Mapping the Research Landscape on Dropout in Higher Learning Institutions: A Bibliometric Approach

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ABSTRACT

This study conducts a bibliometric analysis of research on academic dropout in higher education institutions, focusing on university and college students. The study uses 287 papers listed in the SCOPUS database between 1984 and 2024 to trace the field's intellectual structure and evolution. It analyzes major topics that contribute to dropout, including academic perseverance, student motivation, engagement, financial aid, academic achievement, and student attitudes. The methodology uses co-citation, co-occurrence, and co-authorship network studies to identify prominent authors, highly cited articles, top journals, and popular keywords. The findings provide a thorough perspective of global research trends, indicating Spain as the most productive country in terms of publication output, with the Universidad de Oviedo exhibiting the highest level of institutional collaboration. This bibliometric evaluation is an invaluable resource for scholars and policymakers looking to understand the progress of academic dropout research and develop methods for enhancing student retention in higher education.

Keywords: Academic dropout, university student, college student, burnout

INTRODUCTION

Communities throughout the world see dropout rates in higher education as a problem that needs immediate attention, even if institutions and legislators are beginning to acknowledge them as a serious concern. Concern over the rising number of students quitting college and university before earning their degrees has spread around the world. This situation has significant ramifications, impeding national growth and economic advancement in addition to influencing individual job chances and earning potential. Dropouts sometimes have a variety of complicated causes, such as poor motivation, mental health issues, academic demands, financial hardships, and inadequate support networks. Designing successful measures to increase student retention in higher education institutions requires a greater knowledge of these issues.

Financial difficulties are one of the most common causes for students dropping out of higher education institutions (Ahmad Tarmizi et al., 2024). Tuition, textbooks, housing, and everyday living expenses are all becoming increasingly expensive for students. For many, these financial constraints become overpowering, prompting them to discontinue their education in search of job or financial security. Trying to manage full-time job with full-time study generally leads to poor academic achievement and negative health effects. To address

these issues, institutions and authorities must reform financial aid processes, expand scholarship possibilities, encourage financial literacy, and provide practical assistance like subsidized housing and campus jobs.

Academic problems are a major contributor to student dropout in higher education institutions. Many students attend university unprepared and struggle to satisfy the academic standards of their programs. This problem is frequently exacerbated by restricted access to academic help, insufficient feedback, and learning environments that are not inclusive. To promote retention, universities should focus strong academic support systems and aggressive intervention measures. These might include early evaluations, individualized tutoring, peer mentorship, and integrated academic guidance throughout the student's path.

Personal life circumstances have an important impact in determining student retention in higher education. Family duties, health challenges, mental health concerns, and social isolation can all be obstacles to academic success. Students who lack a sense of connection or community participation are more likely to abandon their studies early. Addressing these issues requires schools to take a more comprehensive approach to student support. On-campus childcare, accessible healthcare, counseling, and inclusive social events can all help students feel better and engage more.

In addition to academic and financial obstacles, social and emotional variables might influence a student's choice to drop out. Family commitments, physical or mental health issues, and feelings of isolation from the academic community can all contribute to excessive stress. These personal and societal factors frequently cross, complicated the dropout picture further. To respond successfully, universities must create support structures that recognize students' wider life experiences. Offering tools such as counseling, peer support networks, and inclusive activities can help students stay enrolled and feel valued.

Academic dropout has far-reaching ramifications for society as a whole. Students who quit higher school early frequently face fewer career opportunities, lower earning potential, and greater economic instability. Nationally, high dropout rates undermine labor competitiveness and diminish returns on public education investments. A less educated population also increases reliance on social welfare institutions, which inhibits innovation and economic progress. As a result, lowering dropout rates is not only an educational objective, but also a societal and economic need.

The purpose of this research is to provide light on an increasingly important problem, particularly in the field of higher education. The subject of academic dropout has received a lot of attention because of its influence on student outcomes and institutional performance. This study aims to determine the important variables leading to dropout in higher education institutions by conducting a comprehensive review of available literature. Understanding these aspects will allow for the creation of more effective methods and solutions. Finally, this study provides useful insights for both academics and governments seeking to improve student retention.

