

Review Article

Research Trends and Recommendations for Economics Education in Indonesian Higher Education: A Scopus-Based Systematic Review

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Abstract

This study investigates the research trends in economic education over the past decade, aiming to identify thematic developments, collaborative networks, and emerging topics in the field. Using a bibliometric approach, a total of 27 Scopus-indexed articles published between 2016 and 2025 were analyzed. Data were processed through co-word and co-authorship analysis using VOSviewer and Bibliometrix R-Packages, producing statistical summaries and visual maps to illustrate thematic clusters and author collaborations. The findings show an upward yet fluctuating growth in publication output, with articles predominantly published in Q1–Q2 journals and authored mainly by researchers based in advanced economies, while contributions from the Global South, especially Indonesia. Co-occurrence and content analysis reveal seven major thematic areas: curriculum alignment with labor-market demands and global challenges, innovative learning design and pedagogical methods, evaluation and assessment practices, access and equity issues, student engagement and learning experience, institutional quality evaluation, and technology integration in economics learning. The thematic map further identifies academic performance and higher education as motor themes, assessment as a basic but underdeveloped theme, and online education and active learning as emerging areas.

Keywords: bibliometric analysis, digital learning, economics education, economic literacy, research trends

INTRODUCTION

Economic education plays a strategic role in preparing graduates to confront increasingly complex socioeconomic challenges in a dynamic global environment. Across many countries, curriculum reform and pedagogical innovation have become central priorities. In the United States, the importance of developing quantitative reasoning and data literacy has been widely emphasized (Allgood & McGoldrick, 2020), including an urgent emphasis on strengthening economic and data literacy and implementing instructional innovations in introductory economics courses (Principles of Economics) (Avery et al., 2024; Marchant & Eliason, 2024). In the United Kingdom, the CORE Project has revolutionized the economics curriculum by integrating real-world issues such as inequality, climate change, and financial crises into introductory instruction (Bowles & Carlin, 2020) which is further reinforced by studies on pedagogical innovation in

economics education at UK universities (Birdi et al., 2023). In Australia, the focus has been on blended learning and industry partnerships, reinforced by studies that underscore the effectiveness of work-integrated learning (WIL) and the alignment of curricula with industry needs (El-Mowafy et al., 2013; Jackson, 2024). Meanwhile, studies in China emphasize strengthening critical thinking and global economic awareness, consistent with findings on the role of the economics curriculum in cultivating students' analytical thinking (Chen et al., 2021; Zhang et al., 2022). Across these contexts, technology integration, active-learning pedagogies, and interdisciplinary approaches have emerged as common strategies for enhancing the relevance of economics education.

In Indonesia, economics education in higher education faces both challenges and opportunities. Although several institutions have begun integrating digital technologies into instruction, adoption remains partial and not yet comprehensive across programs (Gani et al., 2024). The implementation of the Competency-Based Curriculum (CBC) has increased curricular relevance and learning motivation; however, constraints such as educator training and local adaptation remain significant (Paramita et al., 2024). Furthermore, integrating financial literacy into economics instruction continues to face barriers related to instructional materials and content relevance (Fadila et al., 2025). The *Merdeka Belajar–Kampus Merdeka* (MBKM) policy has opened new pathways for experiential learning, internships, and industry collaboration; however, its implementation remains uneven across institutions (Adrevi & Safitri, 2025). Many economics graduates still lack practical problem-solving skills and an entrepreneurial mindset, with opportunities remaining concentrated on the island of Java (Amalia & von Korflesch, 2021) and insufficiently incorporate practical (hands-on) content, workplace exposure, and the robust cultivation of an entrepreneurial mindset (Elpisah et al., 2024).

Although global trends have led to significant transformations, including curriculum redesign, the integration of real-world issues, and the enhancement of data literacy progress in Indonesia has been relatively slow and uneven (Fatimah et al., 2025). Many economics programs continue to rely primarily on traditional lecture-based methods (Chang et al., 2014), with limited integration of interdisciplinary and technology-oriented topics such as the green economy, digital finance, and supply chain dynamics (Iswardhana, 2024; Yadav et al., 2025). The scarcity of studies that comprehensively map developments in economics education (across content, pedagogy, technology, and assessment) constitutes a research gap that needs to be addressed.

This study seeks to address that gap by conducting a Systematic Literature Review (SLR), descriptive bibliometric analysis, and content analysis to map research trends in economics education in higher education. The review combines global and local perspectives to generate evidence-based recommendations aligned with industry needs, national policy, and international standards. Data were obtained from the Scopus database, which offers broad multidisciplinary coverage and contains peer-reviewed articles whose quality is ensured through editorial screening. The 2016–2025 timeframe was selected because it represents a pivotal period marked by the rapid adoption of Industry 4.0 technologies in higher education, the disruption of the COVID-19 pandemic, and the post-pandemic recovery phase, which have significantly influenced economics education.

This review contributes to the literature on trends in economics education at the higher-education level by formulating the following research questions (RQs):

- RQ1: What are the publication trends in research on economics education at the higher-education level by time, journal, author, country, and affiliated institutions?
- RQ2: Which research methods are most commonly employed in studies of economics education in Indonesian higher education?
- RQ3: Which studies or themes have been most influential in higher-education economics education?
- RQ4: What global trends in teaching economics in higher education can serve as a basis for recommendations to develop economics education in Indonesian higher education?

METHOD

This study employs bibliometric analysis to achieve its objectives, particularly to map trends, themes, and research networks related to economics education in higher education. The bibliometric analysis was conducted on previously published literature (Ellegaard & Wallin, 2015), with Scopus serving as the primary data source. The choice of Scopus was based on several considerations. Scopus has emerged as a prominent bibliographic database, offering several advantages over competitors such as Web of Science. It provides broader coverage of articles, particularly in the social sciences and humanities (Pranckutė, 2021). To ensure data quality, Scopus applies stringent inclusion criteria, continuous re-evaluation, and independent advisory oversight (Baas et al., 2020). The database offers comprehensive author and institution profiles, bibliometric indicators, and tools for evaluating academic impact (Baas et al., 2020; de Oliveira et al., 2024). Indexing in Scopus enhances a journal's visibility, credibility, and impact, making it crucial for researchers, institutions, and publishers (de Oliveira et al., 2024). In addition, Scopus provides advanced search and filtering features, rapid data updates, and comprehensive citation analysis (Schotten et al., 2017). Another advantage of Scopus is its stringent indexing requirements, which increase publication reliability, in contrast to Google Scholar, which does not employ comparably rigorous selection mechanisms. Moreover, Scopus is compatible with analysis software such as RStudio and VOSviewer, facilitating data processing and visualization (Dervis, 2019).

The search was conducted in July 2025 and limited to publications from 2016 to 2025. This window was chosen because it spans major shifts in higher education and the global economy. The early years capture the accelerated integration of Industry 4.0 technologies into teaching and learning, particularly within economics curricula; 2020 to 2022 reflect the unprecedented impact of COVID-19, which necessitated large-scale transitions to online and hybrid instruction and catalyzed pedagogical innovation; and 2023 to 2025 represent the post-pandemic recovery, during which institutions reassessed curricula, instructional methods, and graduate competency frameworks to align with evolving labor-market demands. This decade-long span therefore offers a comprehensive view of pre-pandemic, pandemic, and post-pandemic developments in tertiary economics education. Only journal articles (excluding conference proceedings and reviews) were included. Scopus was selected as the data source due to its comprehensive metadata and the ease of exporting bibliometric data.

