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The Transformation of Authentic Learning Literature: A Bibliometric Analysis

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This study employs bibliometric methods to provide a comprehensive overview of the intellectual structure, knowledge production dynamics, and conceptual evolution of authentic learning literature. This research analyzes 3,663 documents retrieved from the Web of Science, Scopus, Lens, and PubMed databases covering the period from 1984 to 2025 to map the development of the field using RStudio and the Bibliometrix package. The findings show a quantitative increase in publication output, particularly after 2020, coinciding with global crises and the accelerating digitalization of education. Geographical and institutional distribution analyses revealed the dominance of academic production from Australia in the literature, led by institutions such as Queensland University of Technology. Trend analysis points to a structural shift in research focus within the field: Initially clustered around theoretical frameworks such as “constructivism” and “situated learning,” the literature now reflects a shift toward technological and ethical dimensions represented by keywords such as “artificial intelligence,” “ChatGPT,” “virtual reality,” and “academic integrity.” Furthermore, keyword co-occurrence network analysis shows that the concept of “authentic assessment” has become central to the network structure, frequently co-occurring with “authentic learning,” and is positioned as one of the core research clusters. In conclusion, this research documents that authentic learning is conceptualized in literature not merely as a pedagogical approach, but as a multidimensional educational ecosystem positioned at the intersection of advanced technology, ethics, and assessment.

Introduction

The technological innovations and global transformations of the 21st century have necessitated a radical paradigm shift in education systems. This transformation has led to the

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prominence of student-centered approaches rather than traditional teaching methods (Bolat & Yetim, 2022). While the traditional understanding of education positions the student as a passive recipient of information, contemporary approaches define the student as an active subject who constructs, questions, and relates knowledge to real life (Baştürk, 2019; Karakuş, 2006; Yıldız, 2021). In this context, the fundamental function of education today is not limited to preparing individuals for the future. Education also aims to equip individuals with the knowledge, skills, and critical thinking competencies to solve complex and multifaceted real-world problems they may encounter, thus making them active participants in social life (Franco, 2016). Therefore, education aims not only to enable individuals to acquire academic knowledge but also to be able to use this knowledge in social, cultural, and economic contexts. However, significant difficulties are encountered in transferring theoretical knowledge acquired in the school environment to real-life contexts, because the artificial and controlled learning conditions in the classroom are insufficient to address the complex, uncertain, and multifaceted problems of life (Arıkan et al., 2024; Güneş et al., 2020; Illeris, 2009). This situation highlights the need to enrich educational environments with authentic experiences.

Students' ability to connect with real life in their learning processes makes it possible to internalize knowledge at the application and knowledge transfer levels. In the literature, this process is addressed within the framework of "authentic learning," which advocates for the correspondence of learning to reality, and constitutes a fundamental point of reference in current educational research (Bolat & Yetim, 2022; Erten, 2020). Authentic learning envisions students encountering real-life problems, producing solutions, collaborating, and carrying out the learning process in an experiential context (Bektaş & Horzum, 2014, p. 25; Bissett-Johnson & Radcliffe, 2019). The word "authentic" is defined by the Turkish Language Association (2018) as "having not lost its reality, its conformity to the original; not artificial," while in the context of education, it represents the meaningful connection that students establish with real-world applications (Arıkan & Çetin, 2020). This approach supports not only cognitive development but also the development of social and emotional skills (Bartın-Savran & Çetin, 2025; İneç, 2020, p. 93; Callison & Lamb, 2004). Furthermore, it has been emphasized that authentic learning has a positive effect on academic achievement, attitude towards the lesson, and retention of information (Güneş et al., 2020; Gürgül-Ulusoy et al., 2024; Karakuş, 2006). Supporting this view, a case study in the social studies domain revealed that authentic learning activities significantly transformed students' negative perceptions of the course into positive engagement while fostering skills such as empathy and cooperation (Şekerci, 2021).

Authentic learning, rooted in constructivist and humanist philosophies as well as situated and experiential learning theories, is a multidimensional approach that aims to enable students to produce meaningful tangible products (Bolat & Yetim, 2022; Chabeli et al., 2021). Herrington (2006) argues that this process is based on the principle that knowledge should be presented within a context and supported by realistic tasks. The method directs students toward activating advanced thinking skills in the resolution of complex problems (Chabeli et al., 2021). In the literature, the concept of authenticity is addressed from different perspectives, such as "disciplinary authenticity," "real-world authenticity," and "personal authenticity" (Nachtigall & Wirth, 2024).

An effective, authentic learning environment aims to enable students to apply what they have learned to real-life situations (İneç & Akpınar, 2018; Önger, 2019, p. 130). The framework is organized around nine essential dimensions: genuine context, meaningful activity,

demonstration of expertise, integration of diverse perspectives, collaborative engagement, reflective practice, clear articulation, systematic scaffolding, and authentic evaluation (Baştürk, 2019; Herrington, 2006). Especially with the advancement of technology, applications enriching this field such as virtual simulations, geo-media materials (İneç & Akpınar, 2018), and WebQuests (Lamb, 2004) offer students realistic experiences. Research shows that authentic learning practices positively influence students' success and motivation (Arıkan & Çetin, 2020; Bolat & Yetim, 2022). Scientific knowledge is progressing cumulatively, and publications on authentic learning have shown a significant increase since the 2017-2018 period (Nachtigall & Wirth, 2024; Yıldız, 2021). An examination of postgraduate theses in Türkiye reveals that the vast majority of studies are activity-based and generally concentrated in the field of science education (İneç & Bozkurt, 2021). Despite rapid theoretical growth, the limited number of empirical studies has created conceptual ambiguity (Nachtigall & Wirth, 2024). However, despite the increasing theoretical interest, recent mixed-methods research highlights that although teachers possess high levels of readiness for authentic learning, they still encounter practical obstacles such as material deficiencies and time constraints during implementation (Aktepe et al., 2025). While existing review studies focus on specific disciplines in the current literature (Acar & Acar, 2023; Bolat & Yetim, 2022; İneç & Bozkurt, 2021), a bibliometric synthesis is needed to present the macro-scale development trajectory of the field. In this context, the present study aims to provide a strategic reference point for researchers in the field by offering an analytical framework for identifying which themes are dominant in the authentic learning literature and which future trends may present potential research gaps.