This study begins by identifying current research trends and prominent writers who contribute to the academic dropout conversation. As Ellegaard and Wallin (2015) note, bibliometric analysis provides a thorough perspective of a field's historical history and significant factors. It also helps scholars find possible partners and monitor notable contributors to the subject (Budd, 1988). Furthermore, Moed et al. (1985) underlined that bibliometric methodologies give useful information about the growth and development of study topics. In accordance with this, the research question (RQ) that guides this study is:

RQ1. What is the pattern of annual publication trends?

RQ2. Who are the major productive authors?

RQ3. Which author has the highest citation count?

RQ4. Which countries are the most productive?

RQ5. Which affiliations are the most productive?

RQ6: Which sponsors are the most productive?

RQ7: Which keywords are frequently used?

This study looked at 287 publications on academic dropout published between 1984 and 2024 in SCOPUS-indexed journals. The bibliometric analysis looked at publishing trends, theme progression, and scholarly output across four decades. It also examined important aspects such as author contributions, co-authorship networks, and keyword co-occurrence. To the best of our knowledge, this is the first comprehensive research of academic dropouts that uses bibliometric methodologies to address these specific features. The findings present an organized overview of the field's evolution and lay the groundwork for future study paths.

LITERATURE REVIEW

Academic dropout is a global phenomenon with serious social, economic, and personal ramifications. A thorough examination of the research demonstrates that dropout is impacted by a number of personal, institutional, and societal variables. Researchers investigated the origins, patterns, and effects of academic dropout, as well as ways for addressing the problem in diverse educational settings. The complexities of this phenomena are clear, since it impacts both students and educational institutions. Understanding these characteristics is critical for creating effective treatments and decreasing dropout rates in higher education.

Academic dropout refers to leaving formal education before finishing a specific program or level. Rumberger and Lim (2008) emphasize the necessity of differentiating between deliberate dropouts and those caused by external factors such as institutional marginalization. Dropout rates differ by educational stage, with a particular emphasis on secondary and university education due to their significance for future professional options and economic results. Academic dropout in higher education has been studied extensively, with a focus on both individual individuals and society. As a result, addressing dropout at this stage is crucial for individual and social growth.

The major purpose of colleges is to lower dropout rates, which are frequently utilized as metrics in accreditation procedures. Evaluating at-risk students' cognitive abilities and learning styles can help guide preventative and intervention initiatives to lower dropout rates. Dropping out of higher education has a substantial impact on a student's self-esteem, mental health, and job prospects, as well as imposing financial expenses on institutions (Choudhary 2015). High dropout rates are also a quality indicator for university programs, affecting the institution's reputation and financing (Arce et al. 2015). In Europe, about 20% of students drop out before finishing their degrees (Cabrera et al., 2006).

The literature on academic dropout indicates that individual, institutional, and socioeconomic variables all play a role. Tinto's Theory of Dropout is well known for describing the causes of dropout in higher education. Tinto (1975 & 1987) argues that colleges shape students' psychological, social, economic, and institutional experiences, which impact their decision to quit. He outlines five primary risk factors for dropout: personal qualities, parental and social background, previous school experiences, and institutional integration. These elements combine to impact a student's dedication and academic achievement.

Intelligence is important for academic achievement since it is related to a student's learning abilities and past academic performance. While intelligence has a major hereditary component, research demonstrates that it may be adaptable, particularly throughout childhood. Gallego et al. (2021) found that variations in cognitive ability and attentiveness among university students can influence academic success. Students with lesser intellectual ability and attention spans are more likely to have lower grade point averages and a greater dropout rate. These findings are consistent with earlier research, which has highlighted the difficulty of students with poor self-regulation and learning impairments (Minano et al., 2012).

Motivation, metacognition, and emotional elements are important learning techniques that distinguish pupils according to their academic success. Motivation is the driving force behind students' drive to study and conquer problems, and it is a key factor in determining their learning style. Metacognitive learning practices, such as making pupils aware of their thought processes and measuring their learning progress, have a major influence on academic accomplishment (Abdelrahman, 2020; O'Malley, 1989). Students that struggle with motivation, metacognitive techniques, and emotional management frequently have worse academic

performance. As a result, people who use inadequate learning tactics are more likely to take a surface-level approach, which has been linked to low academic performance.

