Italian Sociological Review
ISSN 2239-8589
DOI: 10.13136/isr.v15i2.891 2025, 15(2), pp. 369 – 392

Opportunities and Barriers for Lecturers' Career Progression: A Systematic Review of the Scientific Labour Market

Nu Nguyet Anh Nguyen[a], Ninh Nguyen[b]

Abstract

Scientific labour market mobility is important for stability in tertiary education worldwide. The systematic research evaluates academic career progression challenges and trends through analysis of 792 Web of Science and Scopus papers spanning from 1990 to 2025. A bibliometric study identified research trends and nodes. and Scopus papers spanning from 1990 to 2025. Gender equality problems combine with limited funding alongside restrictive institutional barriers to create barriers for women in educational development. Limited professional development, international cooperation, and adoption of educational technology remain major challenges. Conversely, growth opportunities include enhanced leadership training, interdisciplinary collaboration, and digital transformation, all of which foster innovation and equity. This study reinforces equality, employability, and leadership as the main elements shaping academic career mobility. More importantly, this study suggests future paths of research that include the support of multicultural and multidisciplinary scholarships, and the expansion of engagement in higher education. The bibliometric analysis revealed a growing trend in research in providing equity for academic opportunities to minority ethnic and socioeconomic background groups.

Keywords: systematic review, scientific labour, lecturers, barriers, opportunities.

[a] Faculty of Sociology, University of Social Sciences and Humanities, Vietnam National University Ho Chi Minh City, Ho Chi Minh City, Viet Nam.
[b] Faculty of Commerce and Tourism, Industrial University of Ho Chi Minh City, Ho Chi Minh City, Viet Nam.

Corresponding author:
Ninh Nguyen
E-mail: nguyenvaninh@iuh.edu.vn

Received: 21 January 2025
Accepted: 27 February 2025
Published: 12 May 2025

1. Introduction

In the recent decades, the scientific labor market in Vietnam has undergone major organizational changes because of fast-growing higher education levels and intensified global economic connections. Student population in higher learning institutions has increased from 0.9 million in 2000 to 2.3 million in 2010 by private university and technical college the growth being incredible (Parajuli et al., 2020). However, the education growth rate slowed since early 2010 with Vietnam's gross enrollment rate (GER) in higher education copyright to a modest 28%, placing the nation as one of the lowest in East Asia (Jacob et al., 2018). Simultaneously, the need for qualified lecturers who can address learning environment challenges reached an all-time high at present. The career progression of lecturers in Vietnamese universities faces frequent obstacles because of organizational structures together with bureaucratic challenges and socio-economic barriers (Thao et al., 2022). While the academic literature widely discusses these challenges but researchers who maintain academic roles produce most studies about their system's career dynamics. Academic researchers could potentially introduce personal biases during discussions about barriers and opportunities because they describe challenges with their own perception of academic (Howe-Walsh & Turnbull, 2016). In this context, one gets the impression that not only do these obstacles negatively affect the development of individual career paths but do so while undermining creation of a competitive and innovative academic workforce in the nation (Pham & Saito, 2020).

The use of innovation, research competence and sustainable economic development in the nation cannot be enhanced without the skilled academic staff. Thailand spends 0.64% of its GDP on higher education, while Malaysia allocated 1.13% of its GDP and Vietnam's investment in higher education constitutes a comparatively modest 0.33% of its GDP (Parajuli et al., 2020). This underinvestment exacerbates existing issues such as limited research funding opportunities, constrained career development prospects, and inflexible institutional policies (Anh Tran et al., 2023). Moreover, these problems are impaired by such factors as bureaucratic guidelines of the institutional procedures, gender injustice, and insufficient cooperation at the intercountry level. Research on frequency and keyword patterns related to faculty academic career growth across countries holds important value because these concerns are increasing.

Career growth necessitates that academic institutions cultivate supportive work environments, offer opportunities for interdisciplinary training, and provide readily accessible research infrastructure (Luwei & Huimin, 2024). However, systematic structure demonstrates unknown effects on career development processes and general developmental processes. Academic career

research usually analyzes large economic structures and gender disparities and funding allocation but lacks thorough investigation of the personal and physiological aspects academic development experiences especially across developing regions (Maheshwari et al., 2021). The current literature therefore indicates a gap that calls for a proper analysis of factors that impact on the career progression of lecturers. It is hoped that this understanding may have implications for future work and research agendas in developing countries, with Vietnam proposed for future research (Le et al., 2023).

To address these gaps in the existing literature, this study investigates the career development challenges that preclude developing countries, particularly lecturers, from attaining successful careers in the scientific labor market. The study includes the process of integrating materials and pointing out topics to reveal factors that hinder students' academic achievement: structural and cultural (Bui & Takuro, 2024). This study uses bibliographic research analysis in defining research needs, exploring keyword occurrence and outward citation for cluster analysis in title selection. With regards to research this work focuses on the following research terms which are related to teaching institutions and different stakeholders involved in the elaboration of teaching conditions (Duong et al., 2024).

2. Literature review

2.1 Barriers to lecturers' career advancement

The career advancement of lecturers is pivotal for the sustainability and growth of higher education institutions, yet it is frequently hindered by a variety of systemic and contextual barriers (Arokiasamy et al., 2011). Many of such barriers have been well reported, ranging from institutional factors to socio-cultural challenges, and are often studied by researchers who themselves experience these obstacles, potentially influencing their perspectives. all pointing to a compound social fact, which defines and hinders the process of progression academically.

These finding places lack adequate research funding, as one of the most widespread problems affecting implementation of research activities. Lecturers from many developing countries such as Vietnam still find it difficult to easily secure these competitive grants meaning that they are cornered in a way when it comes to doing research that can lead to publication in these quality journals (Le et al., 2024). Additionally, the problem intensifies when stiff institutional frameworks and bureaucratic procedures are in place. For instance there is a conflict of intangible policies in regard to promotion where some of the critical

factors that hindered career advancement in academia (Pham & Saito, 2020). These challenges are further enriched by administrative pressures that take most of these lecturers' time for research and development (Yurkofsky et al., 2020).

However, cultural and socioeconomic factors also play decisive roles in the process. Despite these changes, women continue to face significant barriers in advancing their careers, which stem from both institutional constraints and broader societal norms (Podreka et al., 2024). Academic institutions have thoroughly researched these obstacles because they show women experience different challenges in science and technology fields. Research looks into institutional blockages independently from studies that focus on career challenges caused by personal or experiential factors. Research conducted by scientists who actually experience obstacles in their careers tends to influence their findings regarding challenges and opportunities in academic development. This perspective remains useful yet it might introduce personal interpretations relating to system problems and proposed solutions (Howe-Walsh & Turnbull, 2016).

