MUHAMMADIYAH UNIVERSITY OF PURWOKERTO'S GLOBAL RESEARCH IMPACT: A BIBLIOMETRIC ANALYSIS

Sheikh Abu Toha Md Saky
Universitas Muhammadiyah Surakarta, Indonesia
g000224224@student.ums.ac.id

Md Nurul Islam
International Islamic University Chittagong, Bangladesh
nurul.islam@iiuc.ac.bd

Abstract

This study provides a concise overview of a comprehensive study focused on Muhammadiyah University of Purwokerto (UMP), delving into its contributions to the global research landscape. The primary aim is to unravel UMP's global research impact, encompassing scientific production, citation patterns, collaborative networks, and evolving research themes. By utilizing a dataset of 480 documents from 247 diverse sources, the study aims to provide a nuanced understanding of UMP's role in shaping global research narratives. Employing bibliometric analysis, the study utilizes the Scopus database for data extraction spanning 2010 to September 2023. The dataset undergoes meticulous pre-processing to ensure accuracy. Biblioshiny software facilitates a comprehensive analysis, examining annual growth rates, citation patterns, collaborative dynamics, and prevalent research themes. The analysis reveals a dynamic research landscape, characterized by an annual growth rate of 30.86%. Noteworthy trends in annual scientific production and citation impact are unveiled, showcasing the evolving nature of UMP's research impact. The study identifies influential sources, prolific authors, and global collaboration patterns, offering insights into UMP's contributions to diverse research areas. This study sheds light on UMP's dynamic growth trajectory and its impact on global research narratives. The interconnectedness, revealed through bibliometric analysis, underscores UMP's commitment to advancing knowledge. The findings contribute to a comprehensive understanding of UMP's research performance, collaborative efforts, and emerging trends, positioning the institution on the global academic stage.

Keywords: Global Research Impact, Academic Collaboration, Scientific Production, Muhammadiyah University of Purwokerto (UMP), Bibliometric Analysis

Introduction

In the contemporary landscape of academic research, the role of institutions in contributing to global knowledge and fostering collaborative efforts across borders is pivotal(Horta, 2013). This study delves into the research endeavors of Muhammadiyah

University of Purwokerto (UMP), aiming to unravel its impact on the global research landscape. Through meticulous exploration, we seek to discern UMP's contributions in terms of scientific production, citation impact, collaborative networks, and the evolution of research themes. As academic institutions continue to shape the trajectory of knowledge advancement, UMP has positioned itself as a significant player on the global stage through extensive research initiatives. To understand the nuances of UMP's role in the evolving academic landscapes, it becomes imperative to embark on a comprehensive exploration of its contributions. This study serves as a lens through which we analyze and interpret the multifaceted facets of UMP's research performance.

Research Question

How has Muhammadiyah University of Purwokerto (UMP) contributed to the global research landscape in terms of scientific production, citation impact, collaborative networks, and the evolution of research themes?

Objective

The primary objective of this study is to provide a comprehensive overview of UMP's research landscape, utilizing a dataset comprising 480 documents from 247 diverse sources. By meticulously examining annual growth rates, citation patterns, collaborative dynamics, and evolving research trends, the analysis seeks to uncover the nuanced facets of UMP's research performance. Ultimately, the goal is to shed light on UMP's role in shaping global research narratives and its commitment to advancing knowledge across diverse disciplines.

Literature Review

Bibliometric analyses have become integral in evaluating the research performance of academic institutions across diverse domains. In the study by Shakil Ahmad et al. (2020), the bibliometric method was applied to assess the research contribution of the University of the Punjab, the oldest seat of higher learning in Pakistan. Analyzing data from the Scopus database until 2019, the study revealed a