Research Questions

To comprehensively examine the academic literature on authentic learning, the following research questions were addressed:

- (1) What is the distribution of published articles on authentic learning by year?
- (2) Which researchers have contributed most to the authentic learning literature?
- (3) What is the state of inter-institutional (university) collaboration regarding published articles on authentic learning?
- (4) Which articles published on authentic learning have received the highest citation impact?
- (5) Which journals publish the most articles on authentic learning?
- (6) What are the most frequently used keywords in articles published about authentic learning?
- (7) What are the trends and thematic mapping networks formed by published articles on authentic learning?

Methods

Research design

This research aimed to determine the general framework and trends of a subject by analyzing articles in a defined field using statistical techniques. Therefore, bibliometric analysis was employed. Bibliometric analysis provides a comprehensive perspective on a field by statistically examining studies conducted within a specific subject area based on parameters such as citation, publication, and author influence (Aria & Cuccurullo, 2017; McBurney & Novak, 2002).



Population and Sample

The dataset for this study consists of studies on "authentic learning" and related concepts found in the Web of Science (WoS), Scopus, Lens, and PubMed databases, which index academic publications globally and include high-quality scientific publications in the field. To ensure reproducibility and rigor, this study employed a precise systematic search strategy. The primary search utilized the Boolean string ("authentic learning" OR "authentic assessment" OR "authentic task" OR "situated learning" OR "experiential learning") and targeted the Title, Abstract, and Keywords fields across all selected databases. Finally, the search parameters encompassed the timeframe between 1984 and 2025. Additionally, the inclusion criteria were limited to academic articles, while considering publications primarily in English. Following this structured extraction process and the subsequent elimination of duplicate records, the final sample consisted of a total of 3,663 studies.

Data Collection Tools

For the integration, cleaning, and analysis of the obtained data, the RStudio platform, which is compatible with the infrastructure of the open-source R statistical computing environment, was used. Furthermore, the Bibliometrix/Biblioshiny package developed by Aria and Cuccurullo (2017) was used within the aforementioned program.

Data Collection and Analysis

In the data collection process, studies initially retrieved from the WoS (1,720) and Scopus (2,726) databases were combined, and 1,301 duplicate records were identified and removed from the dataset. This extraction process resulted in a total of 3,144 studies, and the combined database was stored. In the second stage, studies obtained from the Lens database were merged with the existing file, 1,165 duplicate records were deleted, and a file containing 3,584 studies was stored. Thus, the data obtained from the WoS, Scopus, and Lens databases were combined. In the third stage, the database obtained from PubMed was merged with the existing database, and after removing 315 duplicate records, a total of 3,663 records were obtained, and the final dataset was saved. To ensure the reliability and validity of the research, a rigorous data cleaning and verification process was implemented in the final stage. First, to prevent data fragmentation, spelling variations in author names, keywords, and institutional affiliations were standardized. Second, the researcher conducted a manual review of a random subset of the data to confirm that the extracted documents strictly aligned with the authentic learning scope, thereby mitigating the risk of false positives. Finally, the reliance on the globally recognized Bibliometrix package within the RStudio environment ensured that the data mapping processes were computationally stable and reproducible, significantly minimizing human error. Since no identical data or inconsistencies were found in the combined database reviewed by the researcher, analyses were conducted using the final dataset.

Research Considerations

This research utilizes secondary data obtained from publicly accessible scientific articles in academic databases. Therefore, in line with similar bibliometric studies in the literature, ethics committee approval is not required for this study.

RESULTS

This section of the study provides basic information about studies conducted on authentic learning.

Table 1. Basic information about the studies

Time Interval	1984-2025
Documents	3663
Authors	9495
Single-Author Documents	982
Average citation per document	16.06
Number of co-authors per document	2.81
Annual growth rate %	5.37

Table 1 presents an overview of the authentic learning literature from 1984 to 2025. This specific time interval was not predetermined; rather, it was established naturally by the dataset, as 1984 marks the earliest indexed publication related to the search query within the selected databases, and 2025 represents the most recent available data at the time of extraction. Over the 41 years covered by the analysis, a total of 3,663 documents were produced, with contributions from 9,495 authors. The field shows a steady growth trend of 5.37% annually. Examining the collaboration data, it is noteworthy that there are 982 single-authored studies, while the average number of authors per document is 2.81; this indicates the prevalence of multi-authored studies in the field. Furthermore, the average of 16.06 citations per document suggests a high level of academic impact for research in the field of authentic learning. Figure 1 below shows the annual publication trend for articles on authentic learning in the examined databases.