Furthermore, international collaboration stands as an opportunity due to restricted global partnerships among educators. Lecturer interaction with global academic communities remains limited because of deficient foreign language abilities combined with restricted contacts and inadequate resources (Rossoni et al., 2024). These hitches greatly reduced their interaction with international best practices and research as well as lowering their competitiveness in teaching. Similar studies pointed out that lack of professional back-up and overseas networking resources are major drawbacks that adversely affect early career scientists (Sverdlik et al., 2018).

The literature also illustrates a mismatch between the priorities of institutions and the aspirations of individuals. In many developing contexts, teaching remains the priority of most universities, which gives little room for lecturers to pursue the scholarly work that would also be needed to build a prominent career. Furthermore, lack of mentoring and professional development workshops considerably limits the capacity of early-career academia to "get on with the job" of developing their career pathways as these have not been optimally available. Studies about entrepreneurial education suggest that professional development programs are critical in setting career paths (Tomlinson, 2007). The process of analyzing systematic literature about missing research remains challenging for researchers who need to establish new research areas.

2.2 Opportunities for lecturers in scientific labor markets

Lecturers in the scientific labor market have multiple career advancement options which help overcome obstacles by connecting internationally and taking professional training with digital tools while receiving financial support (Ta et al., 2024). These opportunities are very important for increasing the standards of educational and research practice, especially in circumstances where such institutional realities and socio-economic obstacles remain evident.

There seems to be money in international collaboration because it offers researchers financial support, new techniques for inquiry, and new topics of study. Partnerships with global academic networks provide opportunities to co-author publications in high-impact journals, thereby enhancing visibility and academic recognition. For example, exchange programs, joint research projects, and international conferences facilitate knowledge sharing and allow lecturers to adopt global best practices and international collaborations can bridge systemic gender gaps, particularly in leadership and research productivity (Howe-Walsh & Turnbull, 2016).

Besides partnership with other countries, the professional development programs contribute substantially to preparing the lecturers necessary tools and knowledge to cultivate the competitive environment in the academic sector. Many of these programs tend to cover topics including grants, new teaching methodologies, and management. Another study on academic leadership revealed that, special and purposeful, learning interventions, and resource management are the key important strategies for promoting gender equity in academia and career enhancement (Chang et al., 2014).

Moreover, the process of digitalization is perceived as the evolutive chance for the lecturers, mainly after the COVID-19 outbreak. The incorporation of digital technologies in teaching as well as in research means that slides or lectures are shared online allows for distance learning, virtual conferences, and use of group tools to reach more students, and to engage in discussions and debates through the conferencing means from any part of the world (Gosetti, 2024). The shift in the educational context has investigated how the virtual learning environment for researchers and the academic networks may enhance digital communication and technological resources to decentralize and globalize their independency and creativity (Fischer et al., 2020).

Lastly, funding available today presents a good chance to let lecturers continue meaningful research at schools. Many national and international funding agencies have created grants for early career researchers or researchers of underrepresented fields. This shift promotes the lecturers to find out new fields of research and involves him in interdisciplinary study. The need to

coordinate funding for interdisciplinarity in a bid to make learning and teaching models more pluralistic (Tomlinson, 2012).

These academic resources enable academics to deal with structural barriers even though their availability differs by both institutional and geographic conditions. This field of academic research shares a parallel condition with barrier-driven investigations since discussion topics on career opportunities may primarily emanate from scholars who experienced these barriers themselves. The emphasis placed on international collaboration, professional development, and digital transformation in literature may, in part, be shaped by the experiences and aspirations of researchers within the academic system (Parziale et al., 2024).

3. Methodology

3.1 Data collection and preparation

This study adopt systematic review method and use two important academic online databases which include the WoS and Scopus (Donthu et al., 2021); (Marzi et al., 2024). For the purposes of the research, a specific search strategy was developed with an inclusive approach to possible articles. Structural keywords and Boolean operators were applied using terms such as "career advancement," "career barriers," "career mobility," "lecturers," "academic staff," and "university job market".

The initially conducted search found 113 WoS and 814 Scopus documents. After clearing 135 duplicates, 792 unique documents from 1990 to 2025 on higher education and the scientific labor market were analyzed.

To extract the articles, filters were set to the preference of articles into social science and education domains which are originally written in the English language and therefore derived from peer-reviewed journals (Vincenzo, 2024).

3.2 Bibliometric analysis

Bibliometrix R package combined with VOS viewer made up the research analysis tools. The research employed citation analysis to discover which papers and authors received the most citations in order to comprehend basic research sources better (Donthu et al., 2021). Co-citation analysis identified relationships and connections between frequently cited pieces of work and keyword analysis identified more important themes and trends (Cobo et al., 2011); (Aria & Cuccurullo, 2017). Additionally, to analysis contributing countries, a

geographical distribution of research inputs was described so as to assess the global coverage of the academic work in this category. The results are approached by cluster analysis, international cooperation network mapping, keyword frequency, citation network from countries.

The analysis of bibliometric data revealed insights about both advantages and disadvantages of opportunities and challenges in lecturers' scientific employment market (Rossoni et al., 2024). Data collected was analyzed and then put into various categories using concept maps (Rathee & Mittal, 2024). This technique facilitated better understanding of the degree of relationship between the concept of institutionalization and the potential for existence of new opportunities for professional development.

3.3 Limitations

The following limitations are observed in this study: First, the sources available only in English were taken into consideration, thus leaving aside the possible research in other languages may show different cultural or regional angle. Second, the exclusion of gray literature such as policy documents, institutional reports and technical articles will limit the practical perspective obtained from the non- peer reviewed sources. The research utilized journal articles and book chapters alongside reviews and conference proceedings and editorials which linked to research goals. This research technique showed methodological rigor but potentially neglected intricate dialogues present in non-traditional information sources. The research adopts a methodical examination despite its slight methodological constraints to uncover professionals' challenges and prospects during their scientific field career.

4. Findings

4.1 Outstanding features of sample research characteristics

Table 1 provides a detailed summary of the sample data used in this study, encompassing 792 documents published between 1990 and 2025. There are different types of documents within the dataset: articles are the most presented (670), book chapters (29), and reviews (39).

The average number of citations per a document is 16.66 which indicates that the documents have a good level of scholarly citations, the average annual citation rate per document equals 1.55 – 2.14 (Romo-Fernández et al., 2011).

