

Mapping Risk Management in Educational Institutions: A Bibliometric Review of Global Research Insights

Abdullah Hamad Abdullah Al Harthi, Mohd Rizal Bin Muwazir
@ Mukhazir Asmuliadi Lubis, Amer Abdulwahab Mahyoub
Murshed, Raja Hisyamudin Bin Raja Sulong, Suhaili Bin Sarif,
Jabar Mohammed Ziyad Al Mamari, Sultan Saif Abdullah Al
Mamari, Mohammed Said Ali Eisaei

Department of Syariah and Management, Academy of Islamic Studies, Universiti Malaya
Emails: azhssy1972@yahoo.com, mrmk@lum.edu.my, masa34941@gmail.com,
almurshed@um.edu.my, r_hisyamudin@um.edu.my, ssahk.1991@gmail.com,
suhaili@um.edu.my, mohammedsaeed12112@gmail.com

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Abstract

Objective: This study provides a bibliometric analysis of risk management research in educational institutions over the last two decades, examining global research trends, key contributors, and prominent thematic areas. **Methods:** Using the Scopus database, the study analyzed publications from 2003 to 2023 related to risk management in educational institutions. The analysis identified the top contributing countries, institutions, and authors, as well as the most frequently occurring research terms. **Results:** The United States was the leading contributor, accounting for 42% of the total research output, followed by Russia and the United Kingdom. The University of Florida and Kazan Federal University were among the top institutions contributing to this field. Manuel Alonso Castro emerged as the most influential author. Key research themes included disaster risk reduction, public health, climate change, and digital learning, reflecting the evolving challenges faced by educational institutions. **Conclusion:** The analysis highlights the global importance of risk management in educational institutions, with a growing emphasis on addressing emerging risks such as climate change and public health crises. Future research should expand to include regional studies and grey literature to provide a more comprehensive understanding of this critical area.

Keywords: Risk Management, Educational Institutions, Bibliometric Analysis, Prisma

Introduction

Risk management has become an integral aspect of institutional governance, particularly within educational institutions that face a wide variety of risks, including financial, operational, and technological risks. The dynamic nature of the educational sector requires robust risk management strategies to ensure institutional sustainability and protect stakeholders such as students, staff, and faculty (Hillson, 2017). In recent years, the adoption of risk management practices has grown substantially in both primary and higher education institutions worldwide, driven by increasing external pressures such as regulatory changes, financial constraints, and digital transformation (Kumar & Gulati, 2021).

The unique challenges faced by educational institutions, particularly in relation to safeguarding financial resources, maintaining data security, and managing operational risks, have brought risk management to the forefront of institutional planning. According to Collier, financial risks have been one of the most prominent concerns in educational institutions, particularly during periods of economic instability, where the ability to maintain steady revenue streams and manage expenditures becomes crucial (Collier, 2009).

Furthermore, the shift towards digital and remote learning has introduced new risks, such as cybersecurity threats and data privacy issues, that require proactive risk mitigation strategies (Miller, 2020). While there has been considerable research into risk management in fields such as finance and healthcare, the academic discourse surrounding risk management in educational institutions has only recently gained prominence. Studies have shown that the integration of formal risk management frameworks in educational settings can enhance institutional resilience and improve overall decision-making processes (Shattock, 2010). However, despite this growing interest, there is still a need for comprehensive reviews that map global research trends, key contributors, and the most influential works in the field of risk management within educational institutions.

This study addresses this gap by conducting a bibliometric analysis of risk management research in educational institutions over the last two decades. Using data from the Scopus database, this review identifies the distribution of research output across different countries, key institutions, and influential authors. Additionally, it highlights the most common research terms and areas of focus within the field, providing a comprehensive overview of how risk management in educational institutions has evolved over time. Thus, the following research questions were formulated:

1. What is the distribution of Risk Management in Educational Institutions for the last two decades?
2. Which nations have the most impact on Risk Management in Educational Institutions for the last two decades?
3. Which educational institutions have made the most notable contributions to the study of Risk Management in Educational Institutions for the last two decades?
4. Which Authors have produced the most substantial contributions to the field of Risk Management in Educational Institutions for the last two decades?
5. Over the last two decades, what have been the most prominent research terms concerning Risk Management in Educational Institutions?