Students with low emotional intelligence may suffer greater stress levels throughout their transition to university, increasing their chances of dropping out (Aizpurua et al., 2018). Anxiety before tests can have a severe impact on academic performance, contributing significantly to dropout rates (Hassanbeigi, 2011). Interventions aimed at reducing anxiety before tests have been demonstrated to enhance academic results among higher education students. Addressing emotional intelligence and stress management can thus play a critical role in increasing retention. Creating supportive settings that assist students handle stress and emotional issues is critical to increasing student achievement and retention.

METHODOLOGY

Bibliometric technique is the systematic application of quantitative methodologies to examine academic publications on a certain topic. This technique relies largely on bibliometric analysis, which looks at important publishing variables such publication year, topic area, source title, country of origin, author contributions, and institutional affiliations. These criteria aid in identifying patterns, developing research trends, prominent contributors, and new themes in academic discourse. Bibliometric analysis gives an objective framework for assessing the growth and emphasis areas of research in a certain discipline. This technique allows scholars to chart the intellectual structure and progression of academic studies.

The data for this study were acquired on December 31, 2024, from the SCOPUS database, which is well-known for its vast coverage of peer-reviewed publications. SCOPUS is regarded for providing high-quality indexing, particularly in the social sciences, making it a reliable source for bibliometric study. The database's tight inclusion requirements ensure that users have access to credible, high-impact academic publications. SCOPUS is especially respected in academic study because of its vast and thorough coverage of several subjects. According to Bergman (2012), SCOPUS is one of the most reputable databases for doing bibliometric research, with a lot of data to analyze.

This study employs the methodological approach described by Archambault et al. (2009) and Suffian et al. (2023), who emphasised the relevance of using huge bibliographic databases to track and analyze academic papers and their impact. Their technique argues for extracting structured metadata from online bibliographic databases in order to identify patterns such as citation trends, cooperation networks, and research output. The information gathered from various sources may then be evaluated to get insight into the progression of academic themes across time. This approach enables researchers to detect substantial shifts in research emphasis and collaboration across the academic community. Using this paradigm, the study may paint a clear picture of the evolution and influence of research on academic dropout in higher education.

It is critical to the success of our data collection, as the accuracy in picking the right keyword highly affects the results number. To ensure selecting all or most of the related papers from SCOPUS database, this study adopted this query which was chosen after careful consideration: TITLE-ABS-KEY ("Withdrawal" OR "Dropout" OR "Drop-out" OR "Dropping out" AND "university student" AND "higher education") AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "cp")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SRCTYPE , "j") OR LIMIT-TO (SRCTYPE , "p")) AND (LIMIT-TO (PUBSTAGE , "final"). The rationale behind using this query is the various use of terminologies by researchers to express this topic. The focus of the study is higher institution education regardless university, colleges, polytechnic or other education institution. There is no limit on the selection of the courses.2

As a result, this query is predicted to return the majority of articles relating to the issue, especially when searching inside the appropriate subject area. As a consequence, the final sample for this study includes 287 publications and reviews. These papers were found through a thorough search of the SCOPUS database. The sample covers a 20-year period, from 1984 to 2024, ensuring a diverse range of scholarly contributions. This time span reflects the progress of studies on academic dropout in higher education.

RESULT AND DISCUSSION

This section covers the results of the VOS viewer used to answer the research question (RQ). The research is to examine annual publication patterns and identify contributing writers in the area. It also lists the most often referenced papers, nations with the greatest citation rates, and the most productive countries and affiliations. Additionally, the study investigates the most significant scientific publications in this field. Finally, the report examines collaboration and co-citation tendencies in the scholarly community.