steady progress in research productivity during the 20th century, with a notable shift in focus and a surge in research publications in the 21st century. The University of the Punjab demonstrated a significant lead in terms of the number of research publications and citations, advocating for collaborative efforts and a preference for open-access journals. Borges et al., (2022) explored university-industry cooperation through a bibliometric analysis. Examining 256 articles between 1970 and 2020, their study showcased a growing trend in publications on this topic. The analysis highlighted influential authors, publication trends over time, and collaboration networks among institutions and countries, contributing valuable insights into the evolving landscape of university-industry cooperation. Cancino et al., (2017) focused on a bibliometric analysis of leading universities in innovation research, using data from the Web of Science between 1989 and 2013. The study identified US universities as the most productive and influential in innovation research, with a subsequent increase in productivity from European universities, particularly from the UK and the Netherlands. Colomo Magaña et al., (2022) delved into MOOC (Massive Open Online Course) and university collaborations, conducting a bibliometric analysis on scientific production in Spanish institutions. Analyzing 120 articles from 2014 to 2020, the study identified key institutions and collaborative networks, emphasizing the significance of MOOC in developing hybrid educational models. Hiranya Dissanayake et al., (2022) conducted a bibliometric analysis on entrepreneurial education at universities. Assessing 447 studies from 2004 to 2022, the study revealed a global focus on entrepreneurship education, though collaboration between developed and developing countries was limited. The study also emphasized a quantitative approach dominating the analysis of entrepreneurship. Djeki et al., (2022) comprehensively examined the e-learning research field through a bibliometric analysis of 12,272 publications from 2015 to 2020. The study identified productive countries, influential authors, and highlighted the impact of COVID-19 on e-learning. Collaboration between authors, universities, and countries was found to be low, emphasizing potential areas for improvement. Duque and Cervantes-Cervantes, (2019) performed a systematic review and bibliometric analysis of University Social Responsibility, identifying three perspectives: measurement, strategic, and connection. The study highlighted a relatively young field, with South America being the region with the highest production in this area. Forliano et al., (2021)

presented a bibliometric analysis of entrepreneurial universities in the business and management fields. Analyzing 511 documents, the study showcased an increasing trend in publications, emphasizing the global relevance of the topic and the need for more systematic research. Halepoto et al., (2022) conducted a descriptive bibliometric analysis of artificial intelligence in textiles, identifying influential journals, institutions, and countries. The study revealed China and the United States as major contributors, focusing on three main themes: textile structure, textile inspection, and textile clothing production. Hassan Abuhassna et al., (2022) explored online learning readiness among university students through a bibliometric analysis. Analyzing 1371 publications from 2010 to 2020, the study identified key research concerns and emerging topics, providing a roadmap for future researchers in the field of online education. Scientific research in Ecuador has gained prominence since 2011, constituting 85% of the total historical production. Herrera-Franco et al., (2021) conducted a bibliometric analysis spanning 1920 to 2020 to evaluate Ecuador's intellectual structure and performance. Their study, embracing 30,205 documents across 27 subject areas and 84 countries, aligns Ecuador's scientific production with global themes such as climate change, higher education, technology, medicine, and sustainable development, contributing to collaborative efforts addressing Sustainable Development Goals (SDGs).

Open universities, catering to diverse demographics, have revolutionized access to education globally since the 1960s. The bibliometric study of Hinojo Lucena et al., (2019) examined the scientific output on open universities from 1969 to 2018. With a sample of 809 papers, the study revealed an exponential growth in scientific output, with the UK emerging as a central contributor. This comprehensive overview offers insights into the past, present, and future trajectory of open universities. Kuyrukçu and Berber, (2023) explored postgraduate thesis studies on university campuses using bibliometric analysis. Analyzing 132 theses, the study depicted a profile of studies predominantly led by female authors and advisors with professorial titles. Despite the late emergence of campus-focused theses, the recent emphasis on accessibility and sustainability highlights the evolving concerns in this field. Leitão et al., (2023) investigated the role of digitalization in fostering civic-oriented universities through a bibliometric analysis. Covering 1980–2021 and analyzing 17,061 articles, their study proposed a new taxonomy for Hybrid Civic Universities based on open innovation,