Publications have increased at an average annual growth rate of 15.9%, this confirms that scholarship has been on the rise during the analyzed period.

The dataset includes contributions from 2204 authors. Among these, 151 documents were single-authored, while 164 works had no co-authors. Notably, research papers from the Humanities and Social Sciences domain included multiple authors in 74% of cases (Macfarlane et al., 2017). The proportion of international author collaborations stands at 2.778%. Most author collaborations occur within domestic settings yet the research community is now turning toward international co-authorships because of heightened interest in worldwide research perspectives.

Table 1. Characteristics of sample data.

N	Description	Results	Document types	Results	Document contents	Results
1	Timespan	1990:2025	Article	670	Keywords plus (ID)	1654
2	Sources (Journals, Books, etc.)	441	Article; e book chapter	4	Author's keywords (DE)	2307
3	Documents	792	Article; early access	8	Authors	2204
4	Annual growth rate %	15.9	Article; proceedings paper	1	Author appearances	2412
5	Document average age	4.04	Book, book chapter	29	Authors of single-authored docs	151
6	Average citations per doc	16.66	Conference paper	29	Single-authored docs	164
7	Average citations per year per doc	2.529	Editorial material; early access	7	Documents per Author	0.359
8	References	1	Note, short survey	5	Co-Authors per Doc	3.05
9	Total duplicate documents Wos and Scopus	135	Review	39	International co-authorships %	2.778

4.2 Contributing countries

Although beyond the scope of this current paper, Table 2 presents the top reporting countries from the articles reviewed in the study. The largest number of articles of 152 is published by the writers from United Kingdom while USA writers published 107 articles, and Australia writers contributing 69 articles. These nations occupy the largest shares which point to the quality of their academic facilities and a strong research indication of leadership in advanced higher learning. Other countries have also been presented with China contributing 29 articles, South Africa with 23 articles and Finland with 17 articles which bring diversity into the research.

The multiple country publications ratio (MCP_Ratio) gives information about the scope in the international cooperation (Aria & Cuccurullo, 2017).

Countries such as Italy (MCP_Ratio: 0.1250). Compared to the countries with focus on domestic research as the United Kingdom (MCP_Ratio: 0.0197), USA (MCP_Ratio: 0.0187), Finland (MCP_Ratio: 0.0588) and Australian (MCP_Ratio: 0.0219) collaborators have higher collaboration ratios.

This distribution is based on global academic production as well as the geography in terms of how countries might differently approach domestic versus international research practices. This by using a multi-country study emphasizes the need for international cooperation in thought development and handling of issues affecting higher education internationally (Akbaritabar & Barbato, 2021).

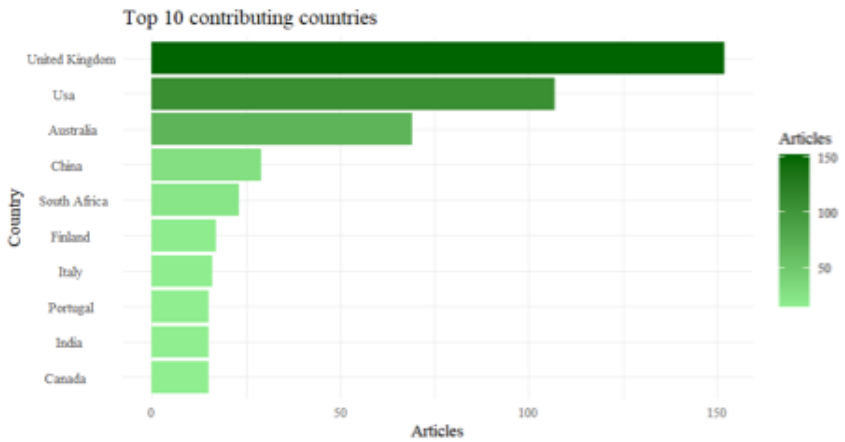
The analysis results in Table 2 are further illustrated through Figure 1, which visually represents the Top 10 contributing countries. This visualization helps to provide a clearer understanding of the distribution of contributions from various countries in the academic landscape.

Table 2. Contributing countries.

No.	Country articles	Frequency	MCP_Ratio
1	United Kingdom	152	0.0197
2	USA	107	0.0187
3	Australia	69	0.0725
4	China	29	0.0345
5	South Africa	23	0.0000
6	Finland	17	0.0588
7	Italy	16	0.1250
8	Portugal	15	0.0000
9	India	15	0.0000
10	Canada	15	0.0000

Source: Author's dataset, 2025

Figure 1. Top 10 contributing countries.



Source: Author's dataset, 2025

4.3 Most cited papers

Table 3 presents the ten most cited papers in the dataset, each of which has had a significant impact on higher education, career development, and the challenges facing academics, as further illustrated in Figure 2" on higher education, career development and challenges facing academics. The most cited paper, "Entrepreneurship education: a systematic review of the evidence", provides a comprehensive overview of entrepreneurship education, reflecting its critical role in fostering innovation and employability (Pittaway & Cope, 2007). Similarly, "Graduate employability: a review of conceptual and empirical themes" explores key strategies to enhance students' transition from education to the labor market (Tomlinson, 2012).

Table 3. Top 10 most cited papers.