Descriptive Analysis

Annual publication trend

The graph in Figure 1 depicts the areas of academic dropout related to RQ1, beginning in 1994. Since then, there has been a huge growth in the number of materials dedicated to this issue, notably after 2021, which marks the end of the Covid period. This time saw a significant increase in study owing to the pandemic's influence on students' mental health. Many kids developed mental illnesses as a result of lockdowns and interruptions to their regular routines, contributing to increased dropout rates. As a result, research on academic dropout has expanded significantly to meet these increasing difficulties.
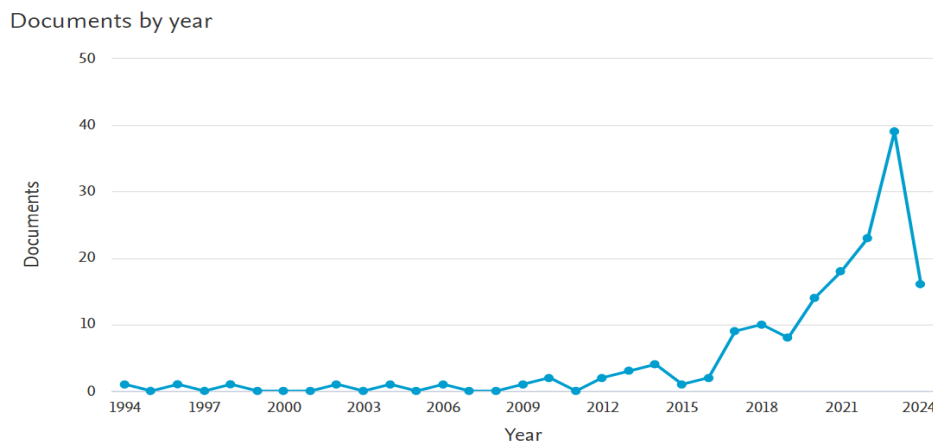

Figure 1: Annual publication trend

Most productive authors
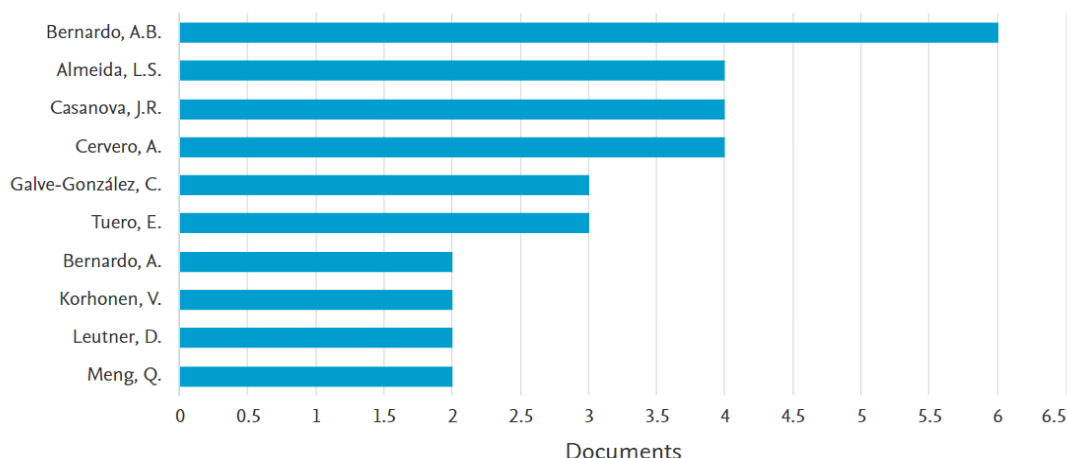
Table 1: Most productive author

Table 1 shows the most active writers based on the Scopus database's 287 articles on academic dropout themes for RQ2. Bernado, A.B., is the primary contributor, having written six academic publications on the subject. The next most prolific writers are Almeida, A.S. and Casanova, J.R., both with four journal publications. These authors have made major contributions to the field on academic dropout in higher education. Their research sheds light on the factors that influence dropout rates, as well as the problems they face.

Most cited author

Table 2 shows the most cited authors based on 158 Scopus articles on academic dropout themes used to measure RQ3. According to the table, Tinto V. is the most referenced author in this discipline. Almeida I.S. comes in second place for most productive author. Perry R.P. comes in third place, as another major contributor to the academic dropout literature. These authors have profoundly influenced the conversation around academic dropout in higher education.