Methodology

This study adheres to the guidelines established by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework (Moher et al., 2009). The methodology involved a systematic bibliometric analysis using the Scopus database to explore the trends, contributors, and key themes in risk management within Islamic thought over the past two decades. Below is a detailed breakdown of each stage in the PRISMA process: identification, screening, eligibility, and inclusion.

Search Strategy

A comprehensive search was performed on the Scopus database using a predefined set of keywords relevant to risk management in Islamic thought. The search query employed was as follows:

The initial search yielded 909 documents, covering a wide range of topics related to risk management, Islamic finance, and associated key terms. This pool of articles was subsequently filtered to exclude irrelevant and duplicate studies, resulting in a refined dataset of 337 documents that formed the basis of the bibliometric analysis.

Inclusion and Exclusion Criteria

To ensure the relevance and quality of the studies included, the following inclusion and exclusion criteria were applied.

Table 1

The inclusion and exclusion criteria

Criteria	Inclusion	Exclusion
Publication Year	2003–2023	Before 2003 or after 2023
Subject Area	Economics, Business, Arts, Social Sciences	Other subject areas not relevant to Islamic risk management
Keywords	Risk management, Islamic finance, Islamic banking, etc.	Keywords unrelated to risk management in Islamic contexts
Language	English	Non-English language
Document Type	Articles, conference papers, chapters	Other document types, such as books or reviews

PRISMA Flow Diagram

The systematic selection process adhered to the PRISMA guidelines and involved four stages: identification, screening, eligibility, and inclusion. The steps were as follows:

1. **Identification:** The search strategy identified 909 articles. The database search was exhaustive and included studies published between 2003 and 2023.
2. **Screening:** After the removal of duplicate entries and irrelevant titles/abstracts, 502 articles were retained for full-text screening.
3. **Eligibility:** The full-text review resulted in the exclusion of 165 studies that did not meet the criteria, primarily because they were outside the scope of risk management in Islamic thought or were not methodologically sound.
4. **Inclusion:** A final set of 337 studies was selected for bibliometric analysis.

The PRISMA flow diagram representing this process has been provided to visualize the number of articles included and excluded at each stage of the review.

Data Extraction and Bibliometric Analysis

The extracted data included information on the title, author(s), year of publication, journal, keywords, citations, and subject area for each of the 337 articles. These data were analyzed using bibliometric techniques to map trends, assess collaboration networks, and identify influential researchers and institutions. VOSviewer software was employed to create visual representations of co-authorship networks, keyword co-occurrence, and country collaborations. These visualizations provided insights into the thematic evolution of risk management in Islamic thought, highlighting the key areas of academic focus and the extent of international collaboration. The PRISMA-based approach ensured a systematic and transparent methodology for the bibliometric analysis of risk management in Islamic thought. The resulting insights are valuable for understanding the key contributors, institutions, and research themes that have shaped this field over the last two decades. See figure 1.