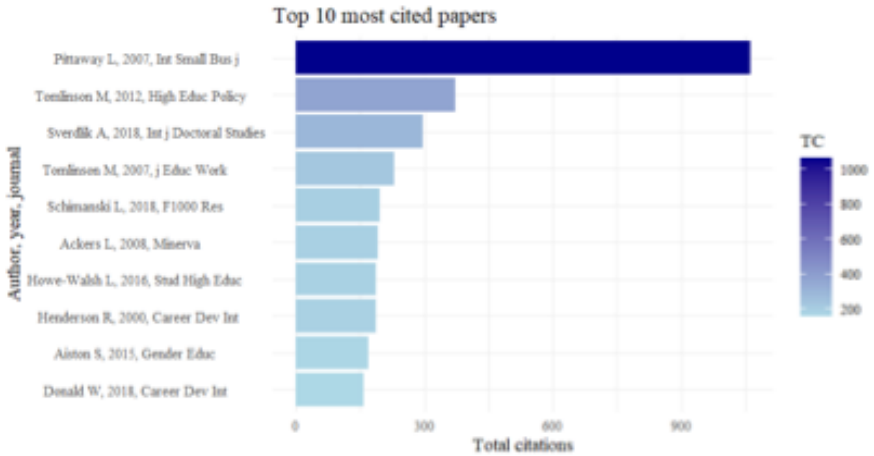
N	Paper, year, journal	Total citations	Average citations per year
1	Entrepreneurship Education: A systematic review of the evidence, 2007, International Small Business Journal: Researching Entrepreneurship	1062	59
2	Graduate Employability: A review of conceptual and empirical themes, 2012, High Educ Policy	373	28.69
3	The PhD Experience: A review of the factors influencing doctoral students' completion, achievement, and well-being, 2018, International Journal of Doctoral Studies	296	42.29
4	Graduate employability and student attitudes and orientations to the labour market, 2007, Journal of Education and Work	230	12.78
5	The evaluation of scholarship in academic promotion and tenure processes: Past, present, and future, 2018, F1000 RES	196	28
6	Mobility and Metrics: A new form of indirect discrimination?, 2008, MINERVA	191	11.24
7	Barriers to women leaders in academia: tales from science and technology, 2016, Studies in Higher Education	187	20.78
8	"Who wants to be an entrepreneur? Young adult attitudes to entrepreneurship as a career", 2000, Education Training	186	7.44
9	Women academics and research productivity: an international comparison, 2015, Gender and Education	168	16.8
10	Students' perceptions of education and employability: Facilitating career transition from higher education into the labor market, 2018, Career Development International	159	22.71

Source: Author's dataset, 2025.

Gender-related challenges in academia are prominently featured in works like "barriers to women leaders in academia: Tales from science and technology" (Howe-Walsh & Turnbull, 2016) and "women academics and research productivity: An international comparison" (Aiston & Jung, 2015). These studies underline systemic inequities and the need for structural reforms to promote inclusivity and gender equity in academic leadership and research productivity.

Discussing critical issues that impact early-career researchers and their success yesterday's contribution includes recent papers, including "a review of the factors influencing the completion, achievement, and well-being of doctoral students" (Sverdlik et al., 2018). Meanwhile, the four research questions in the study whose widely cited research addresses issues related to mobility, and evidence-based assessments of opportunity and equity in postsecondary education (Ackers, 2008).

Figure 2. Top 10 most cited papers.



Source: Author's dataset, 2025.

4.4 Results from collaborative network analysis

In academic research, collaborative network analysis is a key method for exploring the structure and dynamics of scientific relationships, particularly keyword relationships, to clarify how research topics are interconnected within a specific field. Findings from this analysis are presented in Table 4 and visually illustrated in Figure 3 and Figure 4.

Table 4 shows collaborative network analysis keyword relationships and cluster centrality. Betweenness and Pagerank metrics divide phrases into four thematic groups in the table. Table 4 shows topics related to higher education research and academic career development from collaborative network analysis. Tables 3 and 4 show the top-cited publications and clustering findings, emphasizing essential elements and linkages.

Table 4. Results from collaborative network analysis.

Keywords	Cluster	Betweenness	Pagerank
Higher-education	1	3.967	0.01
Work	1	4.634	0.009
Experiences	1	0.046	0.005
Mobility	1	4.502	0.007
Higher education	2	45.499	0.026
Gender	2	17.511	0.016
Employment	2	27.676	0.02
Teaching	2	9.442	0.016
Decision making	2	15.003	0.018
Academic performance	2	3.597	0.012
Research	2	4.946	0.009
Faculty	2	3.862	0.011
Motivation	2	1.939	0.009
Womens status	2	0.167	0.006
Human	3	70.191	0.086
Female	3	38.296	0.061
Male	3	20.267	0.054
Humans	3	46.729	0.066
Education	3	72.16	0.043
Adult	3	16.39	0.048
Human experiment	3	14.063	0.045
Career	3	6.891	0.037
Leadership	3	12.953	0.016
Perception	3	10.248	0.018
Workforce	3	1.866	0.022
Tertiary education	3	3.725	0.025
Mentoring	3	0.458	0.014
Qualitative research	3	7.02	0.014
Educational status	3	1.523	0.015
Curriculum	3	1.7	0.012
Learning	3	0.992	0.013
Job satisfaction	3	1.245	0.013
Questionnaire	3	2.008	0.022
Young adult	3	0.298	0.013
Controlled study	3	1.543	0.02
Adolescent	3	0.132	0.011
Psychology	3	2.543	0.016
Universities	3	5.426	0.013
Career mobility	3	0.271	0.01
Interview	3	3.539	0.012
Major clinical study	3	1.791	0.017
Middle aged	3	0.133	0.011
Surveys and questionnaires	3	1.125	0.017
Workplace	3	2.913	0.01
Career choice	3	0.196	0.013
Medical research	3	0.069	0.009
Engineering education	4	1.126	0.011
High educations	4	0.842	0.008
Professional aspects	4	1.533	0.011

Source: Author's dataset, 2025.

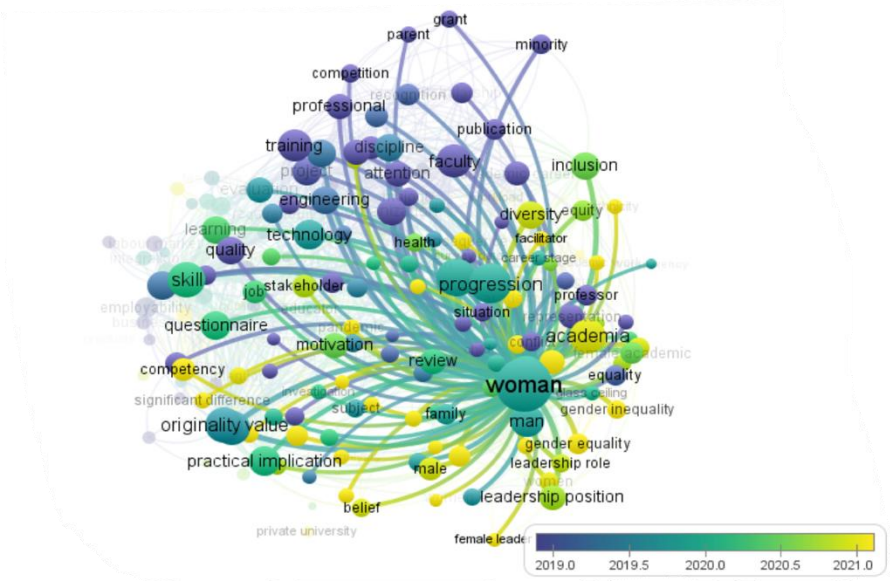
Cluster 1 is identified as mobility, work and higher education as basic themes. Papers like "mobility and metrics: a new form of indirect

discrimination?" this cluster, which highlights problems with academic migration and performance indicators interfering with promotion (Ackers, 2008). This research points to the fact that world and institutional transitions are equally problematic for researchers.