This study adapts the procedural model of Xu and Liu (2024), which comprises: (1) literature data acquisition, namely searching Scopus for higher-education economics articles using predefined keywords and restricting the publication period to 2016 to 2025; (2) data processing, including screening based on inclusion and exclusion criteria,

cleaning metadata, and standardizing information on authors, institutions, keywords, and source outlets; and (3) statistical analysis, mapping, and synthesis of findings, including quantitative analysis of publication trends, identification of influential authors and publications, collaboration mapping, and thematic exploration using VOSviewer and RStudio.

Literature Data Acquisition

The data-processing workflow followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol (Figure 1). In the Identification stage, the literature search was conducted in the Scopus database using keywords related to economics education in higher education, yielding 189 articles. During Screening, titles and abstracts were reviewed for relevance, and 155 records were excluded for the following reasons: publication outside the 2016 to 2025 window; subject areas outside Social Sciences; Economics, Econometrics and Finance; and Business, Management and Accounting; document types other than journal articles; not yet in final publication status; not written in English; and not open access. In the Eligibility stage, the remaining records were read in full and assessed on study type, relevance to higher-education economics education, and publication period, resulting in the exclusion of seven additional articles and leaving 27. The Inclusion stage comprised validation and bibliometric analysis of these 27 articles, including publication-trend mapping, identification of influential authors and journals, cross-country and interinstitutional collaboration analysis, and thematic clustering. Data were retrieved from Scopus using the following keyword combination: "economics courses" OR "advanced economy course" OR "economics education" OR "macroeconomics course" OR "microeconomics course" OR "behavioral economics" AND "higher education". The selected keywords were chosen to ensure a comprehensive coverage of literature relevant to economics education at the tertiary level. The terms encompass both general and specialized fields of economics (economics courses, macroeconomics course, microeconomics course, behavioral economics) as well as advanced-level learning (advanced economy course). Including *economics education* captures pedagogical and curriculum-related studies, while the use of *higher education* focuses the search on university and college contexts, ensuring the retrieval of research specifically relevant to undergraduate and postgraduate economics programs.

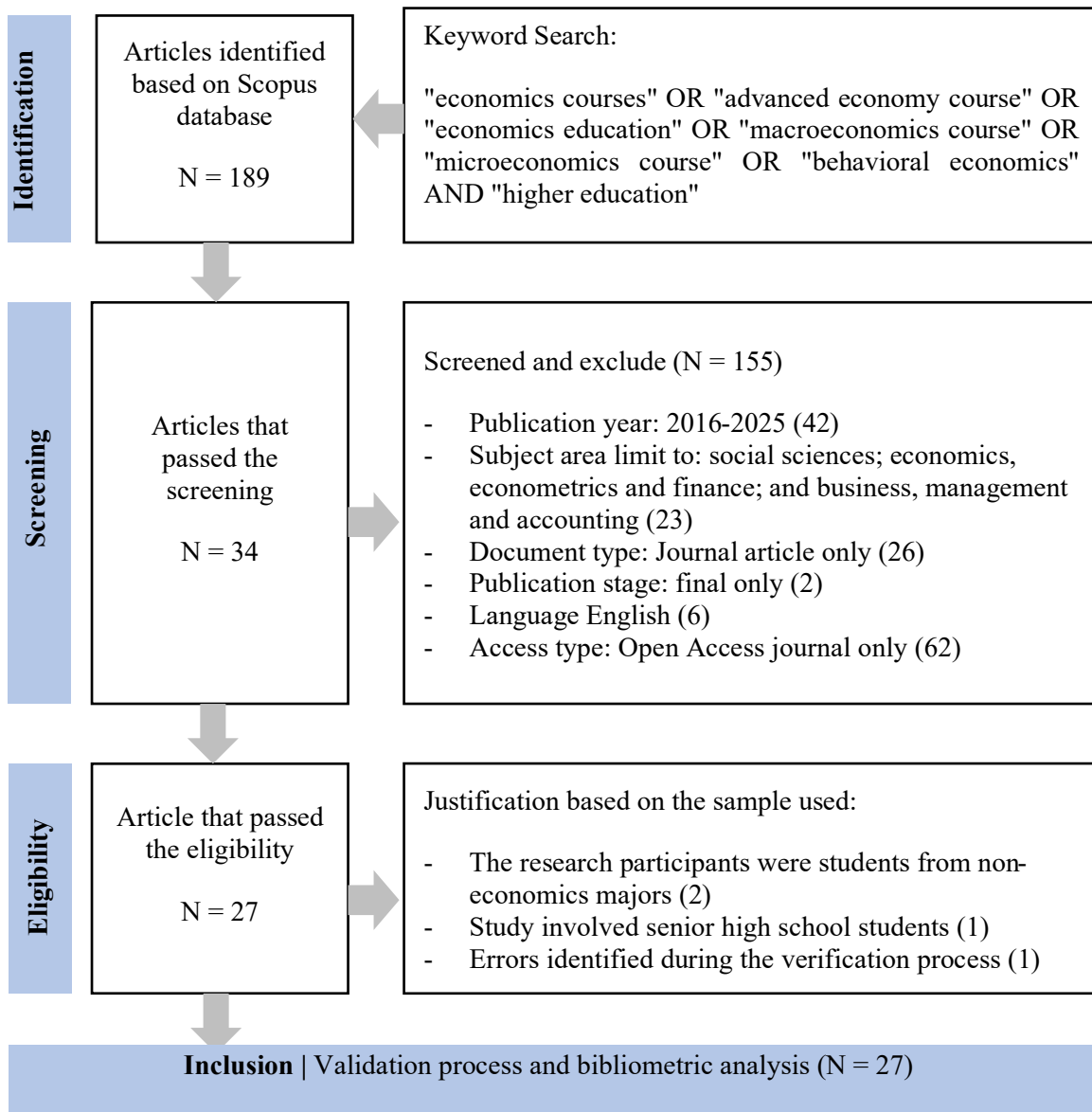
Data Processing

Data processing in this study employed bibliometric methods on 27 selected articles relevant to economics education in higher education. The analyses were conducted using VOSviewer and R-studio (Aria & Cuccurullo, 2017), applying co-word and co-authorship analysis. The underlying premise is that the co-occurrence of terms in the literature signals close conceptual linkages (Zupic & Čater, 2015). Co-word analysis was used to identify core concepts through the co-occurrence of keywords, clarify topical emphases, detect salient and emerging issues, and map potential directions for future research. Co-authorship analysis was used to depict research collaboration networks and identify leading authors in the field.

Biblioshiny was used to analyze annual scientific production; author analytics (authors, institutions, and countries of affiliation); source analysis (publication counts and most relevant sources); trending topics; influential journals; conceptual structure (co-occurrence networks, thematic maps, and thematic evolution); and social structure (collaboration networks), addressing RQ1, RQ2, and RQ4. VOSviewer, in turn, was

employed to examine the field's intellectual structure through citation and co-citation analyses, thereby informing RQ3.

Figure 1
Articles inclusion/exclusion flowchart



Source: Authors compilation, 2025

Data statistics, Mapping, and Finding Review

Based on the co-word and co-authorship analyses, the findings were statistically mapped and visualized in tables and figures to illustrate the evolution and contributions of the economics education literature. Furthermore, these results were examined in greater depth to address the research questions and to formulate recommendations for future studies.

RESULT

General Characteristics of Literature

Based on Table 1, analysis of 27 articles published from 2016 to 2025 shows that the publications appeared in 23 journals, with an annual growth rate of 5.2 percent. The average document age is 3.22 years, and each document received an average of 6.407 citations. Although the recorded number of references is zero, the documents contain 29 terms from Keywords Plus (ID) and 116 terms from Author’s Keywords (DE). In terms of authorship, there are 63 authors, eight of which are single-authored documents. The average number of authors per document is 2.37, with an international collaboration rate of 7.407 percent. All analyzed records are journal articles. The data were processed using the Bibliometrix R package (Biblioshiny) in 2025.

