

Authorship Patterns in Lifelong Learning Literature Emanating from Asia during 2000–2024: A Twofold Bibliometric and Data-Analytical Approach

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ABSTRACT

Background: Lifelong learning is an established field because of its importance in supporting continuing education, career advancement, and societal progress. Examining authorship patterns can reveal temporal, institutional, national, and gender-related dimensions of research development.

Objective: This study analyzes authorship patterns in English-language journal articles on Lifelong Learning emanating from Asia during 2000–2024, focusing on annual scientific production, average citation count per year, author productivity, author-productivity distribution in relation to Lotka’s law, affiliation output, Single Country Publications (SCP), Multiple Country Publications (MCP), citation counts, and name-based gender classification by author position.

Methods: Bibliographic records were retrieved from OpenAlex in June 2026 using the search string “lifelong learning”. Eligibility was restricted to English-language journal articles published during 2000–2024 and meeting the Asian geographical criterion. The retrieval yielded 3,103 records, downloaded in CSV format. Analysis used Bibliometrix/Biblioshiny for bibliometric indicators and OpenRefine with Genderize.io for data wrangling and name-based gender classification. Bibliometrix loaded 3,099 records (99.817%).

Results: Annual scientific production generally increased, whereas average citation counts varied across years. Marjaan Laal was the most prolific author with 11 documents. Of 7,292 authors represented in the author-productivity distribution, 6,703 (91.92%) contributed one document, broadly consistent with the pattern predicted by Lotka’s law. Universiti Kebangsaan Malaysia led affiliation output with 123 articles. China recorded the highest SCP (558) and MCP (41), whereas Turkey had the highest citation count (1,721), followed by China (1,312). Of 7,491 names queried through Genderize.io, 421 returned null values; 4,038 (53.91%) were classified as male and 3,032 (40.47%) as female.

Conclusion: The study provides a quantitative baseline of Lifelong Learning scholarship in Asia, integrating production, citation accumulation, author productivity, institutional and national contributions, and name-based gender classification. Despite metadata limitations, findings can inform decisions. Future research should compare databases, test Lotka’s law, examine collaboration and thematic change, and develop reproducible workflows.

Keywords: Authorship pattern; Bibliometric analysis; Gender analysis; Lifelong learning; OpenAlex; OpenRefine

INTRODUCTION

Lifelong Learning can be defined as “any intentional learning activities conducted throughout a person’s lifetime to improve their knowledge, skills, and competencies from an individual, municipal, societal, and/or career standpoint” (Thwe & Kálmán, 2024). It envisions education for all at any time and from anywhere, overcoming conventional constraints. The purpose of lifelong learning is multifaceted, and it contributes to

societal development. Research on lifelong learning has increased in recent years, driven by its growing adoption.

The improvement of society is strongly driven by knowledge. We are living in a knowledge society in which intellectual output is a major resource. Quality education serves as the backbone of a knowledge society (Ashour, 2020). Education thrives on a foundation of scholarly literature; therefore, examining the literature produced in a field is important. Authorship analysis, an important facet of bibliometric studies, provides insights into countries' intellectual productivity, inter-author collaboration, and affiliation productivity.

Lifelong learning is a domain of growing importance with an expanding body of literature. Many bibliographic databases index research in this domain, enabling authors from different countries to contribute to its development. Authors of different genders contribute to this scholarly corpus. Asia, with its diverse and developing national contexts, provides substantial scope for research, and many scholarly works emanate from the continent.

From a scholarly communication perspective, examining authorship patterns provides more than a simple count of publications. Author-level productivity can indicate the extent to which scholarly participation is concentrated or dispersed. At the same time, affiliation- and country-level analyses can reveal the institutional and geographical distribution of research activity. Citation counts provide an additional dimension of scholarly visibility, although they should not be interpreted as equivalent to research quality or field-normalized impact. Similarly, examining author positions and name-based gender classifications can provide an exploratory view of representation within the scholarly corpus. A multidimensional analysis combining these indicators provides a more comprehensive understanding of how Lifelong Learning scholarship has developed across Asia.

The present study focuses specifically on literature originating from Asia because the region encompasses diverse educational systems, socioeconomic contexts, institutional environments, and national research capacities. Examining the Asian literature as a distinct corpus can therefore provide evidence about the geographical and institutional distribution of scholarly attention to Lifelong Learning that may not be apparent in global-level analyses.

LITERATURE REVIEW

Jarvis (2024) provides an overview of lifelong learning and adult studies as a domain, offering a comprehensive account of its development. Thwe and Kálmán (2024) provided an updated overview of lifelong learning in educational research by examining theoretical documents and empirical papers from 2000 to 2022. Their review sought to identify concepts, theories, research trends, and methods linked to lifelong learning in educational research across different countries. Donthu et al. (2021) provide guidance on conducting bibliometric analysis and outline a step-by-step approach. Kirtania (2023) examines the literature on authorship patterns through a systematic bibliometric analysis. Mishra et al. (2023) provide another example of a bibliometric analysis focusing on the Sustainable Development Goals (SDGs). Verma and Rajiv (2021) examined the authorship pattern of 419 papers contributed to COLLNET Conference proceedings during 2011–2015. They identified prolific authors and examined collaboration behavior; the degree of collaboration was 0.7852. They tested Lotka's law using the Kolmogorov–Smirnov goodness-of-fit test and found that it did not fit the observed distribution of COLLNET Conference Proceedings. Bapte et al. (2024) examined authorship patterns and authorship productivity in library and information science literature, providing evidence on authorship trends in the field.