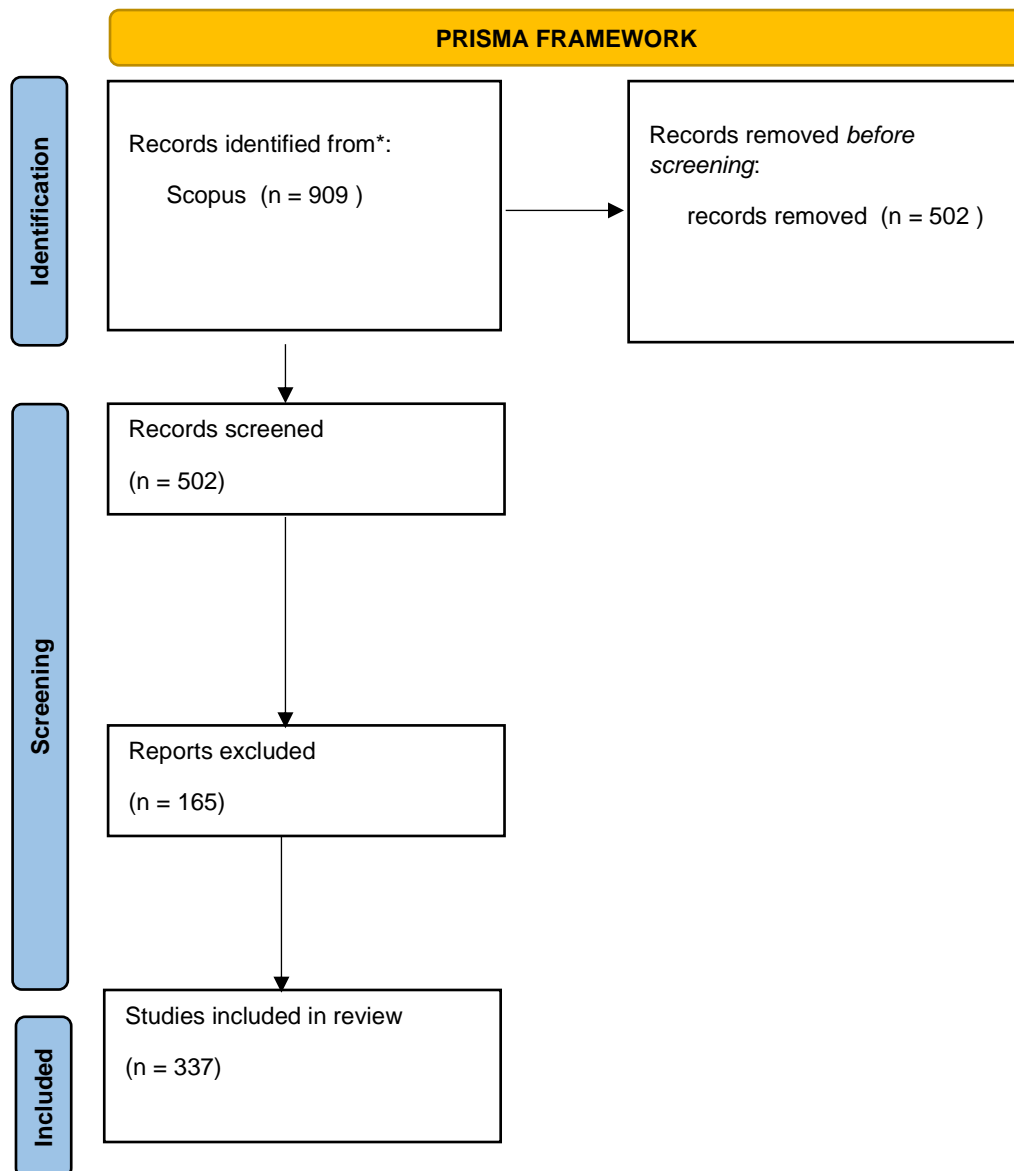


Figure 1: PRISMA Framework.

Results

What is the distribution of Risk Management in Educational Institutions for the last two decades?

The distribution of research on risk management in educational institutions over the past two decades reveals significant fluctuations in the number of publications. As seen in Figure 2, the output of publications has varied year by year, reflecting both the evolving academic interest in the subject and external factors that may have influenced the research landscape.