Table 1

Summary of the key characteristics of the 27 articles analyzed

Description	Results
Main information about data	
Timespan	2016 – 2025
Sources (Journals, Books, etc)	23
Documents	27
Annual Growth Rate %	5.2
Document Average Age	3.22
Average citations per doc	6.407
References	0
Document contents	
Keywords Plus (ID)	29
Author's Keywords (DE)	116
Authors	
Authors	63
Authors of single-authored docs	8
Authors collaboration	
Single-authored docs	8
Co-Authors per Doc	2.37
International co-authorships %	7.407
Document types	
Article	27

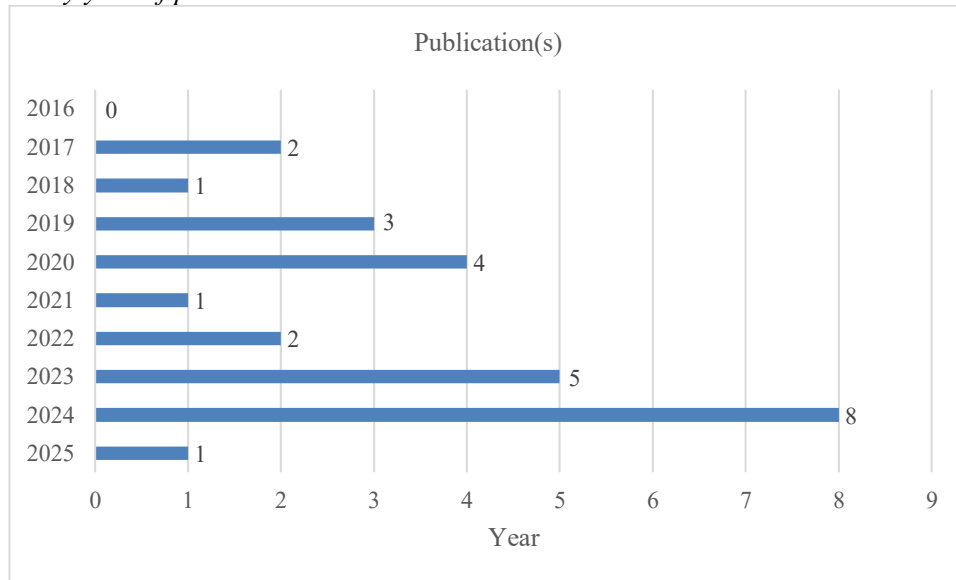
Source: Processed using bibliometrix R-package (Biblioshiny), 2025

Based on the analyzed publication data, Figure 2 shows a fluctuating yet generally upward trend in this research area over recent years. No publications were recorded in 2016; output began in 2017 with two publications and declined slightly in 2018. It rose again in 2019 and reached four publications in 2020, then dropped sharply to one in 2021. Output increased in 2022 and peaked in 2024 with eight publications, the highest count in the observation period. For 2025, one publication has been recorded to date, a figure likely to rise as the year is not yet complete. This pattern indicates growing interest in the topic, particularly in the past two years, reinforcing the relevance of conducting an SLR to synthesize recent developments and outline directions for future research. For Indonesia, this momentum suggests expanding research capacity and greater recognition of economics education as a strategic field within higher education reform. The trend also

signals opportunities for international collaboration and the need for more context-specific studies to strengthen national policy and instructional practice.

Figure 2

Document by year of publication



Source: Authors compilation, 2025

General Characteristics of Sources

The most frequently cited source journal based on Table 2 is the International Review of Economics Education, with three articles that collectively received 13 citations. Education Sciences ranks second with two articles but has the highest citation count at 43, indicating substantial influence in the literature. Sustainability (Switzerland) also has two articles with a total of 22 citations, reflecting its relevance to the topic. Several other journals contribute with a single article each, including Applied Economics (2 citations), British Journal of Educational Technology (7), Cypriot Journal of Educational Sciences (4), Daedalus (12), Eastern Economic Journal (0), Entrepreneurship Education (6), and Higher Education (4). Overall, although the number of articles varies by journal, the citation data suggest that Education Sciences and Sustainability exert relatively higher academic impact than the others.

Table 2

Most relevant journal

Sources	Percentile (per June 2025)	Field	Articles	Total Citations
International Review of Economics Education	75% (Q1)	Education	3	13
Education Sciences	84% (Q1)	Physical Therapy, Sports Therapy and Rehabilitation	2	43
Sustainability (Switzerland)	90% (Q1)	Geography, Planning and Development	2	22

Applied Economics	68% (Q2)	Economics and Econometrics	1	2
British Journal of Educational Technology	99% (Q1)	Education	1	7
Cypriot Journal of Educational Sciences	N/A (Not Yet Assigned Quartile)	N/A	1	4
Daedalus	96% (Q1)	History and Philosophy of Science	1	12
Eastern Economic Journal	44% (Q3)	Economics and Econometrics	1	0
Entrepreneurship Education	62% (Q2)	Social Sciences (miscellaneous)	1	6
Higher Education	97% (Q1)	Education	1	4

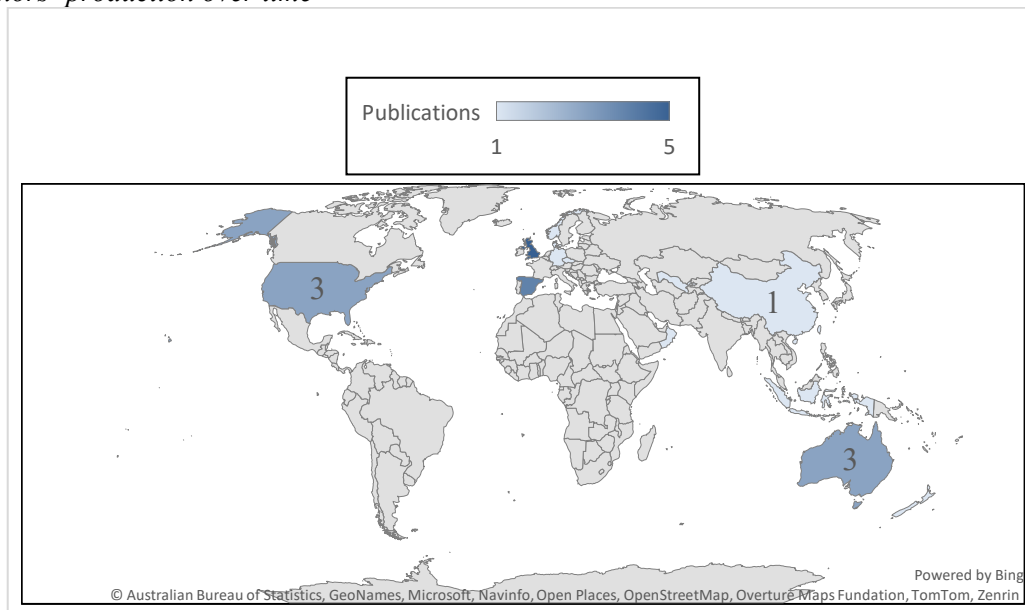
Source: Processed using bibliometrix R-Package (Biblioshiny), 2024

General characteristics of authors – most active countries

The publication distribution map indicates that contributions to this SLR’s topic come from multiple countries, with the United States and Australia leading at three publications each. European countries such as the United Kingdom and Spain also contribute, albeit in smaller numbers, alongside Russia and China, which each account for a single publication. The intensity of the blue shading reflects output, with darker shades denoting more publications. This pattern suggests that research on economics education remains concentrated in advanced economies, while contributions from developing countries are relatively limited, signaling opportunities to expand scholarship in those regions.