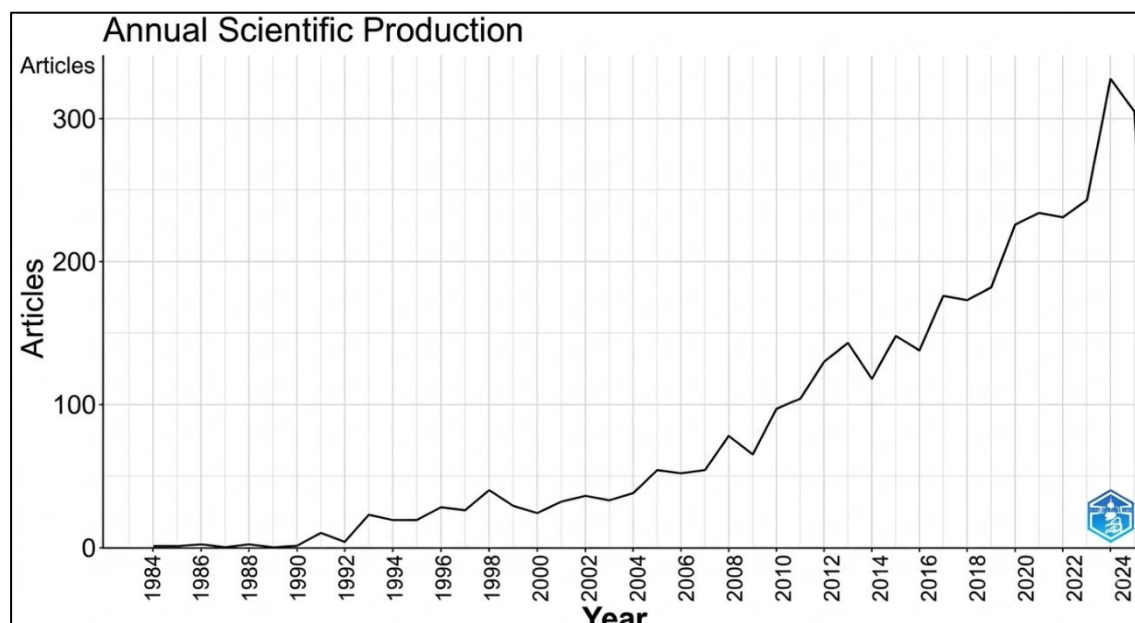


Figure 1. Annual publication trend.

Figure 1 illustrates how research output has been distributed within the authentic learning literature over the years, revealing that the literature's development has occurred in three distinct phases. The first phase, between 1984 and 2000, shows a relatively low annual publication rate, indicating that the subject was still in its conceptual framework stage. From the early 2000s onwards, particularly between 2008 and 2010, a steady increase in the number

of publications began. However, the most significant change was observed from 2020 onwards. The annual output exceeded 200 publications by 2020 and reached its historical peak of over 300 publications in 2023-2024. The sharp drop at the end of the graph is because the data for 2025 is not yet complete. The overall trend reveals that academic interest in the field has increased significantly, especially in the last five years. Figure 2 below presents the top 10 researchers contributing to authentic learning research in the examined databases, along with the number of articles they have produced on the subject.

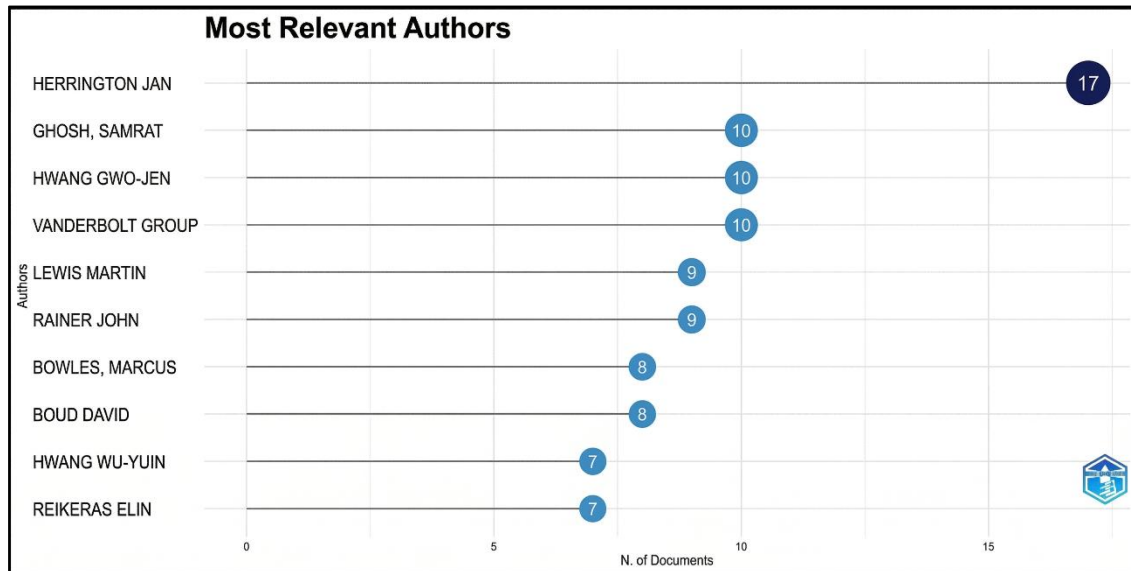


Figure 2. The most prolific authors.

An examination of the authors who have contributed most to the relevant literature reveals that certain authors are significantly prolific in the field. Jan Herrington stands out as the most prolific author with a total of 17 articles. He is followed by Samrat Ghosh, Gwo-Jen Hwang, and the Vanderbilt Group, each with 10 publications. The number of publications for other authors on the list ranges from 7 to 9. The publication years and citation burst values for researchers interested in authentic learning are given in Figure 3.