Although previous studies have examined Lifelong Learning as an educational field and demonstrated the usefulness of bibliometric approaches for investigating scholarly communication and authorship, the existing literature does not provide a focused quantitative characterization of authorship patterns in Lifelong Learning literature originating in Asia over the extended 2000–2024 period. Previous authorship studies have examined author productivity, collaboration, or Lotka's law within specific disciplinary or conference-based contexts. At the same time, broader reviews of Lifelong Learning have primarily emphasized concepts, theories, research trends, and methodological developments. Consequently, there remains a need for an integrated analysis that simultaneously examines publication growth, citation patterns, author productivity, affiliation contributions,

country-level SCP and MCP, country-level citation impact, and gender distribution by author position. The present study addresses this gap by combining bibliometric analysis with systematic data cleaning and name-based gender classification to provide a quantitative profile of authorship in Asian Lifelong Learning literature.

Accordingly, the contribution of the present study is not limited to identifying the most productive authors or countries. It develops a multidimensional authorship profile by examining temporal production, citation performance, author productivity, productivity distribution, institutional contribution, country-level publication patterns, country-level citation counts, and author-position-based gender classification within a single Asia-focused Lifelong Learning corpus. This integrated perspective enables publication volume, scholarly visibility, institutional concentration, geographical contribution, and author representation to be considered together rather than as isolated bibliometric indicators.

OBJECTIVES

The broader objective of the research is to quantitatively analyze various aspects of authorship of English-language journal articles on Lifelong Learning originating in Asia and published during 2000–2024. The specific objectives are: **Part I-Bibliometric analysis:** (a) to quantify annual scientific production and average citation count per year; (b) to analyze author productivity, including the number of documents per author and the distribution of author productivity in relation to Lotka's law; (c) to quantify affiliation-wise contributions; and (d) to quantify country-level scientific production through Single Country Publications (SCP) and Multiple Country Publications (MCP), together with country-level citation counts. **Part II-Data Wrangling and Name-Based Gender Classification:** (e) to determine the gender distribution of authors by first-, middle-, and last-author position using OpenRefine and Genderize.io.

Research Questions

Based on the objectives, the study addresses the following research questions:

RQ1: How did annual scientific production and average citation counts of Lifelong Learning literature originating from Asia change during 2000–2024?

RQ2: What is the distribution of author productivity in the retrieved literature, and to what extent does the observed distribution correspond descriptively to the pattern predicted by Lotka's law?

RQ3: Which affiliations made the largest contributions to Lifelong Learning literature originating from Asia during the study period?

RQ4: Which countries recorded the highest levels of Single Country Publications (SCP), Multiple Country Publications (MCP), and country-level citation counts?

RQ5: What gender classifications are obtained for authors with available first names, and how are these classifications distributed across first-, middle-, and last-author positions?

METHODOLOGY

Research Design

This study adopted a descriptive quantitative bibliometric research design. The analytical workflow comprised two complementary components. The first component involved bibliometric analysis of publication, citation, author, affiliation, and country-level indicators using Bibliometrix/Biblioshiny. The second component involved structured data wrangling and name-based gender classification using OpenRefine and Genderize.io. The two components were applied to the same bibliographic corpus. However, they served different analytical purposes: Bibliometrix was used to quantify scholarly production and authorship-related bibliometric

indicators, whereas OpenRefine and Genderize.io were used to clean, transform, and classify author-name information.

Data Collection and Eligibility Criteria

The study uses bibliographic data on English-language journal articles on Lifelong Learning originating from Asia and published during 2000–2024. The data were collected from OpenAlex, an openly accessible scholarly knowledge graph that provides metadata on works, authors, sources, institutions, and related scholarly entities (Priem et al., 2022). Data collection and retrieval were conducted in June 2026 using the search string “lifelong learning.” Eligibility was restricted to English-language journal articles published during 2000–2024 that met the study’s predefined Asia-related geographical scope. Records that did not satisfy the specified language, document-type, publication-period, or geographical criteria were excluded. The resulting dataset comprised 3,103 records and was downloaded as a CSV file for subsequent analysis. The original manuscript did not preserve the interface-generated query syntax; therefore, the documented search string is reported as “lifelong learning,” together with the stated eligibility criteria, to support methodological transparency and reproducibility. The search string used to retrieve data from OpenAlex is listed in Table 1.

Table 1. Search String for retrieving data from OpenAlex

Purpose	Search String
Obtain data from OpenAlex	<code>https://api.openalex.org/works?search="lifelong learning"&filter=from_publication_date:2000-01-01,to_publication_date:2024-12-31,type:article,language:en,authorships.institutions.continent:Q48</code>

Class I Methodology: Bibliometric Analysis

For the bibliometric analysis, the dataset was analyzed using Bibliometrix, an open-source R-based package, through its Biblioshiny graphical interface. The analysis quantified annual scientific production, average citation count per year, author productivity, the distribution of author productivity in relation to Lotka’s law, affiliation-wise contributions, country-level SCP and MCP, and country-level citation counts. Bibliometrix presents the results in graphical and tabular forms. The dataset was loaded into Biblioshiny from the CSV file obtained from OpenAlex.

Class II Methodology: Data Wrangling and Name-Based Gender Classification

For Data Wrangling and Name-Based Gender Classification, the bibliographic dataset was processed in OpenRefine, an open-source data-wrangling tool for cleaning, transforming, faceting, and other data operations. Gender-related information was obtained from Genderize.io, an ODbL data source that estimates gender from first names and associated countries, providing a probability value. A GREL expression was used to make API calls and extract gender and probability values. Because the Genderize.io service limits the number of API calls, the dataset was managed in batches. First names were used for the gender analysis where available. The GREL expressions used to obtain and extract gender-related data are presented in Table 2.