Figure 3

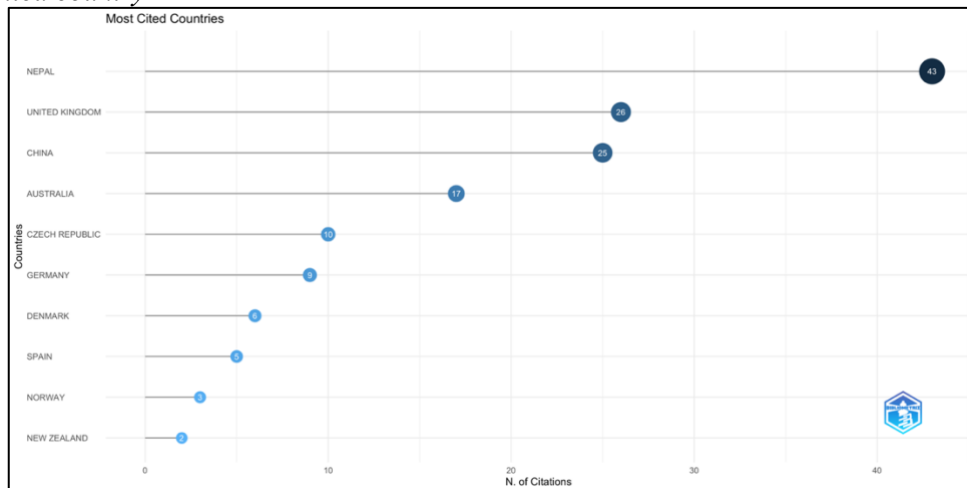
Authors’ production over time



Source: Authors’ compilation, 2025

Based on Figure 4, Nepal ranks first with the highest number of citations (43). The United Kingdom is second (28), followed by China (25). Australia is fourth (17), followed by the Czech Republic (10) and Germany (9). Denmark records 6 citations, Spain 5, Norway 3, and New Zealand 2. These results indicate that contributions from Nepal have received the greatest attention and recognition among the countries listed.

Figure 4
Most cited country

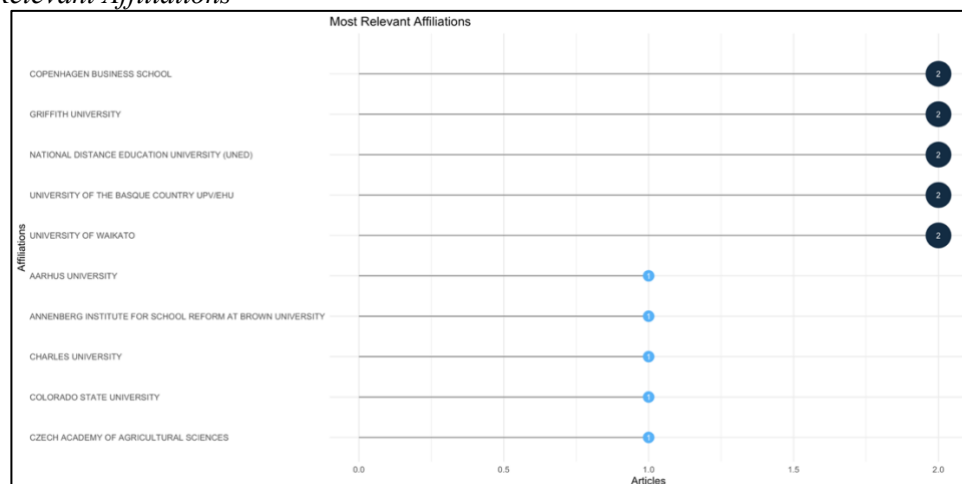


Source: Processed using bibliometrix R-package (Biblioshiny), 2025

General Characteristics of Authors – Most Active University

Based on the analysis in Figure 5, five institutions account for the highest publication contributions, with two articles each: Copenhagen Business School, Griffith University, National Distance Education University (UNED), the University of the Basque Country UPV/EHU, and the University of Waikato.

Figure 5
Most Relevant Affiliations



Source: processed using bibliometrix R-package (Biblioshiny), 2025

Five other institutions, Aarhus University, the Annenberg Institute for School Reform at Brown University, Charles University, Colorado State University, and the

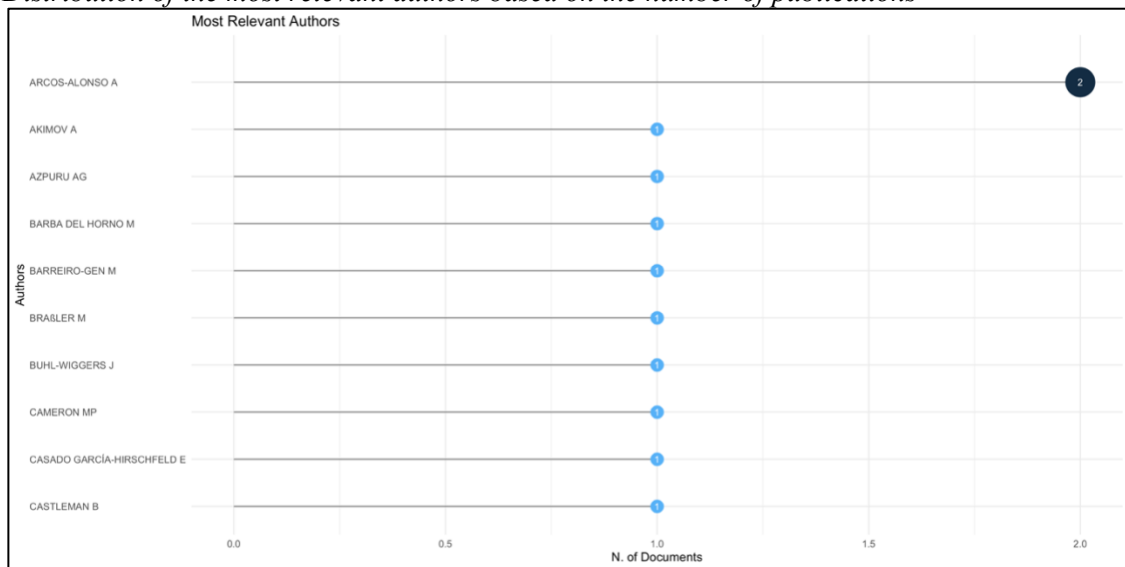
Czech Academy of Agricultural Sciences, each produced a single article. These findings suggest that, while no institution clearly dominates, the top five show slightly greater research engagement than the others. The small gap in output, at most one article, indicates that collaboration on this topic is fairly evenly distributed across institutions.

General Characteristics of Authors – Most Active Authors

Figure 6 presents the most relevant authors based on the number of documents published in this dataset. ARCOS-ALONSO A has the highest output with two documents, while other authors, including AKIMOV A, AZPURU AG, and BARBA DEL HORNO M each have one. This distribution indicates that publication contributions are fairly even across authors, with no notable dominance beyond ARCOS-ALONSO A.