Cluster 2 is about institutional and societal aspects; gender and employment, and teaching are identified as important themes. This is in consonant with preeminent cited works on the problem of women in leadership and in academia (Howe-Walsh & Turnbull, 2016), women academics and research productivity that focuses on the gender gap, and obstacles to career progress (Aiston & Jung, 2015). All these papers call for fairness in practice and policies to eradicate inequality in academic contexts.

Cluster 3 analyzes leadership, education and female engagement as human-oriented issues. Keywords in this cluster relate to the effects of papers such as well-being and success of Ph., D (Sverdlik et al., 2018), and graduate employability: a brief of conceptual and empirical, areas that concentrates on the process of moving from education to work (Tomlinson, 2012). These research results show how effective support systems of inclusion and leadership opportunities have on the students' and careers.

Figure 3. Keywords that appear frequently at present.

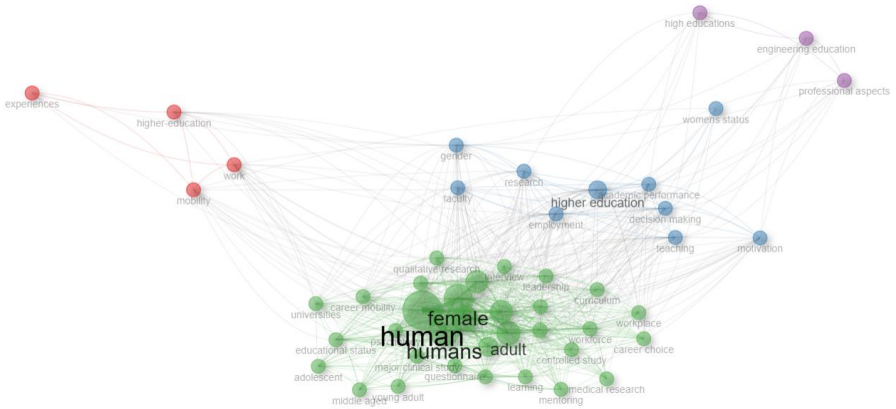


Source: Author's dataset, 2025.

Cluster 4 covers some specific and transdisciplinary topics, such as engineering education and professional dimension. These keywords describe particular domains of knowledge that augment the themes existing in the academic workers' market. For instance educational trends and challenges in engineering a part of table 3 discussed on changing functions of technical education in determining the professional career and workforce development with the growing research capacity at developed countries level (Ackers, 2008). These outcomes prove that the efficiency of an interdisciplinary approach is helpful to encourage innovations and adapt students to a specific profession (Haviland & Robbins, 2021).

The analysis of keywords in Figure 3 using collaborative network analysis reveals the division of terms into four distinct clusters, reflecting thematic groupings in research (Skute et al., 2019). Keyword frequencies increase between 2019 and 2021, this makes it a significant period for research. The keyword adopted for the study is woman which directs the focus on gender related education issues and in this specific case, with regards to progression, academia, originality value and leadership. This means that gender inequality and the leadership for women on academic all formed a central concern (Harris et al., 2024)

Figure 4. Clustering of keywords in collaborative network analysis.



Source: Author's dataset, 2025

Table 4 provides cluster and keyword detail, represented in greater level of theorization, to provide greater insight on the specific thematic directions and the relations between the terms in the context of the clusters. Figure 4 provides an extended view on the relationships of and between these clusters along with shifts in between and interconnections of key research themes. Altogether these

findings stress the need for gender equity in academic advancement and at the same time give insights into the map of the education network (Podreka et al., 2024)

The approach shows how basic issues like education intersect with specialized themes to identify key research areas. Tables 3 and 4 show that structural, human, and institutional issues drive higher education research. The study reveals how mobility, gender equity, and engineering education interact, offering a comprehensive view of academic research goals. This approach leads future research and collaboration to solve higher education's problems and innovate.

4.5 Foundational investigations utilizing co-occurrence analysis methods

Table 5 highlights the most representative keywords concerning the research topics of the bibliometric network. Every keyword stands for a topic of concern in the research, which mirrors the thematic organization and concerns in the analyzed literature.

Table 5. Top six keywords cluster analysis in research trends.

N	Cluster	Callon centrality	Cluster frequency
1	Education	22.113	419
2	Human	15.015	929
3	Higher education	3.592	151
4	Professional aspects	2.575	102
5	Womens status	2.243	129
6	Engineering research	1.418	127

First, the phrase "education" becomes the most noticeable one reflecting its centrality to academic research. This term serves to link together different subfields for work and research, which is why it is so versatile in its effects on the scientific labor market (Kiss, 2024).

Similarly, the keyword "human" is very significant as it relates to the aspects of study that concern people, diversity, inclusion and psychological matters. The idea that personal experiences and subject wellness gets place in educational and professional practices is increasingly becoming popular, as reflected in this term (Atherton et al., 2024).

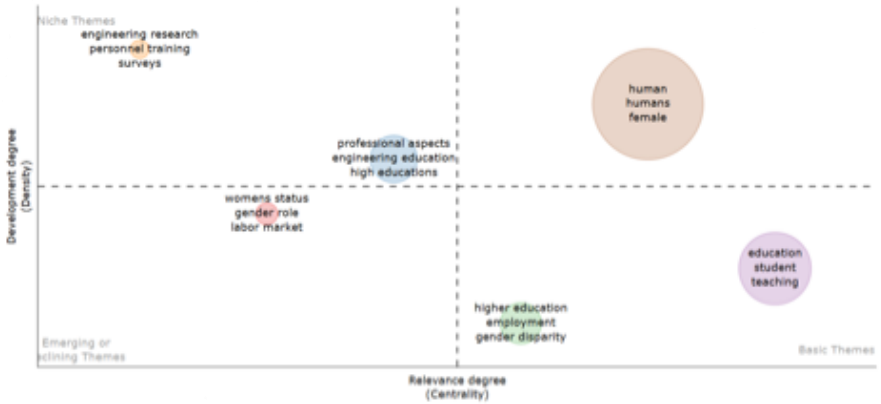
Moreover, the term "higher education" is important to emphasize the specific mission of the third level education institutions in personal and career formation of students and academic or professional employees or in offering formation systems for persons (Tran et al., 2024). "Higher education" emphasizes the structural dynamics and institutional frameworks that support research on career development.