Table 2: Most cited author

| Selected	Author	Citations
☑	tinto v.	87
☑	perry r.p.	27
☑	almeida l.s.	45
☑	ryan r.m.	30
☑	pekrun r.	31
☑	vansteenkiste m.	28
☑	nunez j.c.	36
☑	deci e.l.	23
☑	bernardo a.b.	31
☑	bakker a.b.	34
☑	goetz t.	20
☑	cervero a.	35
☑	bernardo a.	35
☑	salmela-aro k.	24
☑	soenens b.	19
☑	casanova j.r.	26
☑	bandura a.	27
☑	dresel m.	19
☑	kuh g.d.	27

Most productive country

To address RQ4, this study also presents the most productive countries that published documents on academic dropout. Table 3 illustrates the most active countries that contributed to publications in the academic dropout. Spain, with 37 total publications with 435 citations, is rated first due to the high number of researchers interested in this area (refer to Table 3). The practice of academic dropout is becoming more common in Spain which has prompted academicians to investigate and improve its regulations on student dropout. United Kingdom came second, with a total publication of 14 with 244 citations, followed by Germany in third place, with 9 publications and 254 citations, and Australia is ranked fourth with 8 publications and 170 citations.

Table 3: Most productive country

Documents by country or territory

Compare the document counts for up to 15 countries/territories.
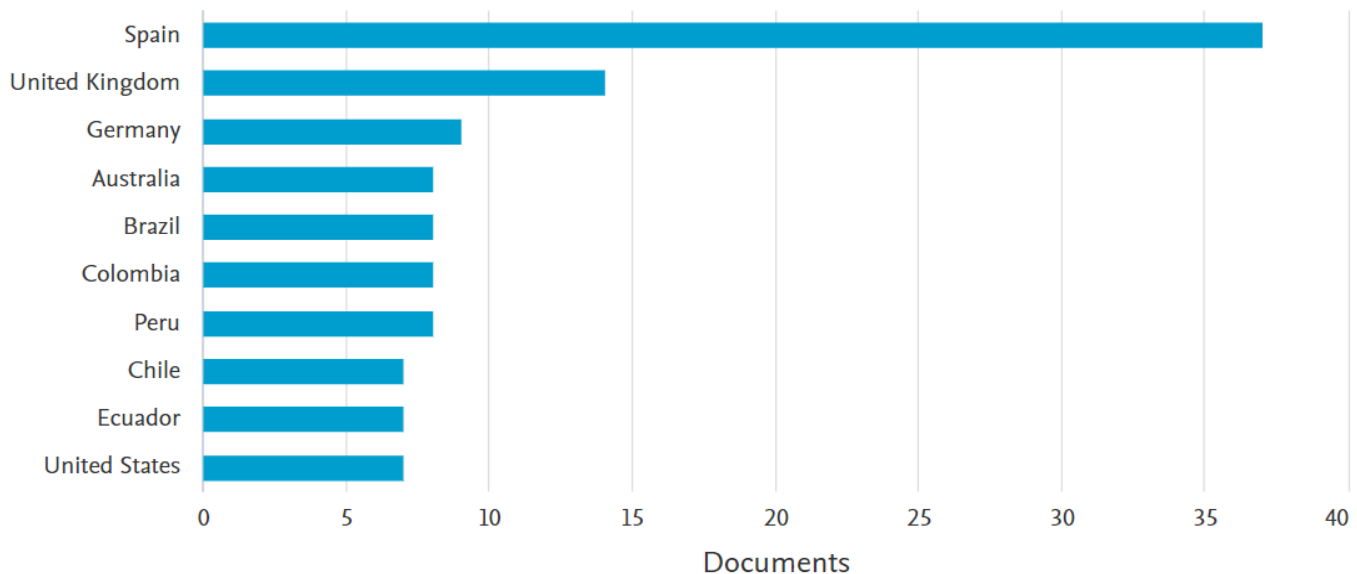

Most productive affiliation

Moving on to RQ5, the analysis of the most productive affiliations in this research on academic dropout provides interesting insights into the global awareness of this topic. Notably, the top 10 productive affiliations worldwide demonstrate a positive increase in recognition and engagement of the subject. Spain has stand out because two university in Spain was in the first and second place. Universidade do Minho Portugal was in the 3rd place. These institutions' commitment to producing high-quality research in academic dropout contributes to the broader global understanding of the factors that contributes to the academic dropout. These would help to reduce the number of academic dropouts among the students and enhance the great achievement of them.