Figure 6

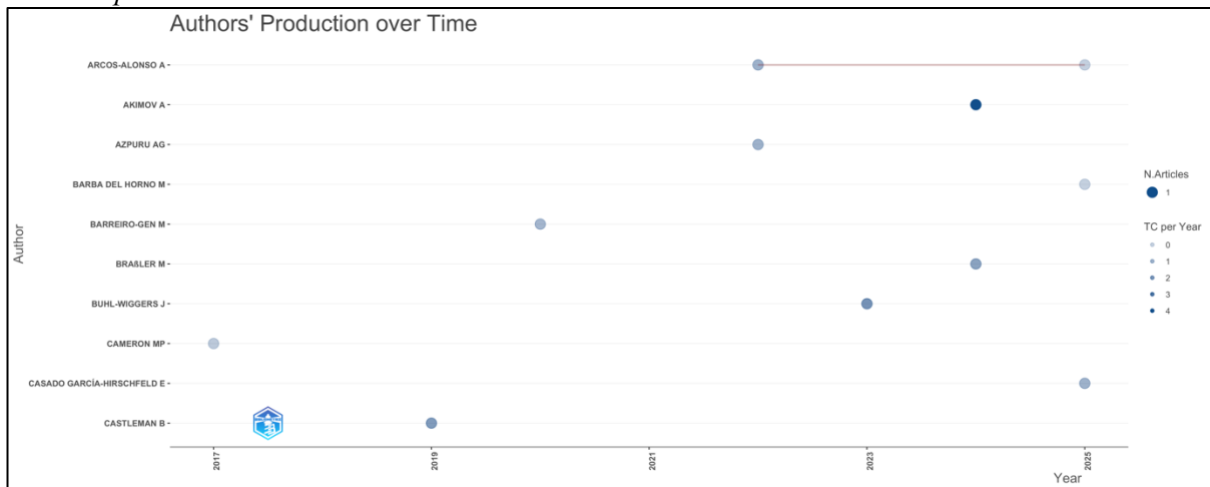
Distribution of the most relevant authors based on the number of publications



Source: Processed using bibliometrix R-package (Biblioshiny), 2025

Figure 7, “Authors’ Production over Time,” displays the distribution of authors’ publications from 2017 to 2023 alongside citations per year (TC per Year). Most authors produced only one article during this period. Publication activity is relatively dispersed; some authors, such as ARCOS-ALONSO A, were active continuously from 2021 through 2023, indicating consistent output. Others, including AKIMOV A, published in 2021 and again in 2023, while AZPURU AG contributed in 2021 and 2023. The annual citation rate (represented by bubble size) is generally low, predominantly in the range of 0 to 2 citations per year, although a few papers reached 4 citations per year, such as AKIMOV A’s 2023 article. Overall, the pattern suggests sporadic contributions, with only a few authors maintaining sustained publication over time, and per-article citation rates remaining relatively modest.

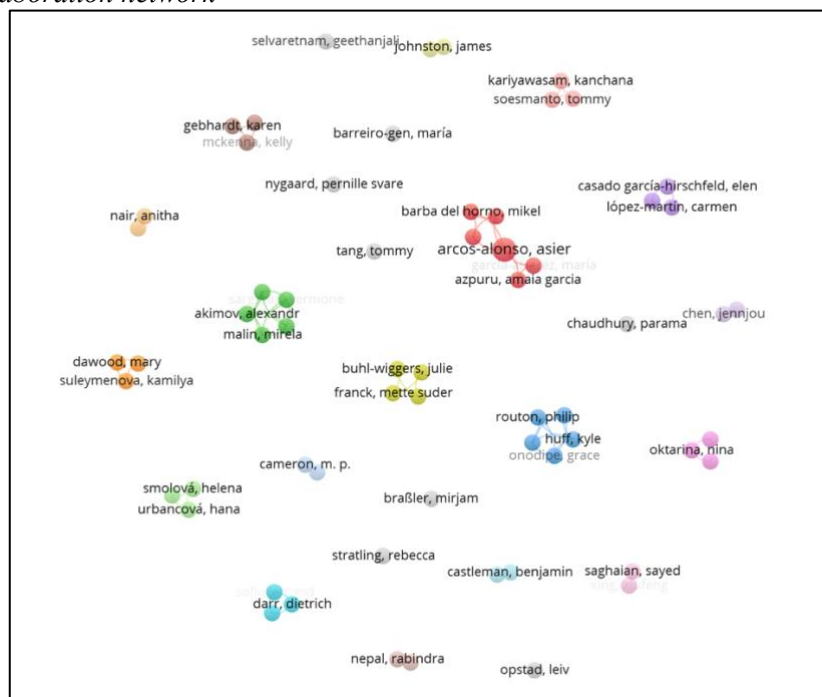
Figure 7
Authors' production over time



Source: processed using Bibliometrix R-package (Biblioshiny), 2025

Figure 8 presents the authors' collaboration network, which maps coauthorship ties in this research area. Nodes represent authors, while node size and color indicate collaboration clusters. Several groups collaborate intensively within their respective clusters, including those centered on Casado Garcia, Asier and Apzuru, Mikel; Buhl-Wiggers, Julie and Franck, Ntergerd; and Oktaria, Nina. The distance between authors reflects collaboration intensity: authors located closer together have stronger ties, whereas those farther apart are less likely to collaborate directly. Overall, the map shows that collaboration is fragmented into several separate clusters with limited links across clusters, suggesting opportunities to strengthen cross-group networks in the future.

Figure 8
Authors collaboration network



Source: Processed using bibliometrix R-package (Biblioshiny), 2025

Research Method Trends

Table 3 presents the distribution of research methods used, along with sample sizes and their proportions. The most common method is quantitative experimental (7 studies, 25.93%), followed by qualitative (5, 18.52%) and quantitative causal (4, 14.81%). Quantitative descriptive and mixed methods are each used in 3 studies (11.11%). Comparative quantitative appears in 2 studies (7.41%), while quantitative, qualitative interview, and descriptive qualitative are each employed in 1 study (3.70%). Sample sizes range from small (fewer than 50) and medium (50 to 200) to large (more than 299), with some studies not reporting sample size. Overall, the field is dominated by quantitative approaches—particularly experimental designs—while qualitative and mixed methods are used in smaller proportions.

Table 3
Type of research method

Types of methods	Sample size			No mention of sample size	Total	%
	Small (<50)	Medium (50-200)	Large (>299)			
Quantitative				1	1	3.70%
Descriptive Quantitative		1	1	1	3	11.11%
Comparative Quantitative			2		2	7.41%
Causal Quantitative		2	2		4	14.81%
Qualitative		2		3	5	18.52%
Experimental Quantitative		3	3	1	7	25.93%
Qualitative-Interview	1				1	3.70%
Descriptive Qualitative		1			1	3.70%
Mixed-Methods		1	2		3	11.11%
					27	100.00%

The Influential and Themes of Research

The “most relevant articles” section summarizes the nine most-cited papers, as shown in Table 4. The most highly cited per year is A16 (42 citations), a literature review on undergraduate student engagement in economics that adopts the Fredericks, Blumenfeld, and Paris (2004) framework; its substantial citation count suggests it serves as a key reference even though the study population is not specified. A19 (19 citations) ranks second, examining major challenges in online learning and the effects of COVID-19 on economics students in China (n = 1,462) using a mixed-methods design, with the large sample size strengthening the validity of the findings. A15 (12 citations) uses a behavioral-economics lens to explain financial and behavioral barriers faced by low-income students in navigating higher education and proposes evidence-based strategies to improve success. A6 and A5 each have 10 citations: A6 analyzes quality factors in business economics education at private universities in the Czech Republic using descriptive quantitative methods, whereas A5 explores storytelling to increase engagement in an international trade course during the pandemic. A13 (9 citations) evaluates the effects of mixed-mode learning on equity in learning experiences and academic performance among early-stage economics students, while A23 (8 citations) investigates links between student engagement, sociodemographic factors, and performance in a statistics course. A27 (7 citations) assesses the impact of a technology-supported three-stage repeat-testing model on MBA students’ motivation and understanding in business economics, and A18 (6 citations) examines the effects of a

flipped-classroom model on undergraduate macroeconomics outcomes, including variation across instructors.