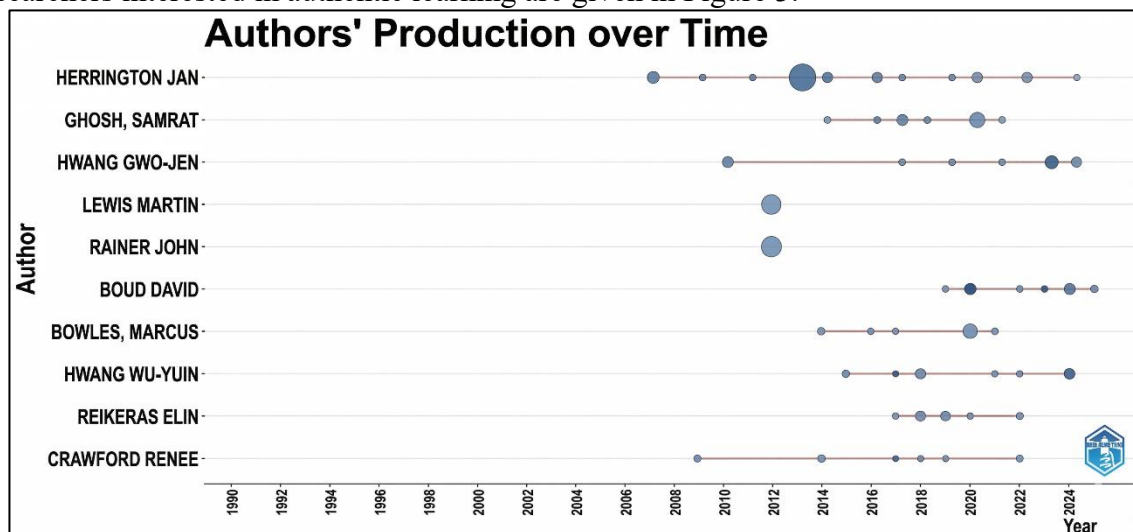


Figure 3. Authors' output and citation status on authentic learning over the years.

Examining the production dynamics of authors over time has yielded significant data regarding the continuity and currency of studies in the field. Jan Herrington, the most prolific

author in the field, consistently produced publications from 2007 to 2022, ensuring the historical continuity of the field. In contrast, authors such as Gwo-Jen Hwang and David Boud, who rank highly in terms of publication volume, exhibit a particularly intense production graph from 2018 to 2024. The size of the circles in the figure depicts the number of studies published each year; accordingly, it is understood that the publication volumes of Hwang Gwo-Jen and Hwang Wu-Yuin increased in recent years (2020-2024), thus shaping the current research trends in the field. Figure 4 below shows the top 10 universities with the most publications on authentic learning.

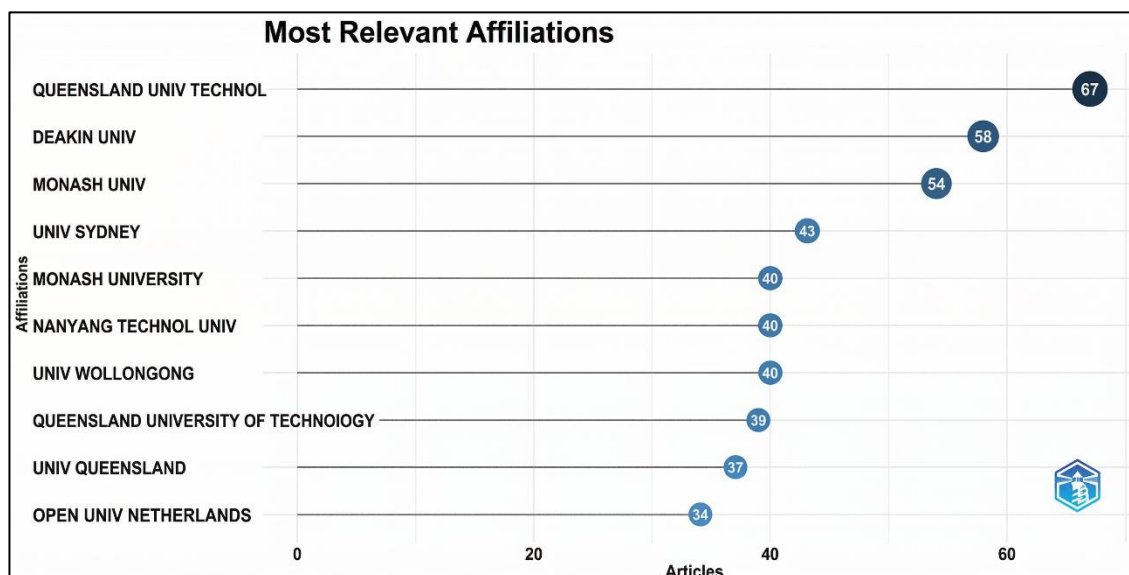


Figure 4. Universities with the highest publication output in authentic learning.

An examination of the distribution of institutions contributing to the authentic learning literature reveals a clear dominance of Australian universities. Queensland University of Technology is the most productive institution in the field with a total of 67 publications. This is followed by Deakin University (58 publications) and Monash University (54 publications), also from Australia. The inclusion of other Australian universities such as the University of Sydney (43), the University of Wollongong (40), and the University of Queensland (37) in the top 10 list indicates that the academic production center in this field is Australia. Among the institutions outside Australia that made it onto the list, Nanyang Technological University in Singapore (40 publications) and the Open University of the Netherlands (34 publications) are noteworthy.