Table 2. GREL expressions for retrieving and extracting gender-related data from Genderize.io

Purpose	GREL Expression
Obtain data from genderize.io using API calls	<code>"https://api.genderize.io/?name=" + value</code> Here, value indicates the first name.
Extract gender	<code>value.parseJson().gender</code>
Extract gender probability	<code>value.parseJson().probability</code>

RESULTS

Of the 3,103 records retrieved from OpenAlex, Bibliometrix successfully loaded 3,099 records (99.817%). The four records that could not be loaded limited the completeness of the bibliometric analysis; the available 3,099 records were therefore used for the Bibliometrix-based analyses.

Annual Scientific Production and Average Citation Count per Year

Annual scientific output generally increased during 2000–2024, with minor fluctuations. In contrast, the average citation count per year did not show a consistent upward pattern. Figure 1 presents annual scientific production, and Figure 2 presents the average citation count per year.

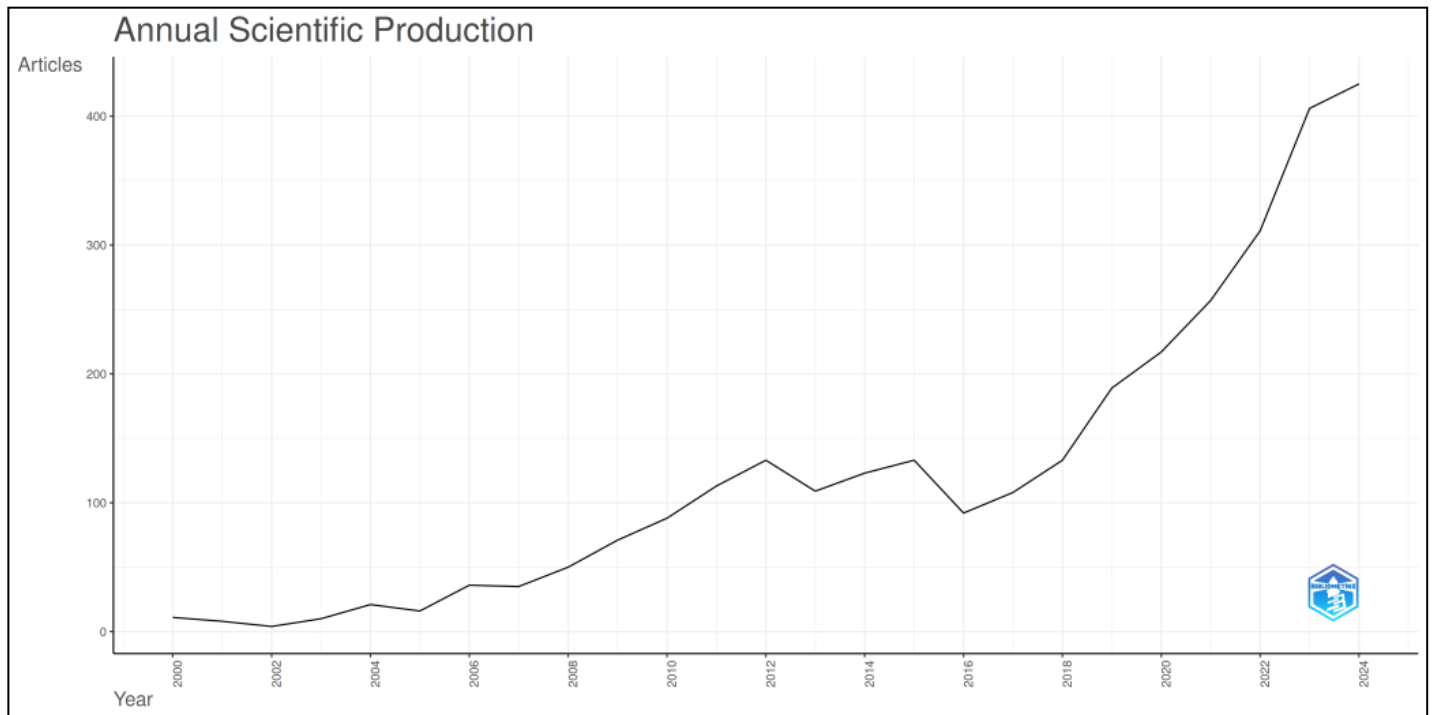


Figure 1. Annual scientific production in Lifelong Learning literature, 2000–2024