governance, and sustainability. This taxonomy positions universities as open and hybrid hubs without walls, promoting transnational orientation and sustainable development. León-Gómez et al., (2023) delved into sustainability education in tourism universities through bibliometric analysis. Examining the scientific activity in this field, the study employed bibliometric tools to evaluate research impact, co-authorship networks, and keywords. The results indicated a recent but growing interest in this topic, emphasizing the need for further research and thematic specialization. Martínez et al., (2023) aimed to identify the current panorama of scientific production associated with governance in university institutions. Using bibliometric analysis in Scopus, the study highlighted countries with the highest productivity, prominent authors, and thematic clusters, offering a comprehensive understanding of the evolving field of university governance. Prado-Gascó et al., (2021) conducted a bibliometric analysis on job insecurity in nursing. Focusing on 128 articles in nursing, the study explored productivity, influential authors, universities, and countries. The findings identified the recent establishment of job insecurity as a significant topic, highlighting key authors, universities, and countries contributing to this emerging field. Skute et al., (2019) mapped the field of university–industry collaborations using co-citation analysis and bibliographic coupling techniques. Analyzing a dataset of U–I publications, the study clustered the research into an interconnected ecosystem consisting of individual, organizational, and institutional levels. The study contributes to understanding the multifaceted nature of U–I collaborations and proposes a research agenda for future investigations. Sonkar et al., (2021) examined the research contributions of nine central universities in India in the field of science. Analyzing 53,617 publications from 2011 to 2020, the study revealed productivity, citations, and core journals. This comparative study contributes to understanding the research landscape, aiding fund-granting bodies in formulating frameworks for grants allocation.

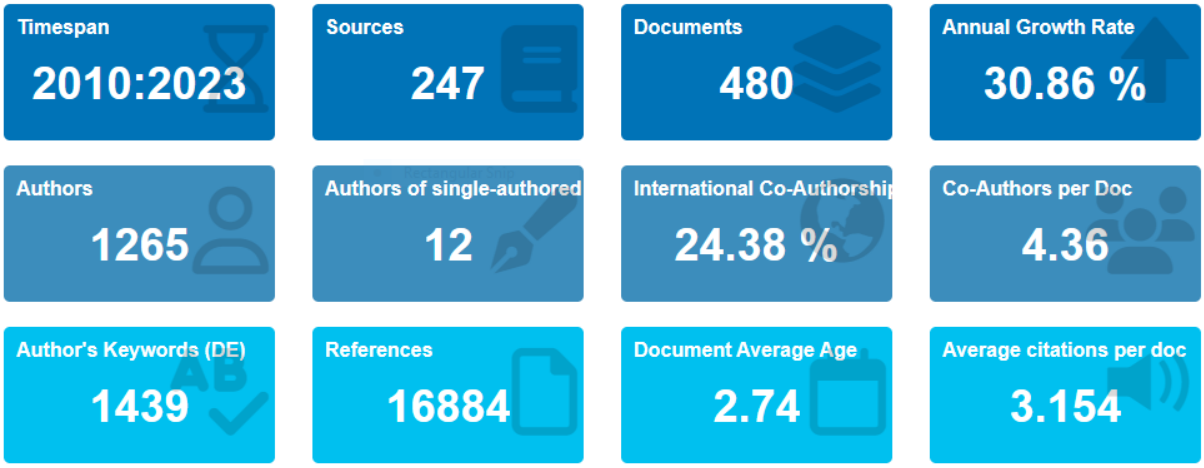
Method

The Scopus database served as the primary data source for conducting a bibliometric analysis(Herrera-Franco et al., 2020; Md Khudzari et al., 2018) of scientific publications affiliated with Muhammadiyah University of Purwokerto (UMP)

and its global collaborators, spanning the years from 2010 to September 2023. The dataset encompassed a wide range of information, including affiliations, publications in academic journals, citation counts, and prevalent research themes. To ensure data accuracy, a meticulous pre-processing phase was undertaken, involving the removal of duplicate entries and the exclusion of irrelevant records. Subsequently, the curated dataset was subjected to in-depth analysis using the Biblioshiny software tool(Huang et al., 2021; Moral-Muñoz et al., 2020; Rusydiana, 2021; Thangavel and Chandra, 2023). The analysis encompassed a comprehensive examination of key metrics such as the annual growth rate, average publication age, mean number of citations per document, as well as annual scientific production and citation patterns. These metrics were utilized to gain valuable insights into the research dynamics and performance of UMP and its collaborative partners. The findings of the analysis were effectively visualized using a range of tables and charts generated by the Biblioshiny program. This visualization approach provided a clear and concise overview of the research endeavors undertaken by UMP and its extensive network of global collaborators. The analysis extended to include a citation analysis, identifying the most highly cited articles, an affiliation analysis pinpointing the most influential affiliations, a trend topic analysis highlighting popular research themes, and a collaboration analysis, which mapped the global landscape of research collaboration. These multifaceted analytical procedures collectively facilitated a comprehensive assessment of UMP's research performance, collaborative efforts, and emerging trends. The bibliometric analysis offered valuable insights into the growth trajectory, research impact, and international partnerships of Muhammadiyah University of Purwokerto (UMP), shedding light on the institution's contributions to the global academic landscape.