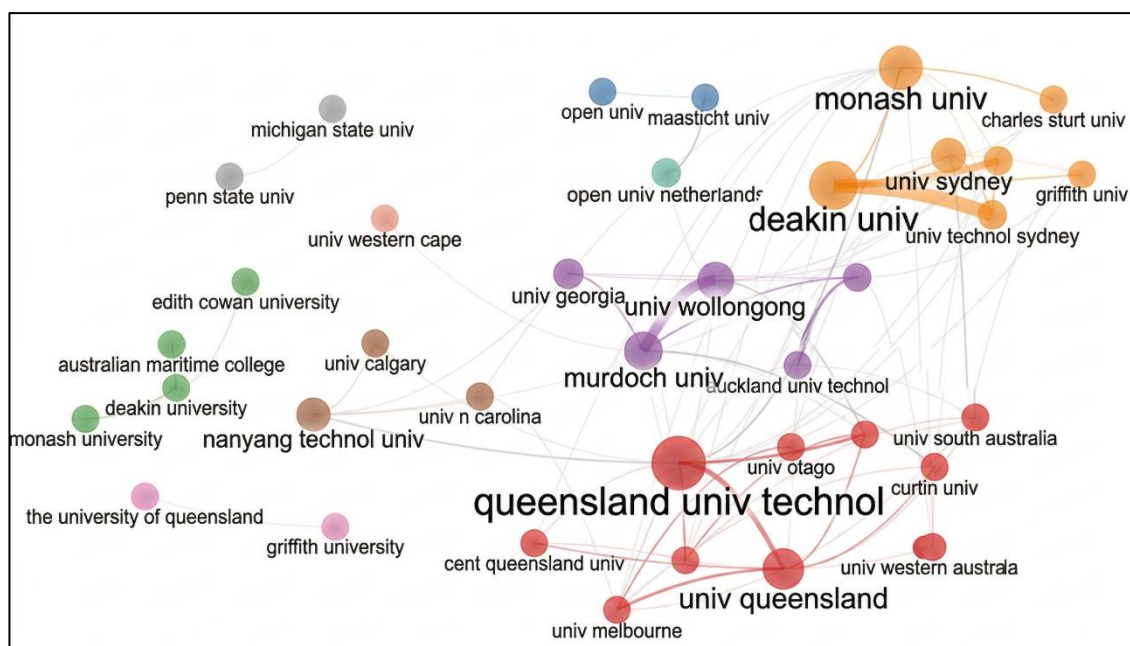


Figure 5. Inter-institutional collaboration network (top 50 institutions with the strongest relationships)

An examination of the institutional collaboration structure in authentic learning research reveals a fragmented structure where universities are organized around specific clusters. The most dominant collaboration group on the map is the “Red Cluster,” centered around the Queensland University of Technology and the University of Queensland. Parallel to this, the “Orange Cluster,” with strong connections between Deakin University, Monash University, and the University of Sydney, represents the second largest collaboration network. Interestingly, the “Brown Cluster,” where the Asian-based Nanyang Technological University and the North American-based University of Calgary form a separate collaboration line, contrasts sharply with the Grey Cluster, where US universities (e.g., Michigan State, Penn State) operate in more isolated and smaller groups. Table 2 below lists the articles most frequently cited by researchers working on authentic learning, based on their total citation count.

Table 2. Most cited studies internationally.

Author, Year, and Journal Name	Total Citations
Messick, 1994, <i>Educ Res</i>	858
Mikropoulos, 2011, <i>Comput Educ</i>	841
Gordieieva, 2011, <i>Comput Educ</i>	806
Webster-Wright, 2009, <i>Rev Educ Res</i>	747
Johnson C, 2001, <i>The Internet And Higher Education</i>	640
Herrington J, 2003, <i>Australasian Journal Of Edu Tech</i>	630
Vinderbolt Group, 1990, <i>Educ Res</i>	613
Herrington J, 2000, <i>Etr&D-Educ Tech Res Dev</i>	603
Ball D, 1993, <i>Elem Sch J</i>	496
Govindasamy, 2001, <i>Internet Higher Educ</i>	473

An examination of the studies with the highest citation impact presented in Table 2 reveals a structure where theoretical foundations and technological applications are intertwined. Messick's (1994) study tops the list with 858 citations, followed closely by Mikropoulos'

(2011) study (841 citations). Other significant studies in the top five are by Gordieva (2011), Webster-Wright (2009), and Johnson (2001). Another noteworthy finding is that Jan Herrington, a pioneer in the field, appears on the list with two different studies (2000 and 2003); this reinforces the author's foundational contribution to the field. When examining the journals in which the studies were published, it is seen that general education journals such as *Educational Researcher*, as well as technology-focused journals such as *Computers & Education* and *The Internet and Higher Education*, are predominant. The table below lists the journals with the most publications in this field.

Table 3. Journals with the highest publication output in the field.

Journals	Related studies
Education Sciences	34
Assessment & Evaluation in Higher Education	32
British Journal of Educational Technology	31
Teaching in Higher Education	31
Australasian Journal of Educational Technology	30
Phi Delta Kappan	29
Educational Technology & Society	28
Medical Teacher	27
Nurse Education Today	27
Tech Trends	25

An examination of journals publishing research on authentic learning reveals that the literature is not confined to a single discipline but rather exhibits a multidisciplinary publication profile. Leading the list in terms of publication volume is the journal “*Education Sciences*” with 34 articles. This is followed by “*Assessment & Evaluation in Higher Education*” with 32 articles. Technology-focused journals, “*British Journal of Educational Technology*” and “*Teaching in Higher Education*,” share third place with 31 publications each. A noteworthy finding is the strong presence of journals in the fields of medical and health education; “*Medical Teacher*” (27 publications) and “*Nurse Education Today*” (27 publications) demonstrate the widespread application of authentic learning in health sciences. Figure 6 below shows a word cloud of the most frequently used keywords in academic studies related to authentic learning.



Figure 6. Most frequently used keywords in authentic learning studies.

An examination of the keyword density in the authentic learning literature reveals that the conceptual structure of the field is built upon three fundamental pillars. While the most dominant concept at the center is naturally “Authentic Learning,” it is noteworthy that “Authentic Assessment” occupies almost equal importance. These two core concepts are surrounded by the terms “Higher Education” and “Education,” which define the contextual framework. In terms of methodological tools, “Simulation,” “Virtual Reality,” and “Problem-based Learning” are significantly prominent. Furthermore, the presence of specific field terms such as “Nursing Education” and “Clinical Competence” demonstrates the strong relationship between authentic learning and health education. A keyword co-occurrence analysis, illustrating the terms most frequently used together, is presented in Figure 7.