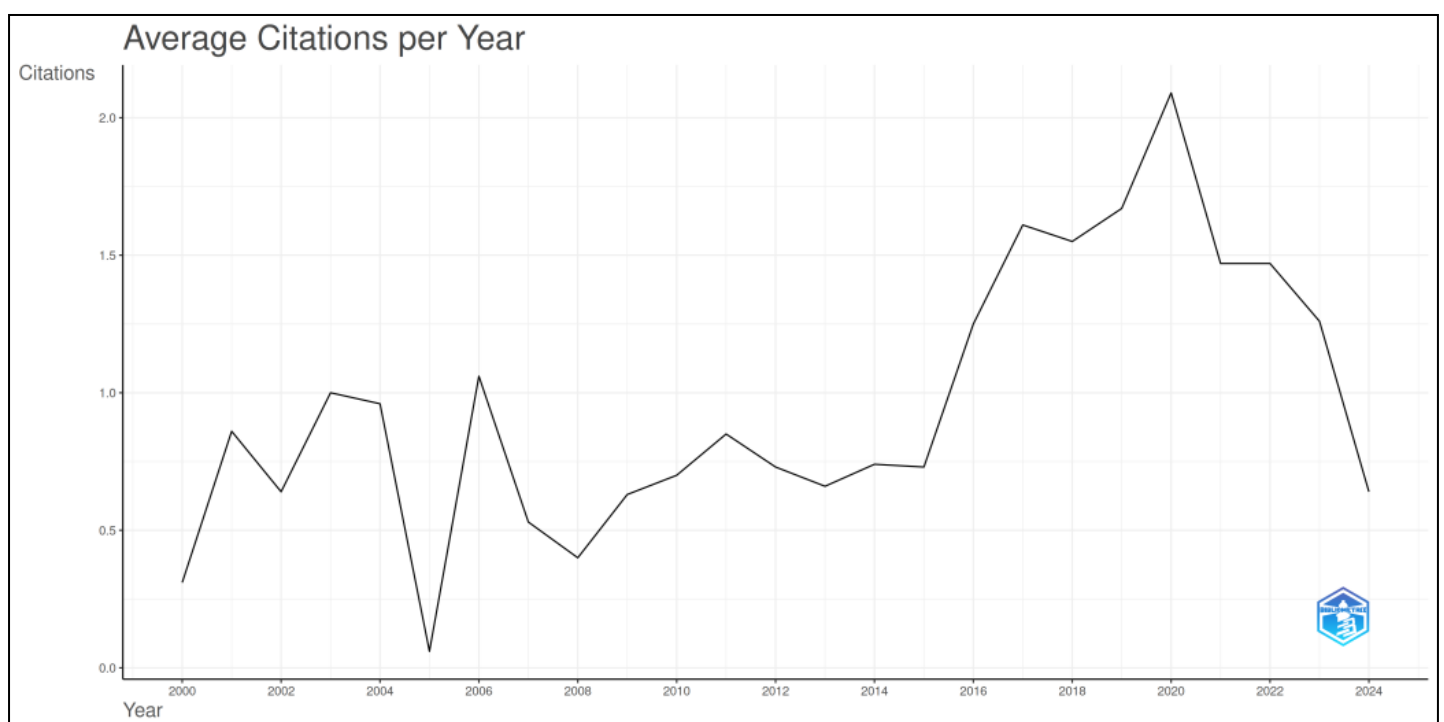


Figure 2. Average citations per year in Lifelong Learning literature, 2000–2024

Author-Related Findings

Bibliometrix identified Marjaan Laal as the most prolific author, with 11 documents, followed by Suwithida Charungkaitikul with 10, and Maureen Tam and Tanju Deveci with 9 each. Figure 3 presents selected top authors' contributions over time. The Lotka's law analysis examines the distribution of authors by the number of documents they contributed; Table 2 presents the corresponding author-productivity distribution.

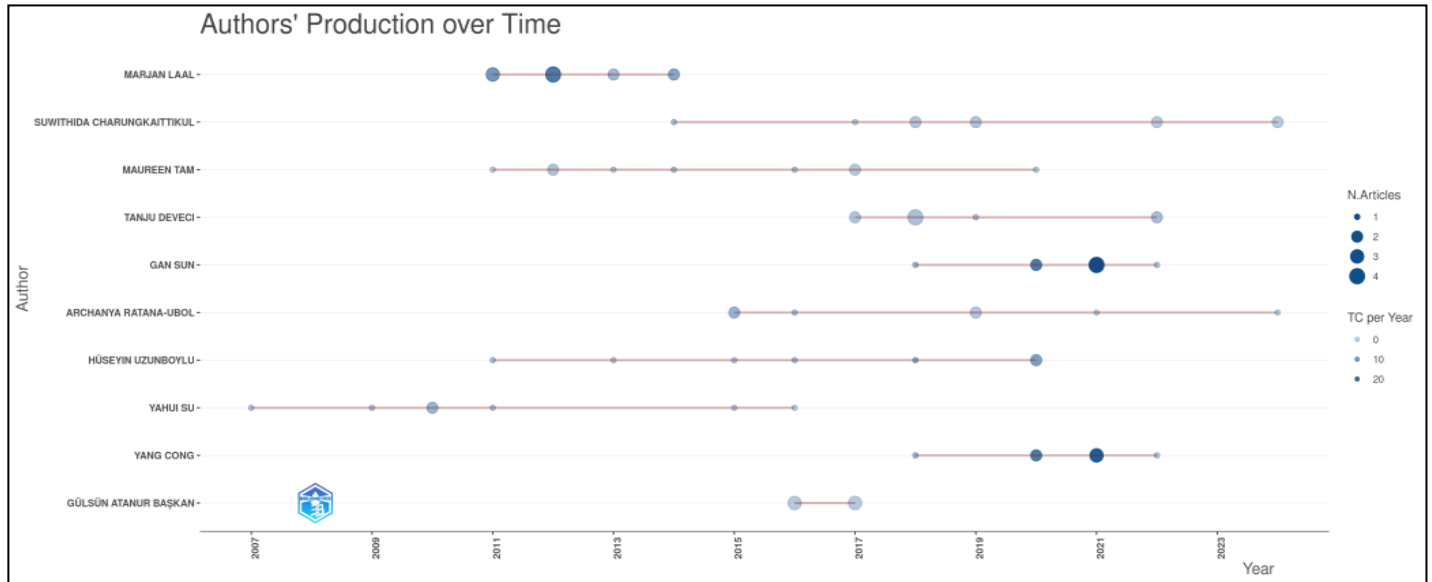


Figure 3. Publication activity of selected top authors over time

Table 3. Author productivity distribution by number of documents

Documents written	Number of authors
1	6703
2	450
3	88
4	28
5	11
6	3
7	4
8	1
9	2
10	1
11	1

Of the authors represented in Lotka's law distribution, 6,703 authors (91.92%) contributed one document, the largest observed group, while one author contributed 11 documents. The observed distribution broadly corresponds to the pattern predicted by Lotka's law. No formal goodness-of-fit test for Lotka's law was conducted in the present study.