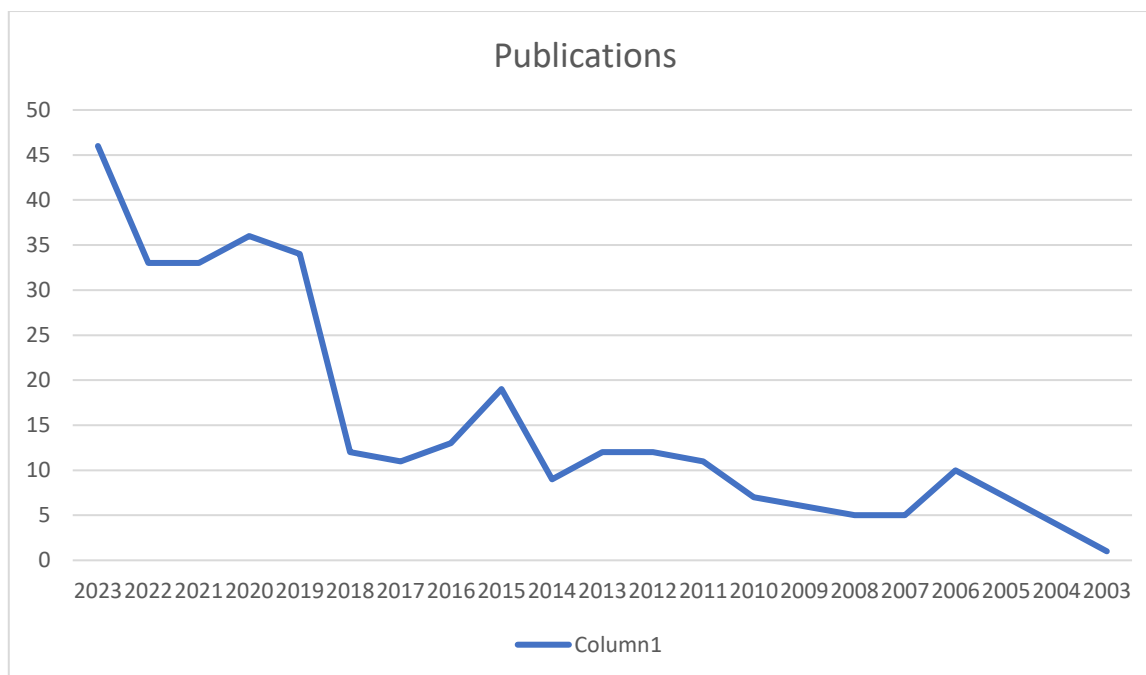


Figure 2: Yearly distribution of Risk Management in Educational Institutions for the last two decades

Figure 2 shows a peak in publications in the early 2020s, with nearly 50 publications in 2023. The number of publications remained relatively high until 2017, after which there was a noticeable decline. From 2016 onwards, the number of publications ranged from 10 to 25 annually, with a steady downward trend as the years progressed. The lowest number of publications was recorded in 2003, with only a handful of studies addressing risk management in educational institutions. The peak in the 2020s could be attributed to the increased focus on risk management due to global challenges such as the COVID-19 pandemic, which had a profound impact on educational institutions. This period saw a surge in research aimed at understanding how institutions could mitigate risks related to health, finance, and the sudden shift to online learning.

The overall decline in publications after 2017 might reflect the saturation of certain areas of research or a shift in academic focus towards emerging trends in educational management. However, the presence of sustained interest in the topic over two decades indicates that risk management remains a relevant and important area of study in the context of educational institutions.

1. Which nations have the most impact on Risk Management in Educational Institutions for the last two decades?

Research on risk management in educational institutions has been distributed unevenly across different countries. Figure 3 shows the distribution of publications by country, illustrating which nations have contributed the most to the field over the last two decades.