Overall, the most-cited topics cluster around student engagement, the impact of COVID-19 on economics learning, innovative pedagogies such as storytelling, flipped classrooms, and formative assessment, and determinants of academic success, indicating a sustained emphasis on pedagogical innovation and enhanced student experience in higher-education economics.

Table 4

Overview of top-cited articles included in the analysis by citations per year

ID	Purpose	Methods	Subject	Cited	References
A16	Review the literature on student engagement in undergraduate economics education using the Frederiks, Blumenfeld, and Paris (2004) framework.	Literature Review	Not clearly mentioned	42	(Nepal & Rogerson, 2020)
A19	To investigate the key problems encountered during online teaching and learning, and to measure the impact of the COVID-19 pandemic	Mix-methods	1462 economics students in China	19	(Xing & Saghalian, 2022)
A15	To apply a behavioral economics perspective to understand how financial constraints and behavioral barriers affect low-income students' ability to navigate higher education, and to identify evidence-based strategies that can help improve their college success.	Qualitative	Not clearly mentioned none	12	(Castleman & Meyer, 2019)
A6	To identify and evaluate factors of quality of business economics education by university students at a private Czech university.	Descriptive Quantitative	6050 Czech Private University	10	(Vnoučková et al., 2019)
A5	Describes the use of a storytelling approach in a learning design with significant asynchronous elements, implemented to enhance engagement and effectiveness in an upper-level international trade course during the COVID-19 pandemic.	Descriptive Qualitative	200 students	10	(Chaudhury, 2023)
A13	To evaluate the impact of mixed-mode teaching on creating an equitable learning experience and academic performance for both online and face-to-face students in an introductory economics course during the COVID-19 pandemic.	Quantitative Experimental	Undergraduate students enrolled in the EDM course between 2017 and 2019 (not	9	(Soesmanto et al., 2023)

			clearly mentioned)		
A23	To explore the drivers of student success in a first-year university statistics course by examining the impact of student engagement and socio-demographic factors on academic performance.	Causal Quantitative	700-800 students BSc in Economics with Finance, BA in Business Administration, and BSc in Business Information Systems	8	(Akimov et al., 2024)
A27	To investigate how a three-stage model of repeat testing, implemented through computer-aided formative assessment using audience response systems (ARS) and online tests, affects students' understanding, learning motivation, and behaviour in a Business Economics course for MBA students.	Quantitative Experimental	94 of Business Economics course at a UK University	7	(Stratling, 2017)
A18	To examine the effects of the flipped classroom model on student learning outcomes—specifically pass rates and final exam grades—while exploring how these effects vary across different teachers in an undergraduate macroeconomics course.	Quantitative Experimental	undergraduate macroeconomics course with 933 students and 11 teachers	6	(Buhl-Wiggers et al., 2023)

Source: Authors Compilation, 2025

The Recent Research Trends in Economics Education

The co-occurrence analysis of 97 keywords from 27 articles identified four principal clusters that characterize research themes in economics education. The first cluster centers on learning design and the classroom environment, reflected in keywords such as course design, face-to-face classroom, learning performance, undergraduate, and virtual classroom, and highlights the effectiveness of both in-person and online formats in supporting undergraduate learning outcomes. The second cluster emphasizes assessment and academic performance analysis, with terms like constructed response test, economics, multiple-choice test, performance, and regression analyses, indicating the use of diverse assessment formats and quantitative techniques to examine relationships among variables. The third cluster focuses on pedagogical approaches that promote active student participation and technology integration, captured by keywords such as active learning, economics education, and online education, signaling a shift from conventional instruction toward technology-enabled, student-centered learning. The fourth cluster

comprises broader terms (assessment and higher education) representing a macro-level frame for evaluation practices across the tertiary context.

These trends align with global shifts toward competency-based and constructivist pedagogies, where learning design emphasizes engagement, active learning, and real-world application. The prominence of blended and online learning in the dataset reflects the wider adoption of digital pedagogy frameworks such as Technological, Pedagogical, and Content Knowledge (TPACK) and the Substitution, Augmentation, Modification, and Redefinition (SAMR) model, which position technology as a catalyst for redesigning the learning experience rather than merely supplementing instruction. Similarly, the emphasis on curriculum relevance mirrors Biggs' constructive alignment, as universities increasingly redesign economics curricula to match labor-market competencies and 21st-century skills frameworks. By situating the findings within these global theoretical models, the study extends prior bibliometric evidence and highlights how economics education is evolving in line with international pedagogical and curriculum development paradigms. Overall, the findings suggest that research over the past decade extends beyond economics content to foreground pedagogy, assessment, and the effectiveness of instructional models in higher education.

Table 5
Cluster of economic education research

Cluster	Items	Occurrences	Total Link Strengths
Cluster 1 (5 items)	Course design	1	6
	Face-to-face classroom	1	6
	Learning performance	1	6
	Undergraduate	1	6
	Virtual classroom	1	6
Cluster 2 (5 items)	Constructed response test	1	5
	Economics	2	6
	Multiple-choice test	1	5
	Performance	1	5
	Regression analyses	1	5
Cluster 3 (3 items)	Active learning	3	3
	Economics education	5	4
	Online education	2	3
Cluster 4 (2 items)	Assessment	2	2
	Higher education	7	11

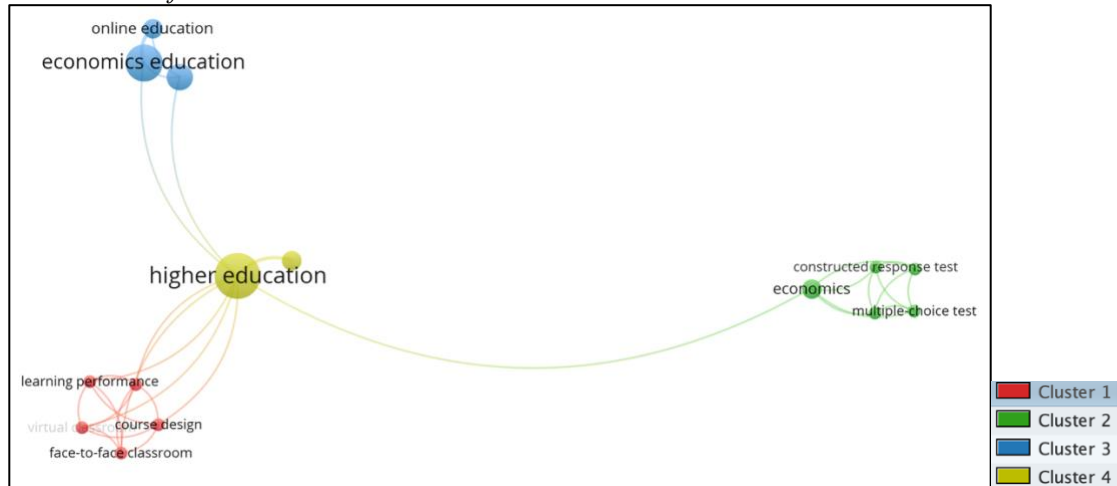
Source: Processed using VOSviewer, 2025

Figure 9 is a co-occurrence network of keywords. Node size reflects frequency, edge thickness indicates co-occurrence strength, and colors mark clusters. "Higher education" is the most central hub, linking the other themes. The red cluster (course design, face to face classroom, virtual classroom, learning performance) represents learning design and delivery, strongly tied to higher education. The blue cluster (economics education, online education) highlights discipline-specific work on modality and digital provision, moderately connected to the hub. The green cluster (economics, multiple choice test, constructed response test) captures assessment research and is more peripheral, connecting mainly through higher education. Overall, the literature concentrates in three strands: design and delivery, online and discipline focus, and

assessment with relatively weak bridges between assessment and the online/design strands, suggesting room for integrated studies that link assessment innovations with online and blended teaching in economics.