Affiliation-level Publication Output

Universiti Kebangsaan Malaysia was the leading affiliation, associated with 123 articles, followed by Universiti Teknologi Malaysia with 84 articles. Affiliation information was not reported for 82 articles. Figure 4 presents contributions from selected affiliations over time.

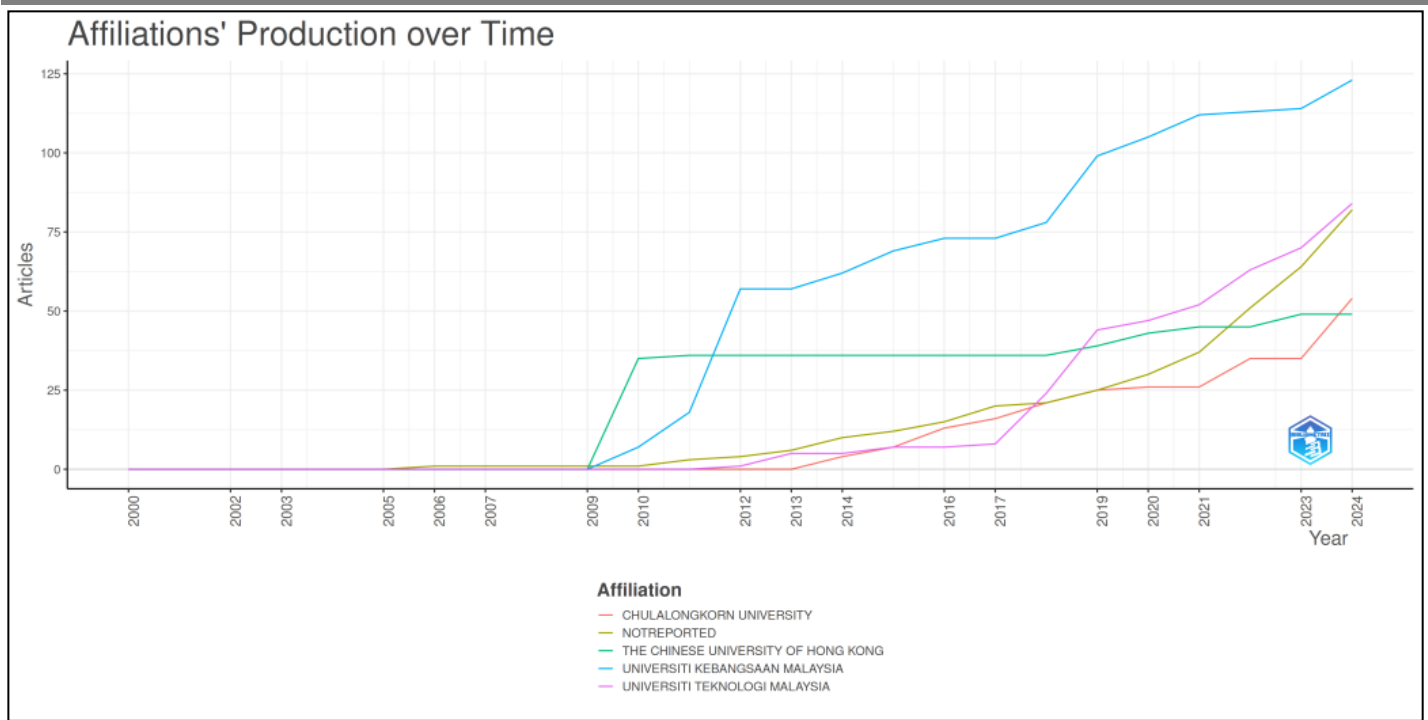


Figure 4. Publication activity of selected affiliations over time

Country-level Publication and Citation Analysis

Bibliometrix generated country-level authorship information using ISO 3166-1 country codes. The analysis distinguished Single Country Publications (SCP) and Multiple Country Publications (MCP). China recorded the highest number of SCPs (558), followed by Turkey (163), India (109), and Malaysia and Indonesia (60 each). China also recorded the highest number of MCPs (41), followed by India and Malaysia (11 each) and Japan (10). Figures 5 and 6 present country contributions across SCPs, MCPs, and years, while Figure 7 presents country-level citation counts.