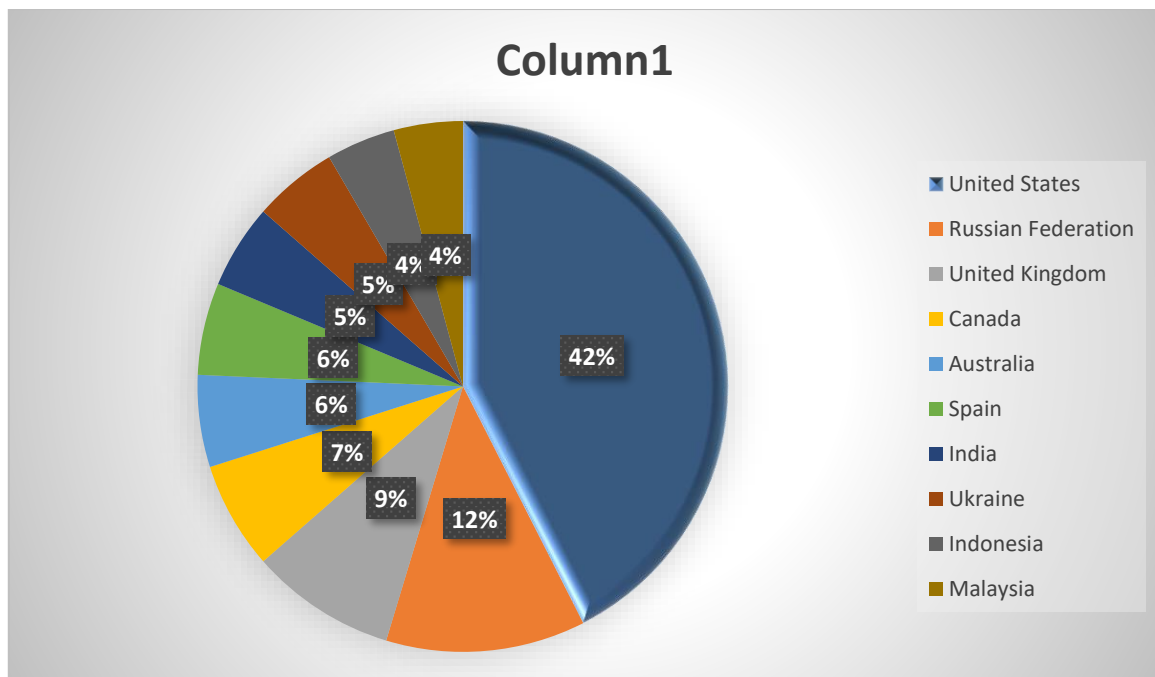


Figure 3: distribution of Risk Management in Educational Institutions by nations

The United States clearly dominates the landscape, accounting for 42% of the total research output. This is likely due to the extensive higher education infrastructure in the United States and its ongoing emphasis on governance, risk management, and compliance in educational institutions. American institutions have a long-standing tradition of incorporating risk management frameworks, which could explain their substantial contribution to this body of literature.

The Russian Federation comes in second with 12% of the publications. Russia's contribution may be linked to its expanding research base and increased focus on risk management in public institutions, including education, due to systemic reforms in governance over the last few decades.

Other notable contributors include the United Kingdom (9%), Canada (7%), and Australia (6%). These countries are home to some of the world's leading universities, which likely explains their considerable involvement in research on risk management practices within the educational sector. Their focus on institutional resilience, regulatory compliance, and educational policies could have driven the growth of studies in this area.

Countries such as Spain, India, Ukraine, Indonesia, and Malaysia collectively account for smaller portions of the global research output, contributing between 4-6% of the total publications. While these countries have smaller academic footprints compared to the United States, their contributions reflect growing awareness and engagement with risk management issues in educational contexts.

Overall, the data show that developed nations, particularly those with well-established educational infrastructures, lead the field of risk management in educational institutions.

However, contributions from emerging economies suggest that the importance of this topic is gaining global traction.

2. Which educational institutions have made the most notable contributions to the study of Risk Management in Educational Institutions for the last two decades?

Research on risk management in educational institutions is distributed across several universities and academic institutions around the world. Table 2 highlights the top 20 institutions that have contributed the most to this field in terms of total publications (TP).

Table 2

Top 20 educational institutions to the study of Risk Management in Educational Institutions

AFFILIATION	TP*
University of Florida	6
Kazan Federal University	6
Universiti Teknologi MARA	4
Universidad Nacional de Educacion a Distancia	4
Kazan National Research Technical University named after A.N. Tupolev-KAI	4
University of Alberta	3
Plekhanov Russian University of Economics	3
Universitat Oberta de Catalunya	2
Harvard Medical School	2
The University of Tampa	2
Arizona State University	2
Vanderbilt University	2
University of Žilina	2
University of Fort Hare	2
University of Ibadan	2
United Arab Emirates University	2
Duke University	2
University of Tyumen	2
Chuvash State University	2
Lipetsk State Technical University	2

TP*= Total Publications

The University of Florida and Kazan Federal University top the list with six publications each. The prominence of these institutions reflects their strong research focus on risk management frameworks, governance, and institutional resilience in education. Both universities are known for their emphasis on interdisciplinary research, which likely contributes to their leading roles in this field.

Universiti Teknologi MARA (UiTM) and Universidad Nacional de Educación a Distancia (UNED) follow closely behind with four publications each. UiTM's contributions may be driven by its focus on educational technology and institutional governance in a rapidly digitizing

educational landscape, while UNED's involvement is likely linked to its expertise in distance education and the management of risks in online learning environments.

Several institutions, including Kazan National Research Technical University, University of Alberta, and Plekhanov Russian University of Economics, have made significant contributions with three publications each. These institutions are known for their academic emphasis on educational administration, institutional risk, and policy analysis.

Interestingly, global leaders such as Harvard Medical School, Arizona State University, and Vanderbilt University are also present in the list with two publications each. Their contributions may reflect a growing interest in applying risk management principles, traditionally associated with other sectors, to the education industry. The institutions on this list span diverse geographic regions and educational contexts, indicating that risk management in education is a topic of global relevance. Despite differences in institutional focus and research priorities, these universities contribute valuable insights into how educational institutions can mitigate risks and enhance operational efficiency in an uncertain world.

3. Which Authors have produced the most substantial contributions to the field of Risk Management in Educational Institutions for the last two decades?