In addition, "women's status" reflects the critical discourse on gender equity and the systemic barriers faced by women in academia (Khan et al., 2024). This keyword encapsulates the ongoing efforts to address inequalities and promote diversity in leadership and research productivity.

Furthermore, the keywork "engineering research", refers to area of concern meaning a branch or division of learning that involves applying technical or professional education within the overall learning system (Padovano & Cardamone, 2024). The term "engineering education" recognizes and demands the usage of cross-disciplinary approaches in developing both competencies of applicability and theoretical skills (Tran et al., 2024).

Table 5 presents a concise overview of the most prominent keywords, illustrating the interconnectedness of foundational themes such as education, human dynamics, and higher education, alongside specialized areas like women's status and engineering education. When paired with an additional set of keywords, this compilation reflects the interdisciplinary character and change in emphasis of research within the academic workforce and higher education.

Figure 5. Results of co-occurrence analysis for core keywords in current research.



Source: Author's dataset, 2025.

Figure 5. In evaluating the latest trends in the keyword distribution research can state that such words as "human" and "female" are the majority. Next, terms like "education", "student", "teaching" are frequently used in publications. In addition, the signal groups "higher education", "employment", "professional aspects" appear normally in publications. For the keywords "Engineering research", and "personal training" increasing vertically, the signal shows high-tech engineering in the direction of personalization. Finally, the gender cluster, women in the labor market shows no signs of increasing. The

latest research contains more detailed information about the most commonly occurring keywords in studies presented through Table 5.

5. Discussion and further research

The analysis shows which citations appear most often together with keywords and essential clusters that enable comprehension of lecturers' career advancement. The objects such as education, gender, women, and higher education remain among the most popular keywords and indicate that the modern world still faces those issues as well as continues to study the improvement of academics. The cluster analysis makes such themes as regional inequalities and interdisciplinary as key themes. Taken together, these studies provide a coherent understanding of how scientific labor market dynamics have become more multifaceted and nuanced and why, indeed how holistic assessment of the system and its reformist measures assuming jobs transformation carries out sustainable development goals for progress .

Several system features, like underinvestment and inflexible organizational structures, are thus prominent at the lecturer's career level. Terms such as "higher education", "teaching", and "employment" from Cluster 2 capture oppositions between institutional rationalities and subjectively imagined possibilities and future. In most of the contexts, the duties at universities outweigh the teaching responsibilities and very few chances are provided to scholarly work which is important for career development (Pham & Saito, 2020). Besides these challenges, time and efforts are used in bureaucratic processes, hence; time and efforts that can be used in other productive academic activities (Yurkofsky et al., 2020). These obstacles imply that policy changes that are targeted specifically are necessary to address these obstacles. Some of these changes should be increasing funding for postsecondary education and efficiency of bureaucracy.

Added to these structural problems, the issue of distinction based on gender continues to rank as an important obstacle, in Clusters 2 and 3 which contain the keywords "gender," "women's status," and "leadership". Academic settings are horrendously paltry for women, where they are less likely to be promoted into leadership and get research funding (Howe-Walsh & Turnbull, 2016). These challenges are compounded by culture and institutional practices that discourages women in careers such a science, technology, engineering, and mathematics (Aiston & Jung, 2015). Chang et al., 2014 propose that advising and leadership training can overcome these differences. Moreover, further study ought to analyze gender interactions with race and socioeconomic class from an intersectional approach (Crenshaw, 2013).

Other than the system related issues cluster 3 including "leadership," "education," and "female participation" that are also human issues. These keywords emphasize encouraging diverse academic communities as well as creating career advancement opportunities via skills development mentoring. For example the provision of leadership training option can address low number of women in some fields apart from achieving better promotion equity (Sverdlik et al., 2018). In addition, future studies in the educational and workforce environment could focus on how academic institutions train lecturers for leadership positions together with analysing existing organisational structures and its lack of support for inclusion (Altynbassov et al., 2024).

Finally, the cluster 4 terms embraced in the analysis including "engineering education" and "professional aspects" enable the solving of global and societal issues through multidisciplinary and specialization. The second utility of technologically related courses in the syllabi is the emergent of innovation and employability marketplace (Padovano & Cardamone, 2024). They are especially applicable at the present time when the labor market is unstable, and the importance of cross-disciplinary competencies is growing. Therefore, future studies should investigate how interdisciplinary collaboration can be scaled across diverse institutional and cultural contexts (Duggan et al., 2024).

The present research also demonstrates that systematic, institutional and individual factors affect career mobility of the lecturers in an academic labor market. As much of the research on academic career progression is conducted by scholars who themselves navigate these challenges, the framing of career barriers and opportunities may be influenced by their own professional experiences within academia (Pham & Saito, 2020). These challenges require empowering institutional changes, gender-sensitive approaches, and conscious efforts at using technology enhanced learning tools. Further, studies into the utilization of interprofessional and collaborative strategies for addressing this issue may contribute to building a more diverse and responsive marketplace for academic workers.

6. Conclusion

This research offers a systematic identification of challenges and prospects for lecturers' career mobility and conceptualizes the main themes in the structure of the academic employment sector. The research provides evidence-based recommendations relevant to issues and progress in postsecondary education.

Firstly, United Kingdom, United States and Australia have very good ranking in research productivity having well developed academic system and on the other side Italy and Finland have more international collaborations ratios. It enriches the academic communities around the world and at the same time restores the need for international cooperation.

Secondly, the majority of widely cited studies are on issues that are strategic including entrepreneurial education for graduates, employment of graduates as well as on gender. These works underscore the importance of addressing systemic barriers, including gender disparities in leadership and research productivity. Therefore, the current argument still holds that for development, fairness and mobility reforms are still a necessity.

Moreover, keyword network analysis reveal that "women" is a key node connecting to a range of topics such as, mobility, social, and more paradigmatically, interdisciplinary. Indeed, the focus on general humanist topics such as leadership and education can be defined as major concerns, although in specialized areas such as technical education, the importance of interdisciplinary approaches is revealed.

Finally, co-occurrence analysis that features with three crucial essential aspects of the society which include education, gender and human where efforts is continued to be enhanced. Thus, incorporating information technology and also encouraging international work style is important for countering these problems and improving career progression.

Acknowledgments

This research was supported by Vietnam National University Ho Chi Minh City, grant number C2023-18b-01, according to the Decision 211/QĐ-ĐHQG, February 23, 2023. 10-12 Dinh Tien Hoang Street, Ben Nghe Ward, District 1, Ho Chi Minh city, Viet Nam.