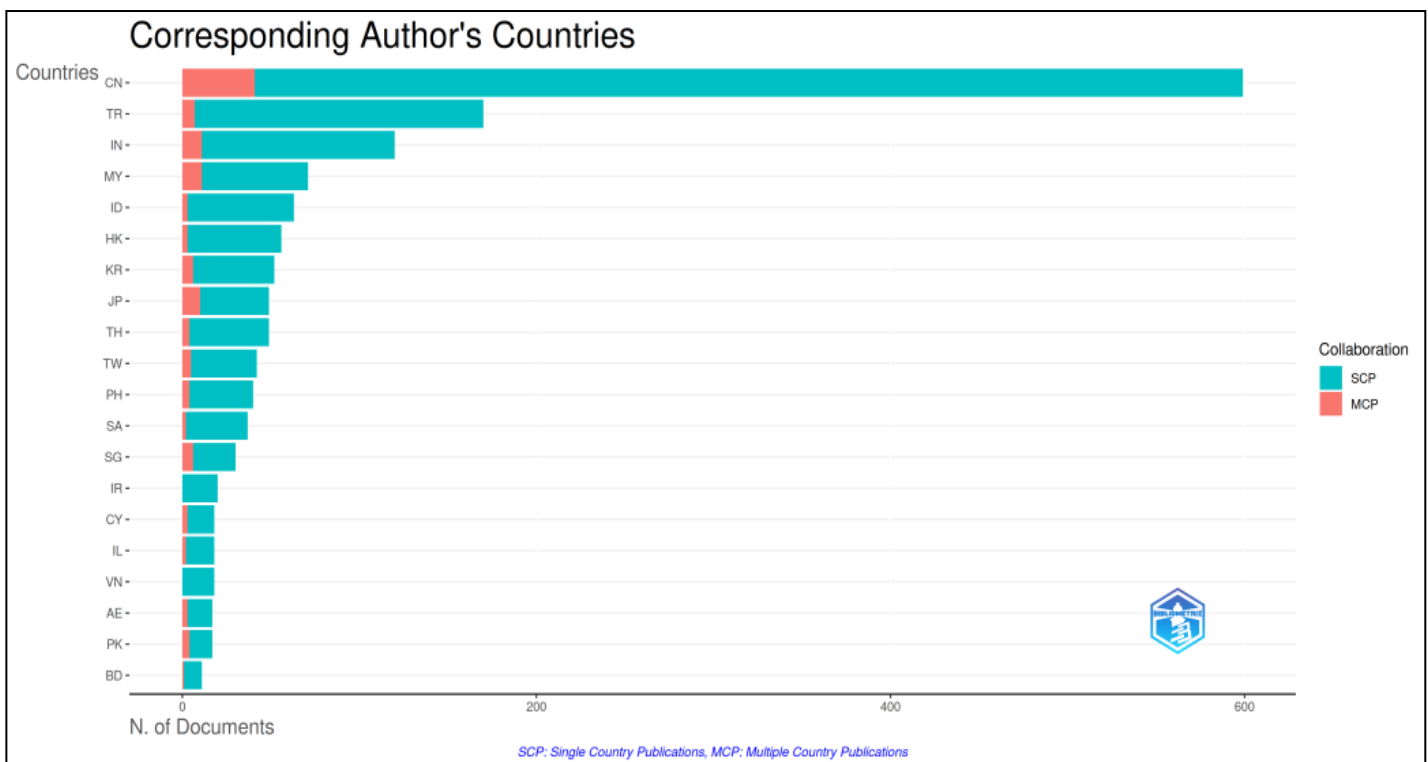


Figure 5. Country-level publications by SCP and MCP

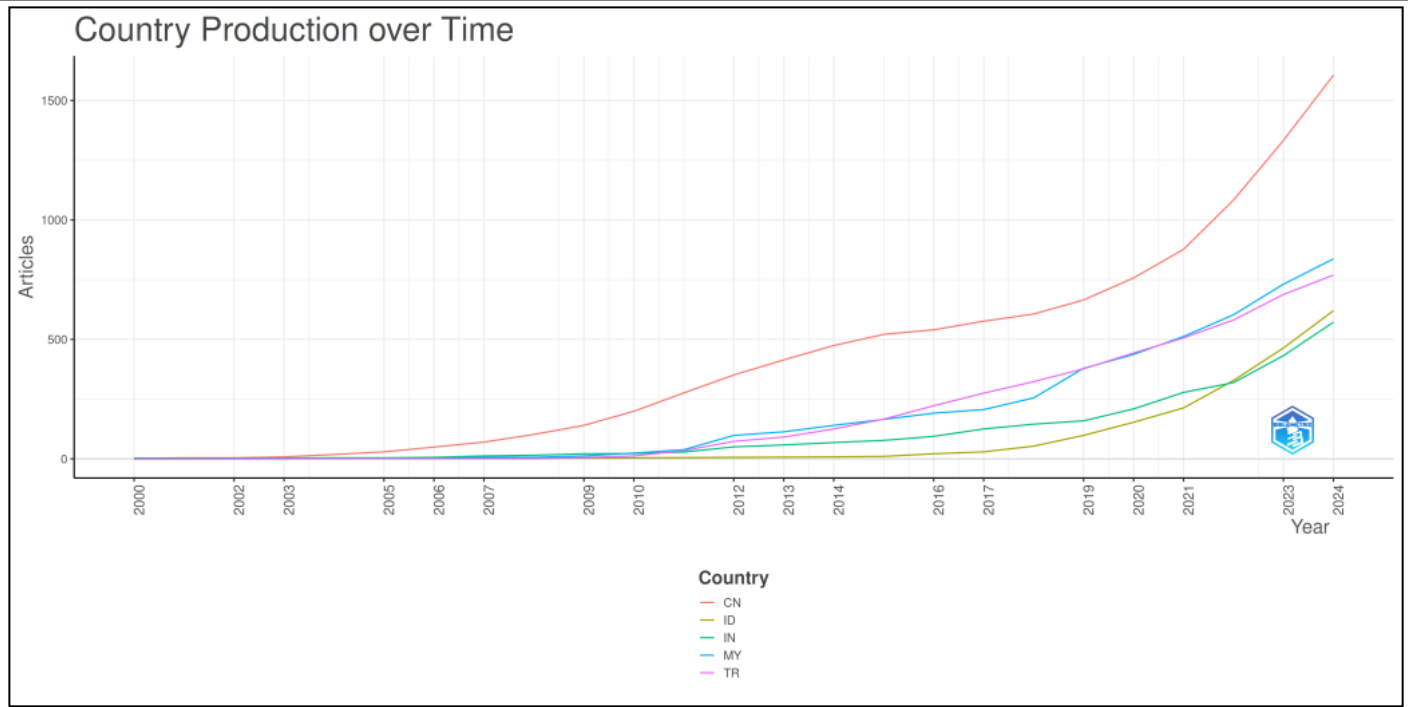


Figure 6. Country-level scientific production over time, 2000–2024

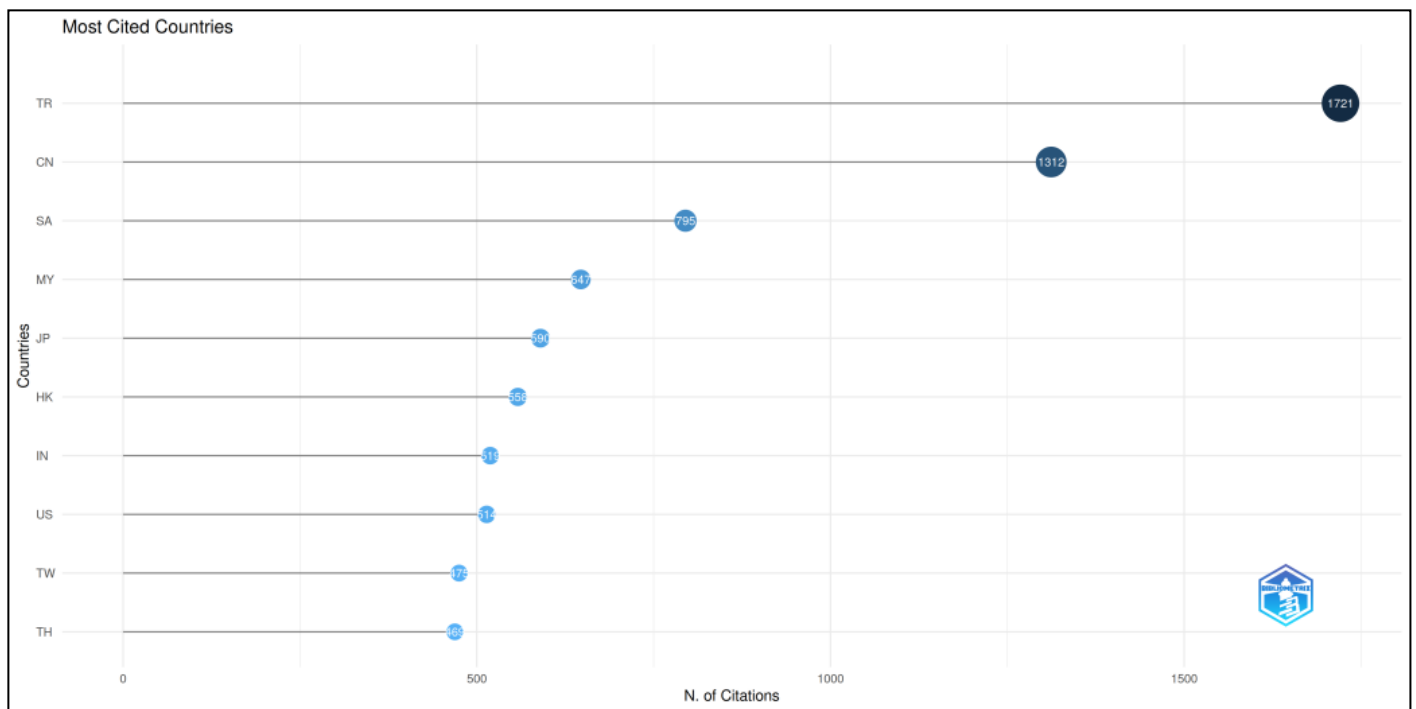


Figure 7. Country-level citation counts

Publications from Turkey received the highest number of citations (1,721), followed by China (1,312), Saudi Arabia (795), and Malaysia (647).

Gender Analysis of Authors

The gender analysis used the OpenAlex dataset and Genderize.io. The 3,103 documents contained 8,163 authors. Of these, 7,680 author names were considered because first names were available rather than initials or abbreviations. Gender data were obtained through Genderize.io for 7,491 names, of which 421 returned null values. The analysis, therefore, considered authors with valid gender data and examined first-, middle-, and last-author positions. Table 4 reports the gender distribution by author position.

Table 4. Gender classification by author position

Position of the Author	Total	Male	Female
First	2838	1529	1152
Middle	2845	1541	1148
Last	1808	968	732

Male authors were more numerous than female authors across all three author positions. Across the analyzed authors, 52.043% were male and 39.077% were female; the remainder had no associated gender data. Thus, within the available gender classifications, male authors were more prevalent in Lifelong Learning articles from Asia during the study period.

DISCUSSION