The study of risk management in educational institutions has been significantly shaped by contributions from a number of prominent authors. Table 2 highlights the top 10 authors based on their total publications (TP), total citations (TC), and H-index, which provides a measure of both productivity and impact.

Table 2

Top 10 authors to the study of Risk Management in Educational Institutions

	Author	TP*	TC*	H-index	Affiliation	Country
1	Castro, Manuel Alonso	464	5,034	36	Universidad Nacional de Educacion Distancia, Madrid	Spain
2	Ghazzawi, Issam A.	23	124	6	University of La Verne, La Verne,	United States
3	Kargidis, Theodoros	10	17	2	International Hellenic University, Thessaloniki	Greece
4	Shaurette, Ken M.	8	1	1	Financial Institution Products Corporation	United States
5	Tsiakis, Theodosios	28	251	6	International Hellenic University, Thessaloniki,	Greece
6	Abdulrahman, Amal	22	136	8	Macquarie University, Sydney,	Australia
7	Abisuga, Abiodun Olatunji	11	154	6	University of Lincoln, Lincoln,	United Kingdom
8	Abrahamsson, Marcus	20	234	10	Lunds Universitet, Lund,	Sweden
9	Abukhalaf, Amer Hamad Issa	8	79	5	University of Florida, Gainesville,	United States
10	Adaralegbe, O. A.	0	1	0	Obafemi Awolowo University, Ife,	Nigeria

TP*= Total Publications, TC*= Total Citations

Leading the list is Castro, Manuel Alonso from Universidad Nacional de Educación a Distancia in Madrid, Spain, with 464 publications and an impressive 5,034 citations, giving him an H-index of 36. His extensive research and substantial citation count underline his critical influence in this field, making him a key contributor to the academic discourse on risk management in educational settings.

Second on the list is Ghazzawi, Issam A., affiliated with University of La Verne, United States, with 23 publications and 124 citations. His research contributions, while smaller in scale compared to Castro, still demonstrate significant academic engagement in the area of risk management. Other notable contributors include Theodoros Kargidis from International Hellenic University, Greece, and Ken M. Shaurette, both of whom have made meaningful

contributions to the field despite having lower citation counts and H-index scores. Their work reflects focused research in niche areas within risk management.

Tsiakis, Theodosios, also from International Hellenic University, Greece, is another notable scholar with 28 publications and 251 citations, contributing to his H-index of 6. His work emphasizes the importance of risk management frameworks and their practical applications in the educational sector. Furthermore, Amal Abdulrahman from Macquarie University, Australia, and Abisuga Abiodun Olatunji from University of Lincoln, United Kingdom, have both made substantial contributions with their research focusing on institutional risk management and governance in educational settings. Both have relatively high H-index scores, indicating the broad academic impact of their work.

Lastly, authors such as Abrahamsson Marcus from Lunds Universitet, Sweden, and Abukhalaf Amer Hamad Issa from University of Florida, United States, further highlight the global nature of this research field, with their work being highly cited and recognized within academic circles.

These leading authors have collectively advanced the study of risk management in educational institutions, helping to establish frameworks, methodologies, and best practices that are used by both researchers and practitioners. Their contributions are critical in shaping the ongoing dialogue on how educational institutions can manage risk effectively in an evolving global landscape

4. Over the last two decades, what have been the most prominent research terms concerning Risk Management in Educational Institutions?

Research on risk management in educational institutions has expanded significantly over the last two decades, as demonstrated by the co-occurrence of prominent research terms. Figure 4 illustrates the network of the most frequently used terms in this field, offering insights into the evolving focus areas of research over time.

institutions, which encompasses not only operational risks but also ethical, technological, and policy dimensions.

Overall, the most prominent research terms reveal a broad and evolving discourse in the field of risk management in educational institutions. The presence of global challenges such as climate change, pandemics, and technological disruption has driven researchers to explore diverse risk management strategies, with an increasing focus on sustainability, public health, and digital resilience in the education sector.

Discussion

The results of this bibliometric analysis provide a nuanced understanding of how research on risk management in educational institutions has evolved over the past two decades. The findings reveal both temporal trends and geographic patterns in research output, highlighting the global significance of this field.