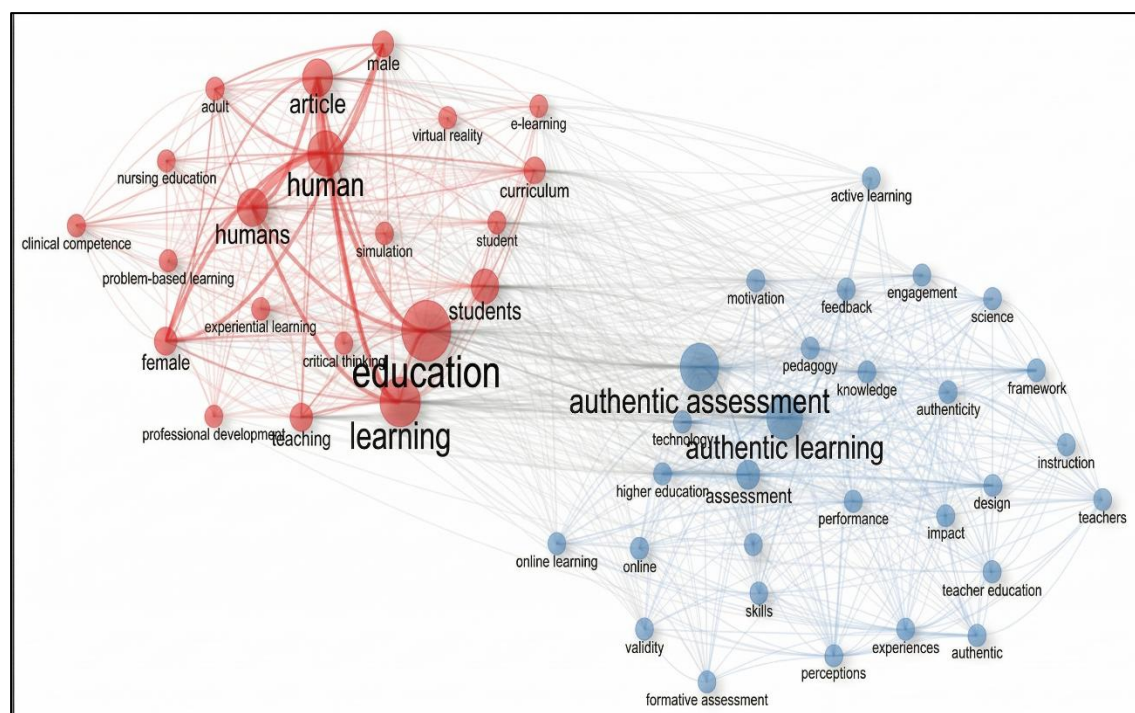


Figure 7. Simultaneous word analysis.

An examination of the keyword co-occurrence network in the authentic learning literature reveals that research tends to concentrate around two main clusters. The "First Cluster," located on the left side of the map and colored red, focuses more on the application area of the research and participant characteristics. At the center of this cluster are the concepts of "human," "article," "education," and "learning," while secondary elements such as "nursing education," "clinical competence," and "problem-based learning," terms generally associated with health education, dominate. The "Second Cluster," located on the right side of the map and colored blue, represents the pedagogical and design dimensions of authentic learning. At the center of this cluster are "authentic assessment" and "authentic learning." These core concepts are strongly associated with variables related to instructional design processes such as "online learning," "design," "feedback," "motivation," and "technology." Figure 8 below shows trending topics related to authentic learning, each with a frequency of at least 10, according to the databases examined.

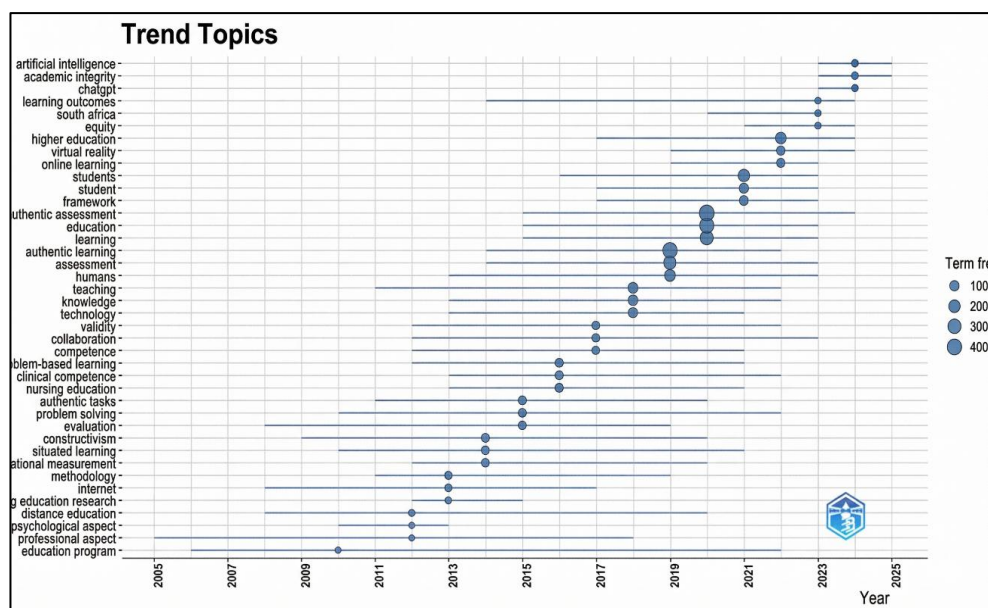


Figure 8. Trending topics for authentic learning, each with a minimum frequency of 10.