The findings demonstrate a sustained expansion of scholarly production on Lifelong Learning emanating from Asia during 2000–2024. The overall increase in annual scientific output indicates growing scholarly attention to Lifelong Learning as an important area of educational and societal development. However, the absence of a consistent upward trend in average citations suggests that growth in publication volume does not necessarily translate into a uniform increase in scholarly impact. Citation behavior may be influenced by publication age, differences in research visibility, disciplinary variation, and the accumulation of citations over time.

The author-productivity distribution shows a strong concentration of authors contributing a single document. Of the authors represented in the Lotka distribution, 6,703 (91.92%) contributed one document, whereas only one author contributed 11 documents. This concentration is consistent with the general principle of highly skewed scientific productivity, in which a relatively small number of authors contribute repeatedly. In contrast, a much larger proportion contributes less frequently. However, the present study does not statistically test the goodness of fit of Lotka’s law; therefore, the observed distribution should be interpreted as being broadly consistent with the pattern predicted by the law rather than as a formal validation of it.

At the institutional level, Universiti Kebangsaan Malaysia and Universiti Teknologi Malaysia were the two leading affiliations, with 123 and 84 associated articles, respectively. This concentration underscores the importance of specific higher education institutions in sustaining research on Lifelong Learning in the Asian context. Nevertheless, affiliation metadata were unavailable for 82 articles, which indicates that incomplete bibliographic metadata may affect institution-level interpretation.