Figure 9

Visualization of co-occurrence network



Source: Processed using VOSviewer, 2025

Economics Education research for future directions

Recent literature in economics education indicates a shift from content transmission to competency development aligned with labor market needs and global challenges, including the integration of sustainability, threshold concepts, cooperative learning, open educational practices (OEP), and competency-based curricula. Learning design has become more flexible and experiential, employing storytelling, asynchronous delivery, and blended formats to sustain student engagement in the online environment after the pandemic. Assessment practices are increasingly diversified, combining constructed-response and multiple-choice formats, leveraging applications and audience response systems (ARS), and anticipating AI-related disruptions, with attention to academic integrity, efficiency, and the development of ethical and critical reasoning. At the same time, issues of access and equity remain salient, and financial or social barriers call for proactive interventions. Engagement, self-regulation, social presence, and clear course structure shape the learning experience, while institutional quality is monitored through student feedback, institutional assessment, and faculty development. Overall, meaningful technology integration is the prevailing direction, yet gaps persist in longitudinal evidence on employability and in cost–benefit analyses, particularly in Global South contexts.

Table 6

Classification of research themes and key findings in economics education over the past decade

Description	Key Findings	Ref
Theme 1: Economics Education Curriculum		
Focuses on the design, content, and its alignment with	1. Aligning the economics curriculum with labor market demands	(Akimov et al., 2024; Arcos-Alonso et al., 2025; Braßler,
	2. Integration of sustainability into the economics curriculum	

industry needs and global challenges.	3. Threshold concepts in economics and their real-world relevance	2024; J. Chen & Lin, 2020; Johnston & Reeves, 2018; Onodipe et al., 2024; Sangeetha & Nair, 2020; Sofiullah et al., 2023; Tang, 2019)
	4. Microeconomics curriculum and cooperative learning approaches	
	5. Open Educational Practices (OEPs) in economics curricula	
	6. Content-based curriculum development	
Theme 2: Learning Design and Pedagogical Methods		
Covers pedagogical innovations and adaptations, particularly in response to technological advancements and global events (e.g., the pandemic)	1. Storytelling in economics education	(Arcos-Alonso et al., 2022; Buhli-Wiggers et al., 2023; Chaudhury, 2023; Soesmanto et al., 2023)
	2. Asynchronous learning	
	3. Mixed-mode learning (blended learning)	
	4. Student engagement in online learning environments	
	5. Pedagogical responses to the COVID-19 pandemic	
	6. Learning design and delivery	
Theme 3: Evaluation and Assessment in Economics Education		
Highlights innovations, effectiveness, and challenges in the assessment processes of economics learning.	1. Assessment formats: Constructed Response (CR) vs. Multiple Choice (MC)	(Nygaard, 2024; Opstad, 2021; Selvaretnam, 2024; Suleymenova et al., 2024)
	2. Assessment innovations in the AI era and academic integrity	
	3. Cost-efficiency in assessment practices	
	4. Adaptations in essay formats and grading criteria	
	5. Technology-based evaluation (mobile apps, ARS)	
	6. Learning outcome analysis based on individual characteristics	
	7. Development of ethical reasoning and critical thinking skills	
Theme 4: Access and Equity in Economics Education		
Discusses financial, social, and institutional barriers affecting student access to economics education.	1. Financial constraints and their impact on academic achievement	(Cameron & Siameja, 2017; Castleman & Meyer, 2019; Long et al., 2023)
	2. Proactive interventions (pastoral care) to support at-risk students	
	3. Equity and access in economics education	
Theme 5: Student Engagement and Learning Experience		
Research that explores strategies to enhance student engagement and holistic learning experiences.	1. Student engagement in economics learning	(Casado García-Hirschfeld et al., 2025; Nepal & Rogerson, 2020; Suryanto et al., 2024)
	2. Self-regulation, social presence, and course structure	
	3. Learning modality and academic performance	
	4. Student experience and motivation	
Theme 6: Institutional Quality Evaluation		
Evaluates the quality of institutions and the policy implications for economics education.	1. Student-led evaluations of economics education quality	(Vnoučková et al., 2019)
	2. Institutional assessments and their impact on education distribution and sustainability	

3. Historical perspectives and faculty development

Theme 7: Technology Integration in Economics Learning

Involves the use of digital tools and technology-driven approaches to support the learning process.	1. Mobile applications for assessment	(Barreiro-Gen, 2020; Stratling, 2017; Xing & Saghaian, 2022)
	2. Audience Response Systems (ARS) for repeat testing	
	3. Technology in assessment and hybrid learning	

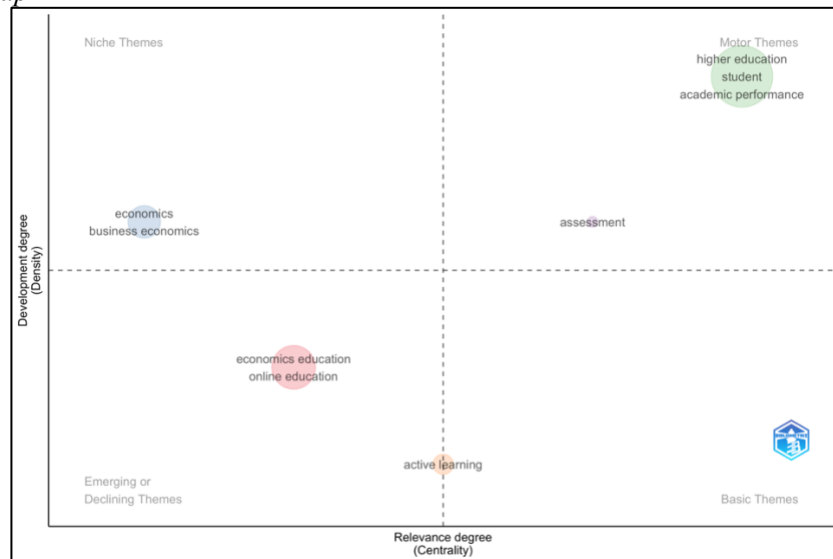
Source: Authors Compilation, 2025

Thematic Maps

Figure 8 presents a thematic map positioning research topics along two axes: relevance (centrality) and degree of development (density). In the Motor Themes quadrant (upper right) are higher education, student, and academic performance, indicating high relevance and mature development that currently drive the field. The Niche Themes quadrant (upper left) contains economics and business economics, which are well developed but less central to the broader domain and more specific to subfields. In the Basic Themes quadrant (lower right) lies assessment, a highly relevant foundation whose thematic development remains limited. The Emerging or Declining Themes quadrant (lower left) includes economics education, online education, and active learning, which presently exhibit lower relevance and development, suggesting either emerging areas of growth or topics experiencing reduced attention. This mapping helps set priorities for theme development and identifies avenues for future research.

Figure 8

Thematic map



Source: processed using bibliometrix R-package (Biblioshiny), 2025

DISCUSSION

Drawing on global trends in teaching economics in higher education and the results of the thematic map, the development of economics education in Indonesian universities should prioritize strengthening the Motor Themes, namely improving students’ academic

performance through the integration of outcome-based learning, enhancing student engagement, and bolstering overall higher-education quality.