Data analysis and visualization

Main Information



Overview of Research Dataset Characteristics and Trends (2010-2023)

The table provides a comprehensive overview of a dataset spanning from 2010 to 2023, comprising 480 documents from 247 different sources, including journals and books. It offers valuable insights into the evolution and characteristics of the dataset. One striking aspect is the impressive annual growth rate of 30.86%, indicating a significant expansion of content over the years. This suggests a growing interest or research focus in the subject matter during the specified timespan. The document contents reveal that there are a substantial number of keywords and author's keywords, totalling 4,387, which indicates a rich diversity of topics and themes within the dataset. Additionally, the average age of documents is relatively low at 2.74 years, suggesting that the dataset is up-to-date and relevant. Authors' collaboration is another notable aspect, with 24.38% of documents having international co-authorships. This highlights the global nature of the research, showcasing collaboration across geographical boundaries. Regarding document types, the dataset primarily consists of articles (313) and conference papers (143), indicating a strong emphasis on academic research and scholarly discourse. Overall, this table provides a snapshot of a dynamic and diverse dataset with a substantial number of authors and international collaborations, reflecting the growth and evolving nature of research in the given field over the specified timespan.

Annual Scientific Production and Citation

Year	MeanTCperArt	N	MeanTCperYear	CitableYears
2010	16	2,00	1,14	14
2012	6	4,00	0,50	12
2013	8	1,00	0,73	11
2014	14,67	3,00	1,47	10
2015	22,5	4,00	2,50	9
2016	7,5	10,00	0,94	8
2017	16,5	18,00	2,36	7
2018	5,63	35,00	0,94	6
2019	2,18	67,00	0,44	5
2020	2,36	98,00	0,59	4
2021	2,14	87,00	0,71	3
2022	1,94	85,00	0,97	2
2023	0,29	66,00	0,29	1

Fluctuating citation impact, evolving research output, and changing citable years in annual scientific production (2010-2023).

The table presents a detailed annual scientific production and citation report spanning from 2010 to 2023. It reveals several noteworthy trends. First, the mean total citations per article (MeanTCperArt) fluctuates significantly over the years, with a peak in 2015 at 22.5 and a steep decline to 0.29 in 2023. This suggests varying levels of citation impact for articles published during different periods. Second, the number of articles (N) steadily increased until 2019 and then declined, reflecting potential shifts in research output or focus. Third, the mean total citations per year (MeanTCperYear) reached its highest point in 2017 at 18, indicating sustained citation impact for articles from that year. Lastly, the decreasing number of citable years, from 14 in 2010 to just 1 in 2023, suggests that more recent articles have had less time to accumulate citations, possibly due to evolving research trends or shorter citation lifespans. This data underscores the dynamic nature of scientific research and its impact over time.

Top Sources: Relevance and Citations

Most relevant sources			Most cited sources	
Sources	**Articles**		**Sources**	**Articles**

JOURNAL OF PHYSICS: CONFERENCE SERIES	53		PLOS ONE	90
IOP CONFERENCE SERIES: MATERIALS SCIENCE AND ENGINEERING	35		VACCINE	68
AIP CONFERENCE PROCEEDINGS	19		SUSTAINABILITY	40
IOP CONFERENCE SERIES: EARTH AND ENVIRONMENTAL SCIENCE	13		ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH	37
INTERNATIONAL JOURNAL OF ADVANCED SCIENCE AND TECHNOLOGY	8		CRYOLETTERS	33
QUALITY - ACCESS TO SUCCESS	8		ENVIRON SCI POLLUT RES	31
INDIAN JOURNAL OF PUBLIC HEALTH RESEARCH AND DEVELOPMENT	7		NAT HAZARDS	31
AACL BIOFLUX	5		J CLEAN PROD	29
BALI MEDICAL JOURNAL	5		JOURNAL OF CLEANER PRODUCTION	28
BIODIVERSITAS	5		LANCET	27

Source: Varied relevance and citation impact within the dataset.