The country-level analysis further demonstrates considerable variation in scholarly production and citation impact. China recorded the highest number of Single Country Publications (558) and Multiple Country Publications (41), indicating a substantial contribution to both nationally authored and internationally collaborative output. In contrast, Turkey recorded the highest country-level citation count (1,721), followed by China (1,312), Saudi Arabia (795), and Malaysia (647). The difference between publication volume and citation impact indicates that productivity and scholarly visibility are related but distinct dimensions of research performance.

The gender analysis indicates greater representation of male authors than female authors in first-, middle-, and last-author positions. However, these results should be interpreted with caution because gender was inferred from authors’ names rather than from self-identification. Name-based gender inference can be affected by cultural and linguistic differences, ambiguous names, incomplete names, and the binary categories used by automated services. Consequently, the reported results should be understood as gender classifications generated by the applied inference procedure rather than definitive measures of authors’ self-identified gender. Such limitations are particularly relevant in an Asian dataset comprising diverse naming conventions.

Taken together, the findings demonstrate that authorship in Asian Lifelong Learning literature is characterized by increasing publication activity, highly uneven author productivity, identifiable institutional and national

concentrations, differences between publication volume and citation impact, and an observable gender imbalance within the available classifications. These findings extend existing bibliometric perspectives by examining these dimensions together within an Asia-specific Lifelong Learning corpus.

LIMITATIONS

This study has several limitations. First, although 3,103 records were retrieved from OpenAlex, Bibliometrix successfully loaded only 3,099 (99.817%), meaning the bibliometric analyses could not incorporate the full retrieved corpus. Second, the study depends on the accuracy and completeness of OpenAlex metadata; missing or inconsistently recorded author, affiliation, country, citation, and publication information may therefore affect some indicator-level results. Third, the study was restricted to English-language journal articles published during 2000–2024 and to records within the defined Asian scope. Consequently, the findings do not represent non-English literature or other scholarly document types, such as conference papers, books, book chapters, reports, and other publications. Fourth, the gender analysis was based on automated name-based classification through Genderize.io rather than the authors' self-reported gender. Name-based inference can be affected by culturally diverse naming practices, transliteration, ambiguous or gender-neutral names, incomplete names, and differences in prediction performance across countries and languages; therefore, the results should not be interpreted as definitive measures of authors' self-identified gender. Finally, the analysis is primarily descriptive, identifying patterns and distributions rather than causal relationships among authorship, institutional affiliation, national contribution, citation impact, and gender-related characteristics.

CONCLUSION

This study provides a quantitative characterization of authorship patterns in English-language Lifelong Learning literature emanating from Asia during 2000–2024 by integrating bibliometric analysis with data cleaning and name-based gender classification. The findings demonstrate sustained growth in scientific production alongside substantial variation in citation performance, a strongly concentrated author-productivity structure, identifiable institutional and national concentrations, and a distinction between publication volume and citation impact. The analysis also indicates greater male representation across the examined author positions within the available gender classifications. Collectively, these results provide a multidimensional account of how scholarly contributions to Lifelong Learning have developed across the Asian research landscape rather than relying on publication counts alone.

The study contributes an integrated analytical perspective that can serve as a baseline for researchers, academic institutions, and policymakers seeking to understand the development, distribution, and visibility of Lifelong Learning scholarship in Asia. Future research should extend the analysis through cross-database comparisons involving OpenAlex, Scopus, and Web of Science; formal goodness-of-fit testing of Lotka's law; co-authorship and institutional collaboration analysis; thematic and conceptual evolution studies; and longitudinal examination of gender representation across countries and author positions. Future work could also develop a reproducible, integrated environment that combines bibliographic retrieval, data cleaning, author disambiguation, bibliometric indicators, and demographic analysis, thereby improving analytical consistency and supporting broader comparative studies of Lifelong Learning research.

REFERENCES

1. Ashour, S. (2020). Quality higher education is the foundation of a knowledge society: Where does the UAE stand? *Quality in Higher Education*, 26(2), 209–223. <https://doi.org/10.1080/13538322.2020.1769263>
2. Bapte, V. D., Gedam, J. S., & Bejalwar, S. (2024). Authorship pattern and authorship productivity in library and information science literature. *Annals of Library and Information Studies*, 71(02), 180–189. <https://doi.org/10.56042/alis.v71i2.7129>
3. 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>

4. Jarvis, P. (2024). *Adult education and lifelong learning: Theory and practice* (5th ed.). Routledge. <https://doi.org/10.4324/9781003540892>
5. Kirtania, D. K. (2023). Bibliometric study of authorship pattern literature. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4398603>
6. Mishra, M., Desul, S., Santos, C. A. G., Mishra, S. K., Kamal, A. H. M., Goswami, S., Kalumba, A. M., Biswal, R., Da Silva, R. M., Dos Santos, C. A. C., & Baral, K. (2023). A bibliometric analysis of sustainable development goals (SDGs): A review of progress, challenges, and opportunities. *Environment, Development and Sustainability*, 26(5), 11101–11143. <https://doi.org/10.1007/s10668-023-03225-w>
7. Priem, J., Piwowar, H., & Orr, R. (2022). OpenAlex: A fully-open index of scholarly works, authors, venues, and institutions. *arXiv*. <https://doi.org/10.48550/arXiv.2205.01833>
8. Thwe, W. P., & Kálmán, A. (2024). Lifelong learning in the educational setting: A systematic literature review. *The Asia-Pacific Education Researcher*, 33(2), 407–417. <https://doi.org/10.1007/s40299-023-00738-w>
9. Verma, M., & Rajiv, P. (2021). Study of Lotka's law and authorship pattern in the conference proceedings of COLLNET: An international conference covering exclusively bibliometric study. *Journal of Ravishankar University (PART-A)*, 26(1), 1–8. <https://doi.org/10.52228/JRUA.2020-26-1-1>