Table 4: Most productive affiliation

Documents by affiliation

Compare the document counts for up to 15 affiliations.
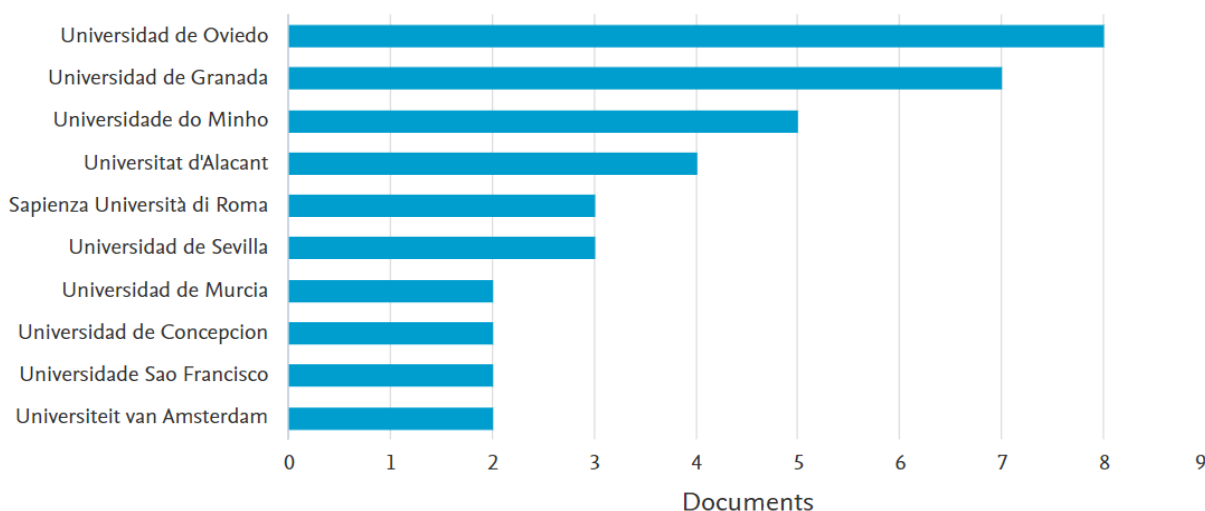
Most productive sponsorship

RQ6 focuses on the most fruitful sponsorships in the field of academic dropout research. Productive sponsorship is more than simply financial assistance; it entails building synergistic partnerships in which sponsors actively contribute to the development of industry standards. These collaborations also promote research, improve educational achievement, and resolve ethical problems. Collaboration with sponsors is critical for promoting principles such as ethics, honesty, transparency, and the establishment of a trustworthy business environment. This method assures that research and educational projects meet worldwide standards of quality.

Table 5 lists the top ten most productive sponsorships by various groups. The European Commission and Fundacao para a Ciencia e a Tecnologia are the primary sponsors, with each financing four research projects. The Bundesministerium für Bildung comes next, funding three research initiatives. Two research initiatives are sponsored by the Centre for Innovation and Energy, the European Regional Development Fund, and the Ministerio do Educacao e Ciencia, respectively. These sponsorships are crucial to developing research on academic dropout and related topics.