An examination of the evolution of topics covered in the authentic learning literature reveals a clear shift from theoretical concepts to current technological applications. The terms at the bottom of the graph, concentrated between 2010 and 2015, include concepts forming the theoretical and methodological foundations of the field, such as “situated learning,” “constructivism,” “methodology,” and “distance education.” Moving upwards on the timeline (2016-2020), application-oriented concepts like “problem-based learning,” “clinical competence,” and “collaborative learning” become trending. The current period at the top of the graph, covering 2023-2025, shows a clear shift in the literature towards a new era increasingly focused on technology and ethics. In this period, concepts such as “artificial intelligence,” “ChatGPT,” “academic integrity,” and “virtual reality” emerge as the most dominant trends. Figure 9 below presents the thematic map network, generated using Keywords Plus, for the authentic learning articles retrieved from the examined databases.

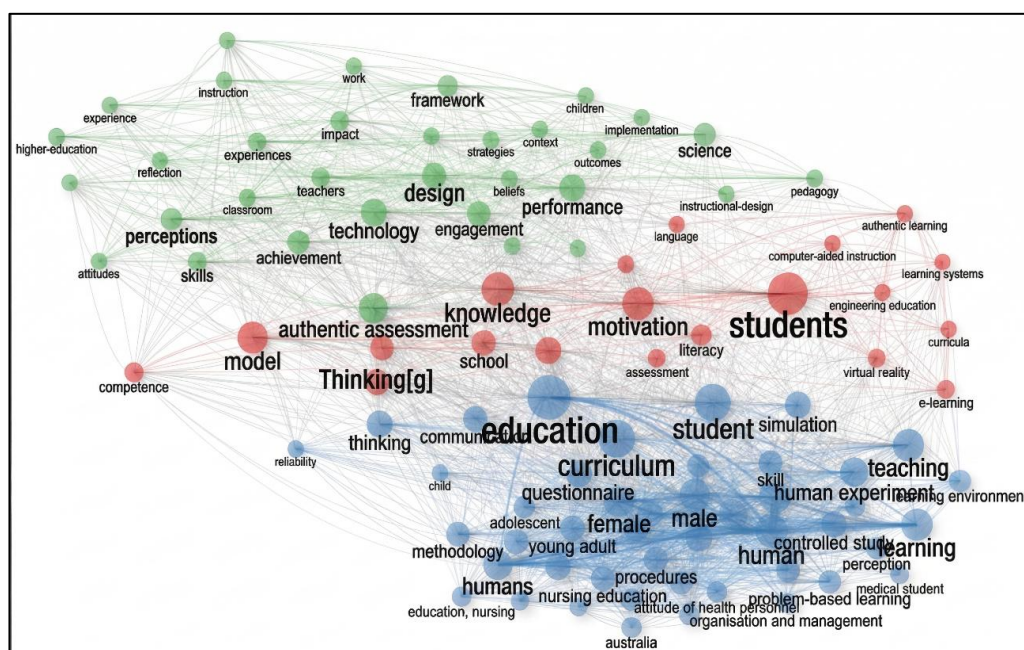


Figure 9. Thematic mapping network.

The thematic mapping analysis in authentic learning research reveals that the literature is structured around three main thematic clusters that support each other:

Blue Cluster (Context and Demographics): Located at the bottom of the map, this cluster represents the context in which the research was conducted. Concepts such as “education,” “curriculum,” “teaching,” and “learning” are at its center, while terms like “human,” “female,” “male,” and “nursing education” indicate the participant profile and the focus on health education.

Red Cluster (Pedagogy and Psychology): Located in the middle of the map, this cluster focuses on the psychological and pedagogical dimensions of the process. The combination of concepts such as “students,” “motivation,” “authentic assessment,” and “knowledge” indicates that researchers are focusing on the relationship between student motivation and authentic assessment.

Green Cluster (Design and Technology): Located in the upper left of the map, this cluster focuses on instructional design and outcomes. The concepts of “design,” “technology,” “performance,” “engagement,” and “science” represent how authentic learning environments are designed and how these designs impact students’ science performance and engagement.

Discussion

This study presents a bibliometric analysis of 3663 academic papers on authentic learning retrieved from the Web of Science, Scopus, Lens, and PubMed databases between 1984 and 2025. The findings reveal the intellectual structure of the field, its developmental trajectory, and potential future research directions from a holistic perspective.

Research findings reveal a significant increase in the literature on authentic learning in recent years, particularly since 2020. The fact that the annual number of publications is expected to exceed 300 in 2023-2024 indicates that this concept is being reshaped by advancements in educational technologies and the impact of global crises (the COVID-19 pandemic). Similarly, studies by Yıldız (2021) and Lubis et al. (2025) confirm a significant acceleration in authentic learning and assessment studies during the pandemic. This can be explained by the increased preference for authentic learning contexts (virtual simulations, online authentic tasks) as a solution to the "detachment from reality" problem experienced in distance education processes (Bolat & Yetim, 2022). Particularly in fields where real-world context is critical, such as social studies education, the integration of augmented reality (AR) and mixed reality (MR) applications has grounded this theoretical need into a practical foundation by allowing students to concretize abstract concepts (Bower, et al., 2014; Wu, et al., 2013). In the post-pandemic era, educators' ability to design authentic tasks enriched with technology has come to the forefront alongside their basic digital literacy (Klopfer & Squire, 2008). On the other hand, institutional and geographical analyses show that Australian universities (Queensland University of Technology, Deakin, Monash) have a significant impact on authentic learning research. This finding is not coincidental; because Jan Herrington, identified as the most prolific author in the field, has established a strong academic school of thought in this region through her work and the theoretical frameworks she developed (Herrington, 2000; 2003). Furthermore, the fact that Herrington's works are among the most cited reinforces this author's foundational influence in the field and the school she represents in defining the theoretical boundaries of the field. This situation aligns with the findings of Bolat and Yetim (2022), who showed that the roots of authentic learning are more firmly established in educational systems where the constructivist approach is strong. The Australian



higher education system's integration of constructivist philosophy into the core of its educational policies, along with curriculum structures that mandate industry-university collaborations (Boud & Falchikov, 2007; Oliver, 2013), has allowed this region to function as a research hub for authentic learning research. However, how this Western-centric academic production will be adapted to the socio-cultural dynamics and diverse technological infrastructures of developing countries remains a significant gap waiting to be addressed in the literature (Lombardi, 2007).