Advancement in this area should place improved student academic performance as a top priority while simultaneously reinforcing student engagement and instructional quality. This can be achieved by implementing measurable outcome-based learning, providing regular feedback, and adopting strategies that facilitate active student participation. In addition, integrating interaction-rich methods such as collaborative discussions, economic simulations, and problem-based projects can increase motivation and deepen students' conceptual understanding of economics.

The economics curriculum should be adapted to be responsive to labor market demands and global challenges, including the integration of sustainability and contemporary socioeconomic issues (Abo-Khalil, 2024; Braßler, 2024; Leal Filho et al., 2025). This approach entails designing course materials aligned with industry needs (Onodipe et al., 2024), implementing threshold concepts with clear real-world relevance (Tang, 2019), and leveraging open educational practices (OEP) to broaden access to learning resources (Braßler, 2024). A curriculum connected to workplace practice will enhance graduates' competitiveness in national and international labor markets.

National curriculum evaluations and survey data indicate that although many universities have introduced courses such as digital economics and entrepreneurship, the integration of crucial topics: sustainability, Environmental, Social, and Governance (ESG), and economic data analysis remains limited. Studies in Indonesia further show that ESG implementation is confined to a handful of institutions and does not yet reflect widespread curricular practice (Huang et al., 2022). The proposed ESG integration framework underscores the importance of an interdisciplinary approach and real-world application, which are not yet widely implemented (Alenezi & Alanazi, 2024). Further global analysis reveals that sustainability-oriented education still needs to be expanded across higher education as a whole (Ankareddy et al., 2025).

Adopting pedagogical innovations is a strategic step to enhance the effectiveness of economics instruction. Blended learning that combines face-to-face and online modalities (Xing & Saghalian, 2022), storytelling to contextualize course content (Chaudhury, 2023), and active-learning approaches can improve students' knowledge retention (Cameron & Siameja, 2017). Global experience during the COVID-19 pandemic also shows that well-designed asynchronous and synchronous learning, integrated with technology, can sustain educational quality even under constrained conditions.

Universities such as Universitas Negeri Semarang (UNNES) have demonstrated that implementing blended learning through a blended problem-based learning model with SIMPEL-12 can significantly improve economics students' retention and critical thinking (Asih et al., 2023). In addition, the use of an LMS such as Elena at UNNES facilitates integrated synchronous and asynchronous learning, underscoring the institution's ability to maintain instructional quality even under constrained conditions (Nurmasitah et al., 2019)

Online learning—classified as an emerging theme—should be directed toward expanding access and reducing the digital divide. This includes providing technological infrastructure, offering digital literacy training for faculty and students, and implementing inclusive instructional strategies. Leveraging interactive platforms and open educational resources can also extend the reach of economics education to regions with limited facilities. The digital divide remains a major challenge, particularly at higher education

institutions outside Java (Amalia & von Korfflesch, 2021). Therefore, national policy support such as education digitalization programs and Merdeka Belajar should be strengthened so universities can build an equitable online ecosystem. In addition, students' socioeconomic barriers, including limited devices and internet costs, need to be addressed through subsidy schemes or partnerships with service providers. These efforts are essential not only to improve instructional quality but also to equip students with digital literacy skills that are relevant to the labor market in the era of digital transformation.

Assessment in economics education must adapt to technological advances while upholding academic integrity. The use of mobile applications can increase the effectiveness of formative evaluation because these apps not only facilitate real-time student engagement but also provide more accurate data on learning outcomes (Barreiro-Gen, 2020). Audience response systems (ARS) likewise support this goal by enabling instant polling, immediate feedback, and repeat testing, while providing instructors with detailed analytics to monitor learning progress (Barreiro-Gen, 2020). Audience response system (ARS) (Stratling, 2017) can increase student participation and provide a more accurate picture of content comprehension. Other technology-based evaluation approaches can further improve the effectiveness and efficiency of assessment. In addition, combining constructed response and multiple-choice formats, together with adjustments to essay scoring criteria, yields a more comprehensive view of students' analytical ability, ethical reasoning, and critical thinking (Opstad, 2021). Accordingly, assessment innovation is essential not only for evaluating learning outcomes but also for equipping students with competencies that are relevant to the workplace.

Specialized themes such as business economics, which currently fall into the niche category, can be leveraged as competitive advantages for Indonesian universities. Developing programs or courses that focus on business skills and applied economics can attract students while meeting the demand for specialist labor in industry and commerce. These niche areas, including applied business economics, social entrepreneurship, and the creative economy, remain underutilized at most institutions. Even so, Universitas Negeri Yogyakarta has an innovation center and business incubator within the Institute for Research and Community Service (LPPM) that actively participates in exhibitions such as the InaRI Expo 2022 and supports student product innovation. Universitas Pendidikan Indonesia also regularly conducts training and incubation activities, such as creative economy startup training across multiple cohorts. These examples show that emphasizing niche themes can be a powerful differentiation strategy while addressing workforce needs in industry and trade.

To achieve sustainable development of economics education, universities need institutional policies that promote faculty collaboration, strengthen teaching capacity, and implement consistent quality evaluation. Data driven reviews of teaching processes and graduate outcomes can guide continuous improvement, aligning Indonesian economics education with global developments while meeting national needs. At many universities, however, quality assurance mechanisms remain largely administrative and not fully grounded in learning outcomes data. Internal studies at several teacher training institutions indicate that evaluations of instructional quality seldom use learning analytics for curriculum enhancement. By contrast, several major universities have strengthened academic evaluation through structured, quality-oriented mechanisms. At Universitas Indonesia, the student-centered e learning environment in the Faculty of Computer Science enables user experience-based evaluation of the e learning system, explicitly

considering usability to support hybrid and blended instruction. At the Bandung Institute of Technology, learning outcome evaluations are required at least twice per semester, both formative and summative, guided by principles of educational value, authenticity, objectivity, accountability, and transparency. Program heads are also required to monitor student achievement regularly and issue early warnings to students showing weak academic indicators. Such evaluation practices help institutions maintain instructional quality over time and support the integration of learning outcomes into campus education policy.

The results suggest that universities can advance economics education by prioritizing curriculum renewal, adopting evidence-based and technology-supported pedagogies, and reinforcing data-driven quality assurance. Thematic mapping also reveals that specialized domains, such as applied business economics can serve as competitive advantages for universities in Indonesia.

CONCLUSION

In conclusion, substantial challenges and untapped opportunities remain in advancing economics education in higher education, particularly in responding to technological change, labor market demands, and global issues. Publication output shows a fluctuating but generally upward trend in recent years, indicating strong potential for continued development as institutions place greater emphasis on quality and relevance. This study provides an overview of the field by (1) identifying the most relevant journals, countries, affiliations, and authors; (2) cataloging the research methods most commonly used in university-level economics education; (3) determining the most influential studies and themes; and (4) identifying global trends in economics instruction that can inform recommendations for developing economics education in Indonesian universities. These recommendations include strengthening academic performance and student engagement, aligning curricula with labor-market and global demands, enhancing pedagogical and assessment innovations, expanding digital access, and leveraging niche areas such as applied business economics. This review is limited to Scopus-indexed, English-language publications and covers work published between 2016 and 2025, potentially excluding newer or region-specific developments. Future research should incorporate broader datasets, explore comparative perspectives across countries, and integrate longitudinal evidence to deepen understanding of how economics education continues to evolve.

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Competing interests

The author has declared that there are no conflicts of interest

Data availability

The data were provided upon request to corresponding author

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