The table provides insights into the most relevant and cited sources within the dataset. In terms of relevance, "Journal of Physics: Conference Series" emerges as the most relevant source with 53 articles, followed by "IOP Conference Series: Materials Science and Engineering" with 35 articles. These sources likely specialize in the field of physics and materials science, respectively. However, when it comes to citations, "PLOS ONE" stands out as the most cited source with 90 articles citing it, suggesting its widespread influence across various research topics. "Vaccine" and "Sustainability" also have a substantial number of citations at 68 and 40 articles, respectively, reflecting their significance in relevant research areas. It's interesting to note that some sources, like "Cryoletters" and "Environmental Science and Pollution Research," are highly cited despite having fewer articles associated with them. This indicates the influential nature of their content. This table highlights the dynamic interplay between source relevance and citation impact within the dataset, showcasing key sources that have made a significant impact on the research landscape.

Authors, Affiliations, and Country-wise Impact

Most relavant authors				Most relevant affiliation		Country production	
Authors	**Articles**	**Articles Fractionalized**		**Affiliation**	**Articles**	**region**	**req**
SETIAWAN D	25	4,76		UNIVERSITAS GADJAH MADA	122	INDONESIA	642
SRIYANTO S	23	3,94		UNIVERSITY OF MUHAMMADIYAH PURWOKERTO	29	MALAYSIA	16
DJALIL AD	15	3,35		UNIVERSITAS AIRLANGGA	27	NETHERLANDS	2
MUSTAFIDA H H	15	4,48		TAIPEI MEDICAL UNIVERSITY	26	UK	7
POSTMA MJ	15	2,73		GRONINGEN	25	CHINA	6
MA'RUF A	14	4,42		INSTITUT TEKNOLOGI BANDUNG	24	PAKISTAN	3
AHMAD	13	4,36		UNIVERSITI TEKNOLOGI MALAYSIA (UTM)	23	THAILAND	1
HARTANTI D	13	3,82		UNIVERSITAS MUHAMMADIYAH YOGYAKARTA	22	HUNGARY	9
ZAMAN K	13	1,74		UNIVERSITAS MUHAMMADIYAH	20	AUSTRALIA	6
HARYANTO	12	3,70		SCHOOL OF PHARMACY	18	GERMANY	2

Authorship, Collaboration, and Research Production: A snapshot of prolific authors, Affiliations, and country-wise contributions.

The table provides a comprehensive snapshot of research contributors and their affiliations, shedding light on collaboration patterns and regional research production. D. Setiawan and S. Sriyanto emerge as prominent authors with 25 and 23 articles, respectively, showcasing their substantial contributions to the dataset. The "Articles Fractionalized" column indicates varying degrees of multi-authorship, with authors like A. Ahmad having an average of 4.36 authors per article. Notably, "Universitas Gadjah Mada" in Indonesia stands out as the most relevant affiliation with 122 articles, emphasizing its significant role in the dataset, followed by "University of Muhammadiyah Purwokerto" in Malaysia with 29 articles. The "Country Production" section underscores Indonesia's dominance in research production with 1642 articles, while other countries like the Netherlands, the UK, and Malaysia also make notable contributions. This table offers valuable insights into the collaborative and regional aspects of research within the dataset.