Table 5: Most productive sponsorship
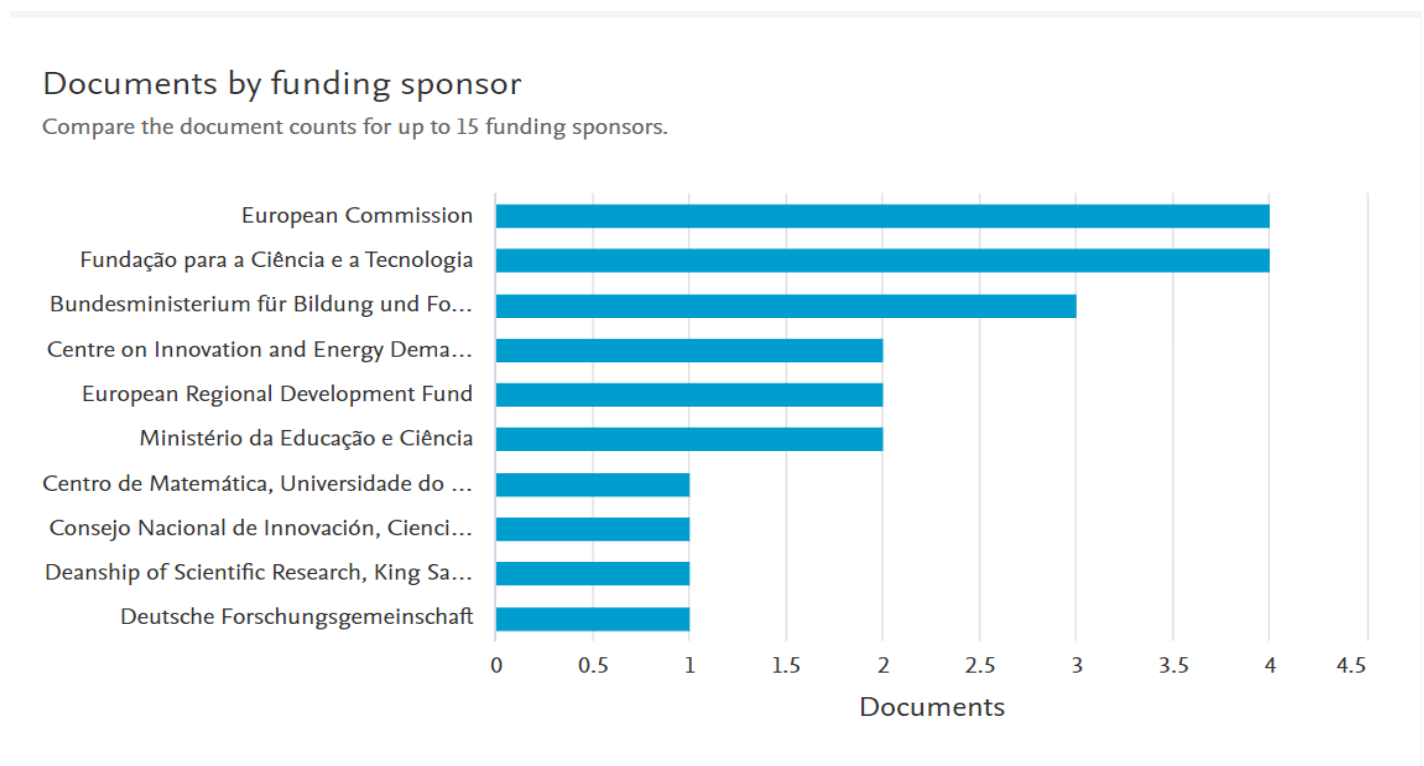
Most frequent keywords

RQ7 focuses on the most often used terms in academic dropout research. Identifying prevalent keywords helps to highlight the literature's fundamental topics and patterns. These terms are essential for comprehending the primary issues covered in academic dropout research. They give insights into the elements that influence dropout rates as well as the most investigated areas in this field. Analyzing the frequency of these terms provides a better understanding of the scholarly debate on dropout in higher education.

Table 7 shows the top eight most often appearing terms, as determined by the study. These keywords include higher education, students, university students, dropout, universities, humans, and others relevant to the topic. These words emphasize the fundamental goal of academic dropout research and its significance in the context of university education. The prevalence of these terms indicates that the discussion is mostly focused on understanding the causes and repercussions of student dropout. Understanding these keywords allows researchers to discover gaps and potential for additional exploration.