Trending topics clearly demonstrate the evolution of the field. While theoretical concepts such as "constructivism" and "situated learning" dominated between 2010 and 2015, the literature has shifted towards "artificial intelligence," "ChatGPT," and "virtual reality" in the recent period (2023-2025). This finding suggests that authentic learning has moved from being a static pedagogical method to a dynamic ecosystem integrated with technology. The trending concept of "academic integrity" indicates that ethical concerns created by generative AI tools in authentic assessment processes hold a significant place in current research. This result supports Nachtigall and Wirth's (2024) view that authenticity needs to be redefined in the digitalized world. At this juncture, students' and educators' attitudes toward generative AI tools, their artificial intelligence literacy levels, and perceived AI anxiety emerge as critical psychological variables that directly influence the success of authentic learning processes (Lodge et al., 2023; Wang & Li, 2024). New ethical guidelines and pedagogical strategies must be urgently developed so that students can utilize generative language models not merely as a "shortcut" but as cognitive partners that scaffold their higher-order thinking and problem-solving skills (Bearman et al., 2020).

Keyword and keyword co-occurrence analyses show that the concept of "Authentic Learning" forms an inseparable whole with "Authentic Assessment". The educational sciences literature argues that learning and assessment processes should be intertwined, and the findings of this study support this. Therefore, it suggests that the integration of learning and assessment processes is a necessary practice in the context of authentic learning. An authentic learning experience can only be completed with an authentic assessment that measures the application of knowledge to real-life problems (Bissett-Johnson & Radcliffe, 2019). Journal and subject analyses reveal that authentic learning is not limited to education faculties but also holds an important place in medical and health education, with the existence of journals such as *Medical Teacher* and *Nurse Education Today*. The intensity of the concepts of "clinical competence" and "simulation" shows that authentic learning environments (realistic simulations) play a vital role in preparing students for their professions in healthcare fields where errors may have serious consequences. This parallels the finding highlighted by Chabeli et al. (2021) that authentic learning improves decision-making skills in complex and risky situations. Furthermore, expanding authentic learning paradigms beyond health or STEM fields into interdisciplinary studies that focus on active social participation and daily-life competencies, such as financial literacy, will significantly enhance the universal applicability of this approach (Lusardi, 2015).

The findings of this study demonstrate that addressing authentic learning solely as a constructivist pedagogical approach is no longer sufficient in the current literature. When network structures, key concept sets, and temporal trends are considered together, authentic learning is seen to transform into a holistic framework repositioned at the intersection of technology, ethics, and assessment. Particularly prominent in the context of artificial intelligence, virtual reality, and large language models (LLMs), the concepts of "academic integrity" and "authentic assessment" reveal that authentic learning is considered not only in

the design of learning environments but also as a multidimensional perspective focusing on the validity of measurement and evaluation processes, ethical boundaries, and the reliability of learning outcomes. In this respect, the study redefines authentic learning not merely as a pedagogical method, but as an educational framework integrating learning, assessment, and ethics in the digital age, thus offering a theoretical contribution to the literature.

Conclusion

This study, examining 3,663 documents from 1984–2025, reveals that the authentic learning literature has experienced significant growth, particularly since 2020, influenced by global crises and digitalization, and has been shaped by an academic tradition centered in Australia. The findings show that the field has evolved from its theoretical roots in constructivist and situated learning and has been repositioned around "academic integrity" and "authentic assessment" in the wake of the rise of artificial intelligence, virtual reality, and large language models (LLMs).

Limitations and future research

This study has several limitations that should be considered. Methodologically, limiting the analysis to leading indexed databases such as Web of Science, Scopus, Lens, and PubMed may have resulted in overlooking relevant local, regional, or unindexed research. Furthermore, the keyword-based search strategy may have excluded studies that address the concept of authentic learning using different terminological variations. While citation counts provide a quantitative measure of academic impact, it is also crucial to acknowledge that they do not necessarily reflect the theoretical depth or pedagogical quality of the studies conducted.

A significant contextual limitation of the current dataset is that it consists primarily of English-language publications reflecting an Australian and Western-centric literature. This geographical and linguistic bias constrains the comprehensive representation of authentic learning approaches in different cultural contexts. To mitigate this limitation, comparative studies are needed that empirically examine how authentic learning paradigms function in different cultural and socio-economic environments, particularly in developing countries such as Türkiye. Such research will provide critical insights into the compatibility and adaptability of Western-origin pedagogical theories with local educational dynamics.

Beyond methodological and geographical factors, the results highlight increasingly apparent thematic trends that warrant further academic investigation. The literature indicates a clear shift toward the intersection of authentic learning with “ChatGPT,” “artificial intelligence,” and “academic integrity.” Consequently, future research should systematically examine how generative AI tools can be effectively integrated into the design of authentic tasks and develop strategies to prevent potential ethical violations arising from this process. Furthermore, given the increasing importance of virtual reality and online learning tools, future studies should focus on creating “digital authenticity” environments through virtual simulations, particularly in situations where physical internships or field experiences are limited. Pedagogically, given the interrelated nature of authentic learning and assessment revealed in the findings, educators should design curricula that seamlessly integrate assessment into the task-oriented learning process, rather than treating it as a disconnected and final step. Finally, to fill the collaboration gaps identified in the bibliometric mapping, universities and institutions should develop joint projects and researcher exchange programs with pioneering centers specializing in authentic learning (e.g., the Australian research tradition), thereby aiming to create a more



integrated and global research community.

Declarations

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