Global Impact and Document Citations

Most cited countries		Most global cited documents

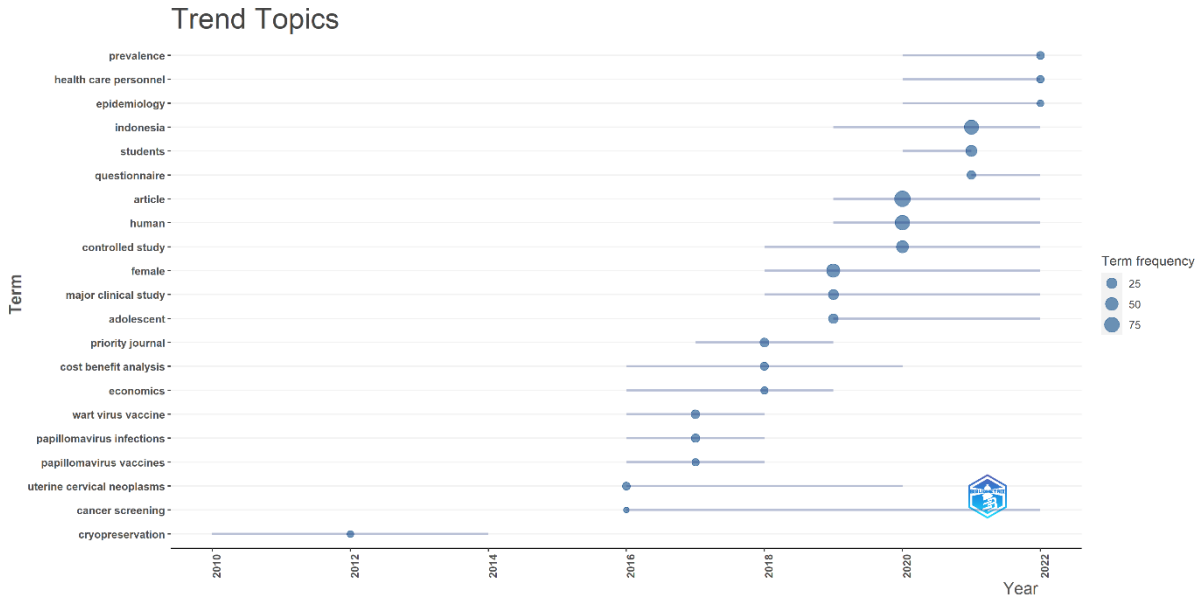
Country	TC	Average Article Citations	Paper	Total Citations	TC per Year	Normalized TC
INDONESIA	605	2,30	BAHAR MA, 2017, PHARMACOGENOMICS	94	13,43	5,70
NETHERLANDS	218	16,80	MA'RUF A, 2017, AIP CONF PROC	44	6,29	2,67
PAKISTAN	65	5,90	NGUYEN QT, 2015, PLANTA	44	4,89	1,96
MALAYSIA	62	4,80	HAMAD A, 2017, RASAYAN J CHEM	39	5,57	2,36
AUSTRALIA	61	15,20	DARMAWAN W, 2018,	34	5,67	6,04
CHINA	37	3,70	SISUNANDAR, 2010, PLANTA	31	2,21	1,94
UNITED KINGDOM	23	4,60	WONG CY, 2020, SUSTAINABILITY	30	7,50	12,73
THAILAND	17	1,70	PURBA AK, 2018, FRONT PHARMACOL	30	5,00	5,33
HUNGARY	13	4,30	FITRIATI A, 2015, ASIAN J, INFO TECHNOL	28	3,11	1,24
GERMANY	12	3,00	HAWANTI S, 2014, INT J PEDAGOG LEARN	28	2,80	1,91

Global Research Impact: Leading countries, influential documents, and their citation dynamics within the dataset.

This table provides a comprehensive overview of the most cited countries in the dataset, their average article citations, and the most globally cited documents, shedding light on the research impact of these nations and the influential papers. Indonesia tops the list with 605 total citations (TC) and an average of 2.30 citations per article, underscoring its research prominence. Notably, the paper "BAHAR MA, 2017, PHARMACOGENOMICS" from Indonesia stands out with 94 total citations, an impressive 13.43 TC per year, and a normalized TC of 5.70, indicating its significant global impact. Other countries like the Netherlands, Pakistan, and Malaysia also demonstrate substantial research influence. Additionally, documents like "AIP CONF PROC" by Ma'ruf A in 2017 and "PLANTA" by Nguyen QT in 2015 have received

notable citations, showcasing their global recognition. This table offers valuable insights into the international reach and impactful research within the dataset.