Geographical Distribution of Research

The dominance of the United States, which accounts for 42% of total publications, underscores the country's strong research infrastructure and focus on institutional governance, particularly in higher education. The U.S. has long been a leader in educational reform and management, which could explain its significant contribution to research on risk management. This aligns with the country's broad emphasis on governance, risk, and compliance across various sectors, including education (Biel, 2017). The focus on risk management in American educational institutions is likely driven by multiple factors, such as increased regulatory requirements, the need for financial sustainability, and the risks associated with digital transformation and online learning.

The presence of Russia and the United Kingdom as major contributors also highlights the importance of risk management in educational systems globally. Russia's engagement may be related to systemic reforms and modernization efforts in its public and higher education institutions, driven by its need to align with global educational standards and improve institutional governance. Similarly, the United Kingdom's research reflects its well-established tradition of studying institutional governance and educational management, particularly in higher education (Shattock, 2010). The contribution of other countries, such as Canada, Australia, and emerging nations like India, reflects a growing recognition of the importance of risk management in education on a global scale. These countries may face unique challenges in educational governance, which have motivated them to explore effective risk mitigation strategies.

Institutional Contributions

The analysis of institutional contributions reveals that research on risk management in education is not confined to a handful of leading universities, but rather, is distributed across a diverse range of institutions. Notably, the University of Florida and Kazan Federal University lead in terms of publication output. This suggests that risk management in education is an interdisciplinary field that attracts attention from institutions with strengths in various academic disciplines, including public policy, management, and educational governance.

Universiti Teknologi MARA (UiTM) and Universidad Nacional de Educación a Distancia (UNED) also stand out for their contributions, reflecting their respective focuses on educational technology and distance learning. As the field of education continues to evolve—especially in response to technological disruptions and the growing importance of online learning environments—these institutions are likely to remain at the forefront of research on institutional resilience and risk management.

Author Contributions and Research Focus

The analysis of individual authors reveals the global nature of research on risk management in educational institutions. Scholars like Manuel Alonso Castro and Issam A. Ghazzawi have made substantial contributions, with Castro emerging as a particularly influential figure due to his high publication and citation counts. The contributions from authors in countries such as Spain, United States, and Australia reflect the international collaboration and cross-disciplinary nature of this research area.

In terms of research focus, Figure 4 illustrates that the field has broadened considerably over the years to include topics such as disaster risk reduction, climate change, and public health. This is particularly relevant in light of the COVID-19 pandemic, which has brought new risks to the forefront for educational institutions worldwide. The pandemic has highlighted the importance of crisis management and institutional preparedness in education, spurring a surge of research on emergency planning, health risks, and the transition to digital learning environments (Miller, 2020).

Moreover, the inclusion of terms like sustainable development and information management points to a growing emphasis on long-term resilience and the sustainable governance of educational institutions. This reflects a shift from purely operational risk management towards more strategic approaches that integrate risk management into the broader framework of institutional planning and sustainability.

The visualization of prominent research terms also indicates the increasing relevance of technological risks, particularly those associated with digital learning and online education. As educational institutions continue to digitize their operations, new risks related to data security, student privacy, and the quality of online education have emerged as critical areas of concern (Abdulrahman & Amran, 2019).

Global Challenges and Emerging Risks

One of the key trends identified in the analysis is the rising importance of disaster risk reduction and climate change in the context of educational institutions. This is indicative of a broader trend in risk management, where institutions are increasingly recognizing the impact of global environmental risks on education. Educational institutions are now required to consider not only immediate operational risks but also long-term environmental risks that could affect their infrastructure, resources, and students.

The intersection of risk management with public health is another critical development. The impact of the COVID-19 pandemic has forced educational institutions worldwide to rethink their risk management strategies, placing greater emphasis on health-related risks and the

need for flexible, adaptive responses to crises. The rapid shift to online learning and the need for remote educational frameworks have underscored the importance of digital resilience, as institutions now face new vulnerabilities in terms of cybersecurity, data protection, and technological infrastructure.

Conclusion

In summary, the study of risk management in educational institutions has evolved significantly over the last two decades, with a growing focus on interdisciplinary approaches that address both traditional and emerging risks. The findings of this bibliometric analysis highlight the contributions of leading countries, institutions, and authors to the field, as well as the thematic areas that have gained prominence in recent years. The global challenges posed by climate change, pandemics, and technological disruption are likely to continue shaping research on risk management in educational institutions, prompting further exploration of strategies that promote institutional resilience and sustainability.

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