The organization provides support for lecturer research development. Industry University of Ho Chi Minh City. No. 12 Nguyen Van Bao, Ward 4, GoVap District, Ho Chi Minh City, Viet Nam.

Declaration of conflicting interests

The authors affirm that there are no conflicts of interest to disclose.

References

Ackers, L. (2008). Internationalisation, mobility and metrics: A new form of indirect discrimination? *Minerva*, *46*(4), 411–435. https://doi.org/10.1007/s11024-008-9110-2

Aiston, S. J., & Jung, J. (2015). Women academics and research productivity: an international comparison. In *Gender and Education* (Vol. 27, Issue 3, pp. 205–220). Routledge. https://doi.org/10.1080/09540253.2015.1024617

Akbaritabar, A., & Barbato, G. (2021). An internationalised Europe and regionally focused Americas: A network analysis of higher education studies. *European Journal of Education*, *56*(2), 219–234. https://doi.org/10.1111/ejed.12446

Altynbassov, B., Bayanbayeva, A., Tolegen, M., & Zhamankarin, M. (2024). A comprehensive bibliometric analysis of trends in higher education leadership in the Global South, 2013-2023: Contemporary perspectives and developments. *International Journal of Educational Research*, *127*, 102421. https://doi.org/10.1016/j.ijer.2024.102421

Anh Tran, N., Hong Dao, T., Thi Banh, H., & Kieu Vo, D. (2023). Policy note on "Higher Education Financing in Vietnam: Strategic priorities and policy options." *Worldbank*. https://documents1.worldbank.org/curated/en/099062823070547678/pdf/P17811209b96300a09154049f2039bb6e0.pdf

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

Arokiasamy, L., Ismail, M., Ahmad, A., & Othman, J. (2011). Predictors of academics' career advancement at Malaysian private universities. *Journal of European Industrial Training*, *35*(6), 589–605. https://doi.org/10.1108/03090591111150112

Atherton, O. E., Westberg, D. W., Perkins, V., Lawson, K. M., Jeftic, A., Jayawickreme, E., Zhang, S., Hu, Z., McLean, K. C., & Bottesini, J. G. (2024). Examining personality psychology to unpack the peer review system: Towards a more diverse, inclusive, and equitable psychological science. *European Journal of Personality*, 08902070241301629.

Bui, V. T. T., & Takuro, K. (2024). Exploring university-industry collaboration in Vietnam: An in-depth review of types and influencing factors. *Industry and Higher Education*, 09504222241249040. https://doi.org/10.1177/09504222241249040

Chang, H., Longman, K. A., & Franco, M. A. (2014). Leadership Development through Mentoring in Higher Education: A Collaborative Autoethnography of Leaders of Color. *Mentoring and Tutoring: Partnership in Learning*, *22*(4), 373–389. https://doi.org/10.1080/13611267.2014.945734

Cobo, M. J., López-Herrera, A. G., Herrera-Viedma, E., & Herrera, F. (2011).

Science mapping software tools: Review, analysis, and cooperative study among tools. *Journal of the American Society for Information Science and Technology*, *62*(7), 1382–1402. https://doi.org/10.1002/asi.21525

Crenshaw, K. W. (2013). Mapping the margins: Intersectionality, identity politics, and violence against women of color. In *The Public Nature of Private Violence: Women and the Discovery of Abuse* (pp. 93–118). Routledge. https://doi.org/10.2307/1229039

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. https://doi.org/10.1016/j.jbusres.2021.04.070

Duggan, J., Cvitanovic, C., & van Putten, I. (2024). An Evolving Understanding of Sense of Place in Social-Ecological Systems Research and the Barriers and Enablers to its Measurement. *Environmental Management*, *73*(1), 19–33. https://doi.org/10.1007/s00267-023-01882-1

Duong, V. T., Tan, P. N., & Truong, V. H. (2024). Mentoring Students in Vietnamese Higher Education Institutions. *Digital Education and Learning*, 145–202. https://doi.org/10.1007/978-3-031-61838-3_7

Fischer, G., Lundin, J., & Lindberg, J. O. (2020). Rethinking and reinventing learning, education and collaboration in the digital age—from creating technologies to transforming cultures. *International Journal of Information and Learning Technology*, *37*(5), 241–252. https://doi.org/10.1108/IJILT-04-2020-0051

Gosetti, G. (2024). Work and Digital Technologies. A Proposal for Analysis. *Italian Sociological Review*, *14*(1), 177–198. https://doi.org/10.13136/isr.v14i1.715

Harris, A., Ismail, N., Jones, M., Azorín, C., & Longville, J. (2024). Invisible leaders? Reviewing contemporary evidence about women leaders in education. *School Leadership and Management*, *44*(5), 523–546. https://doi.org/10.1080/13632434.2024.2408220

Haviland, S., & Robbins, S. (2021). Career and Technical Education as a Conduit for Skilled Technical Careers: A Targeted Research Review and Framework for Future Research. *ETS Research Report Series*, *2021*(1), 1–42. https://doi.org/10.1002/ets2.12318

Howe-Walsh, L., & Turnbull, S. (2016). Barriers to women leaders in academia: tales from science and technology. *Studies in Higher Education*, *41*(3), 415–428. https://doi.org/10.1080/03075079.2014.929102

Jacob, W. J., Neubauer, D., & Ye, H. (2018). Financing trends in Southeast Asia and Oceania: Meeting the demands of regional higher education growth. *International Journal of Educational Development*, *58*, 47–63. https://doi.org/10.1016/j.ijedudev.2016.11.001

Khan, M., Sulaiman, R., Nazir, O., Khan, S., & Awan, S. (2024). The unseen in the glass ceilings: examining women's career advancement in higher education institutions through a multi-level institutional lens. *Human Resource Development International*, 1–28. https://doi.org/10.1080/13678868.2024.2342762

Kiss, Z. (2024). Vertical and horizontal (mis)match of university degrees in the Hungarian labour market. *Humanities and Social Sciences Communications*, *11*(1), 1–16. https://doi.org/10.1057/s41599-024-04203-x

Le, T. T., Phuong, H. Y., Pham, T. T., Nguyen, A. T., Huynh, T. A. T., & Nguyen, H. T. (2023). The integral roles of supporting staff in bolstering academic performance: A qualitative study in Vietnamese higher education institutions. *Cogent Arts and Humanities*, *10*(1), 2264008. https://doi.org/10.1080/23311983.2023.2264008