Table 6: Most frequent keywords

No	Terms	Frequency
1.	higher education	80
2.	students	34
3.	university students	34
4.	dropout	19
5.	university	19
6.	human	17
7.	humans	14
8.	universities	13
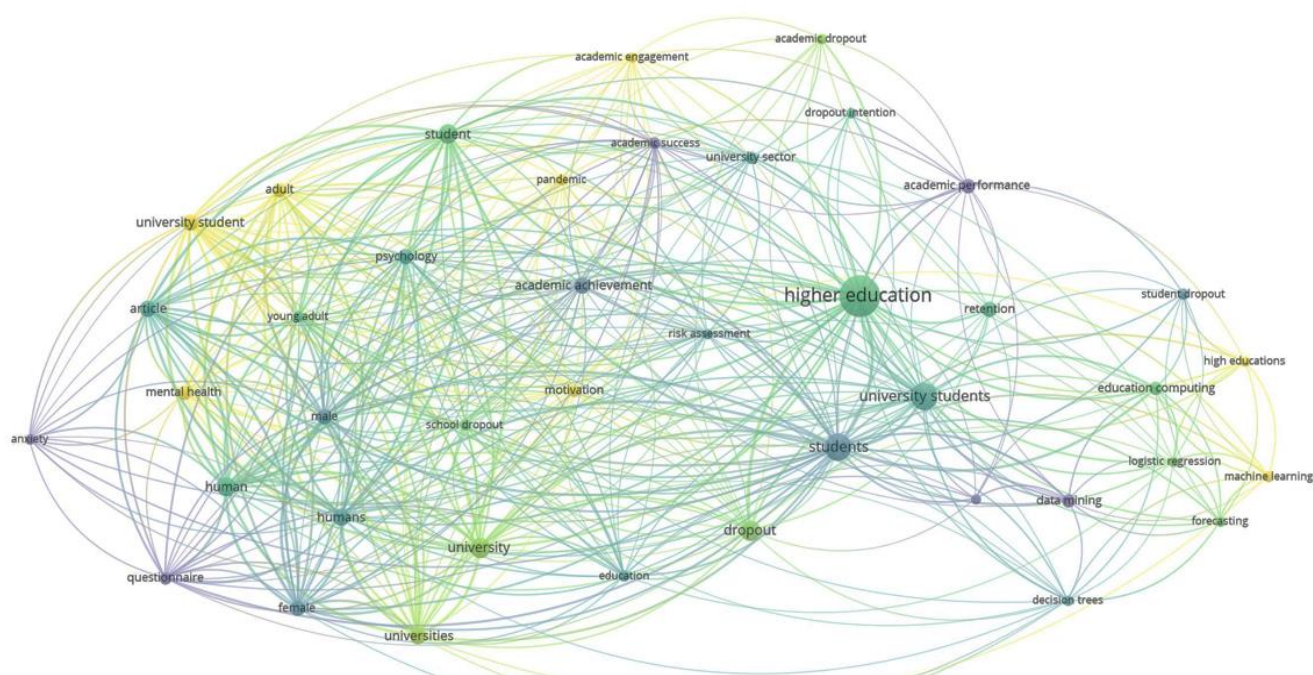
CONCLUSION

This study provides a complete bibliometric mapping of academic dropout research in higher education institutions, emphasizing the field's evolution, scope, and structure. The data confirm that student dropout is a complicated and multifaceted issue that necessitates nuanced and context-specific solutions. It includes not only academic obstacles, but also psychological, social, and economic issues that must be tackled collaboratively. As a result, addressing this issue requires collaborative efforts from governments, educational institutions, researchers, families, and communities. A bibliometric technique can help track the evolution and direction of this important study subject.

Over the last four decades, the number of publications on academic dropout has expanded dramatically, indicating growing global concern. Spain was regarded as the most productive country in terms of research production, with the Universidad de Oviedo being recognized for its high levels of research collaboration. These findings show that specific regions are driving intellectual discussions, paving the way for future international research collaborations. The survey also revealed that more than 20 countries contributed to the literature, emphasizing the issue's worldwide significance. This multinational cooperation reflects a broad commitment to studying and combating dropout in higher education.

Despite this enthusiasm, significant research gaps exist in the subject. Current research frequently overlooks the interaction of socioeconomic, psychological, and institutional elements influencing dropout rates. There is a critical need for intersectional frameworks that capture the complexities of student experiences across educational contexts. These frameworks may provide more inclusive and effective ways for reducing attrition

and improving student outcomes. Addressing these shortcomings will assist to improve both theoretical contributions and practical actions in the subject.

This study contributes by identifying the most prominent authors, publications, journals, and theme clusters using advanced bibliometric methods. It also identifies chronological and thematic alterations that traditional appraisals may miss. The co-citation, co-occurrence, and co-authorship analyses indicate patterns of scientific collaboration and intellectual organization. Such findings assist to define the direction of academic debate on dropout and guide future research objectives. These findings provide a solid platform for scholars and institutions looking to improve academic tactics and support systems.

Finally, this bibliometric review contributes to the current literature by offering a systematic and data-driven summary of studies on academic dropout in higher education. It emphasizes the importance of joint research and points out areas that require further investigation. The study's findings can help to shape targeted legislative initiatives and institutional strategies for increasing student retention. Future research that addresses the highlighted deficiencies can lead to more effective solutions and sustainable education systems. Finally, this work serves as both a roadmap for scholarly research and a catalyst for effective change in higher education institutions.

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