, 2010). This could include academic advising, library resources, counseling, and technical support for online programs.

Quality assurance plays a crucial role in safeguarding the integrity and reputation of transnational programs and institutions. Quality assurance in transnational education addresses the overall student experience, including access to support services, academic advising, and resources (Smith, 2010). This ensures that students have a positive learning environment and receive adequate assistance throughout their studies. It promotes transparency and accountability in the delivery of transnational programs. By providing clear information about program content, delivery modes, tuition fees, and student support services, institutions build trust with their stakeholders.

Overall, quality assurance in transnational higher education is essential for maintaining academic excellence, fostering trust among stakeholders, and ensuring that students receive a high-quality education regardless of their geographic location.

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