Le, A. T. T., Tran, T. V., Tran, T. M., & Phan, T. H. (2024). Intrinsic and Extrinsic Factors as Motivation Roles in Scientific Research Activities of Professors at Several Vietnamese Universities. *SAGE Open*, *14*(1), 21582440241230840. https://doi.org/10.1177/21582440241230838

Luwei, W., & Huimin, M. (2024). From jobs to careers: drivers and barriers to career development in emerging labor markets. *Frontiers in Sociology*, *9*, 1486871. https://doi.org/10.3389/fsoc.2024.1486871

Macfarlane, B., Devine, E., Drake, T., Gilbert, A., Robinson, M., & White, I. (2017). Co-Authorship in the Humanities and Social Sciences: A Global View. In *White Paper (from Taylor & Francis)*. Taylor & Francis White Papers, available at< https://authorservices …. https://research-information.bristol.ac.uk/en/publications/coauthorship-in-humanities-and-the-social-sciences(81d6f2a6-d51a-47e7-8356-a35e167ecc2c).html

Maheshwari, G., Nayak, R., & Ngyyen, T. (2021). Review of research for two decades for women leadership in higher education around the world and in Vietnam: a comparative analysis. *Gender in Management*, *36*(5), 640–658. https://doi.org/10.1108/GM-04-2020-0137

Marzi, G., Balzano, M., Caputo, A., & Pellegrini, M. M. (2024). Guidelines for Bibliometric-Systematic Literature Reviews: 10 steps to combine analysis, synthesis and theory development. *International Journal of Management Reviews*. https://doi.org/10.1111/ijmr.12381

Padovano, A., & Cardamone, M. (2024). Towards human-AI collaboration in the competency-based curriculum development process: The case of industrial engineering and management education. *Computers and Education: Artificial Intelligence*, *7*, 100256. https://doi.org/10.1016/j.caeai.2024.100256

Parajuli, D., Vo, D. K., Salmi, J., & Tran, N. T. A. (2020). Improving the Performance of Higher Education in Vietnam. In *World Bank*. World Bank

Group. https://doi.org/10.1596/33681

Parziale, F., Cavagnuolo, M., & Matrella, A. (2024). The Uses of Digital Technologies in Schools. A Bourdieusian Analysis of Upper-Secondary School Teachers and Students in Rome*. *Italian Sociological Review*, *14*(10), 697–719. https://doi.org/10.13136/isr.v14i10S.726

Pham, T., & Saito, E. (2020). Career development of returnees: experienced constraints and navigating strategies of returnees in Vietnam. *Journal of Further and Higher Education*, *44*(8), 1052–1064. https://doi.org/10.1080/0309877X.2019.1647333

Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal*, *25*(5), 479–510. https://doi.org/10.1177/0266242607080656

Podreka, J., Gaber, M. A., & Smrdelj, R. (2024). Unveiling Structural Barriers: Gender Inequality in the Academic Field. In *Handbook of Equality of Opportunity* (pp. 1–28). Springer. https://doi.org/10.1007/978-3-319-52269-2_76-1

Rathee, V., & Mittal, P. (2024). Employability skills among work ready professionals in higher education: mapping the field through bibliometric analysis with R studio. *Higher Education, Skills and Work-Based Learning*. https://doi.org/10.1108/HESWBL-10-2023-0279

Romo-Fernández, L. M., López-Pujalte, C., Guerrero Bote, V. P., & Moya-Anegón, F. (2011). Analysis of Europe's scientific production on renewable energies. *Renewable Energy*, *36*(9), 2529–2537. https://doi.org/10.1016/j.renene.2011.02.001

Rossoni, A. L., de Vasconcellos, E. P. G., & de Castilho Rossoni, R. L. (2024). Barriers and facilitators of university-industry collaboration for research, development and innovation: a systematic review. *Management Review Quarterly*, *74*(3), 1841–1877. https://doi.org/10.1007/s11301-023-00349-1

Skute, I., Zalewska-Kurek, K., Hatak, I., & de Weerd-Nederhof, P. (2019). Mapping the field: a bibliometric analysis of the literature on university–industry collaborations. *Journal of Technology Transfer*, *44*(3), 916–947. https://doi.org/10.1007/s10961-017-9637-1

Sverdlik, A., Hall, N. C., McAlpine, L., & Hubbard, K. (2018). The PhD experience: A review of the factors influencing doctoral students' completion, achievement, and well-being. *International Journal of Doctoral Studies*, *13*, 361–388. https://doi.org/10.28945/4113

Ta, B., Hoang, C., Khong, H., & Dang, T. (2024). Australian PhD graduates' agency in navigating their career pathways: stories from social sciences. *Higher Education*, 1–21. https://doi.org/10.1007/s10734-024-01181-6

Thao, N. P., Kieu, T. K., Schruefer, G., Nguyen, N. A., Nguyen, Y. T. H., Vien Thong, N., Hai Yen, N. T., Ha, T. T., Phuong, D. T. T., Duy Hai, T., Dieu

Cuc, N., & Van Hanh, N. (2022). Teachers' competencies in education for sustainable development in the context of Vietnam. *International Journal of Sustainability in Higher Education*, *23*(7), 1730–1748. https://doi.org/10.1108/IJSHE-08-2021-0349

Tomlinson, M. (2007). Graduate employability and student attitudes and orientations to the labour market. *Journal of Education and Work*, *20*(4), 285–304. https://doi.org/10.1080/13639080701650164

Tomlinson, M. (2012). Graduate employability: A review of conceptual and empirical themes. *Higher Education Policy*, *25*(4), 407–431. https://doi.org/10.1057/hep.2011.26

Tran, L. T., Ngo, N. T. H., Nguyen, H. T. M., Le, T. T. T., & Ho, T. T. H. (2024). "Employability in context": graduate employability attributes expected by employers in regional Vietnam and implications for career guidance. *International Journal for Educational and Vocational Guidance*, *24*(2), 375–395. https://doi.org/10.1007/s10775-022-09560-0

Vincenzo, E. (2024). The Hikikomori Phenomenon and Its Evolution in Modern Society: A Systematic Literature Review. *Italian Sociological Review*, *14*(3), 1021–1044. https://doi.org/10.13136/isr.v14i3.722

Yurkofsky, M. M., Peterson, A. J., Mehta, J. D., Horwitz-Willis, R., & Frumin, K. M. (2020). Research on Continuous Improvement: Exploring the Complexities of Managing Educational Change. *Review of Research in Education*, *44*(1), 403–433. https://doi.org/10.3102/0091732X20907363