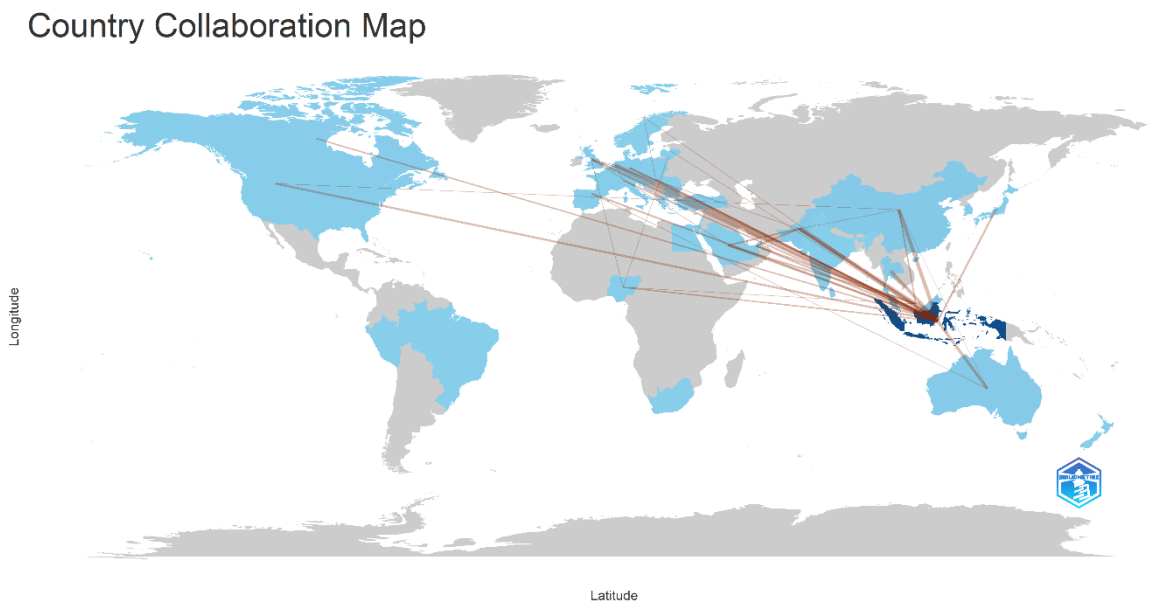
Trend Topics



Dynamic research trends

This table presents trending topics within the dataset, indicating the frequency of their occurrence and the years in which they were most prevalent. Notably, "cancer screening," "wart virus vaccine," and "papillomavirus infections" were prominent in 2016-2018, reflecting a focus on preventive healthcare during that period. "Female" and "major clinical study" gained traction from 2018 to 2022, indicating an increasing emphasis on gender-related research and substantial clinical investigations. "Indonesia" became a prominent topic in 2019-2022, possibly indicating a surge in research related to the country. "Students" and "questionnaire" peaked in 2021, suggesting a focus on student-centric surveys. This analysis reflects evolving research trends and interests over the years.

World Collaboration Map



UMP's global research collaborations

The table reveals the extent of collaborative research efforts involving Universiti Malaysia Pahang (UMP) with various countries. The most prominent collaborator with UMP is Indonesia, with a substantial 43 research collaborations, signifying a robust and consistent partnership in scientific endeavors. Notably, Malaysia and Pakistan have engaged in 13 collaborations, demonstrating a strong regional research network. Meanwhile, UMP has expanded its reach to international partners such as the Netherlands and China, with 17 and 14 collaborations, respectively, indicating a diverse global research footprint. These collaborative initiatives extend further to countries like the United Kingdom, Germany, and the USA, with UMP participating in 9, 7, and 6 research partnerships, respectively. This global network of collaborations underscores UMP's commitment to fostering international research relationships, which is crucial for the exchange of knowledge and the advancement of science on a global scale.

Discussion

Muhammadiyah University of Purwokerto (UMP) is a desirable place to do research for a number of reasons. First, UMP is a desirable center for scholarly activity due to its dedication to academic quality and its strategic focus on promoting research in a variety of areas. The university offers a favorable atmosphere for serious study because of its strong infrastructure, access to a variety of datasets, and encouraging academic community. UMP's attraction is further enhanced by its location in Purwokerto, a city renowned for its cultural legacy and educational institutions. The university's uniqueness is further enhanced by its association with Muhammadiyah, one

of the biggest Islamic groups in Indonesia, which gives researchers access to a rich heritage of Islamic study and beliefs. This combination of academic rigor, strategic focus, and cultural richness makes UMP an ideal site for impactful research.

By offering a thorough examination of research trends, collaboration patterns, and the significance of scientific output at UMP, this paper greatly advances Islamic studies and Islamic educational institutions. The essay emphasizes the changing role of Islamic education in tackling modern concerns by stressing the rise in scholarly activities and the growing significance of Islamic topics in the research output. It demonstrates how UMP, an Islamic university, combines contemporary scientific approaches with Islamic principles to enhance the subject of Islamic studies. Furthermore, the article's perspectives on global partnerships demonstrate UMP's worldwide involvement in Islamic study, encouraging scholarly exchanges across cultural boundaries and expanding the reach of Islamic education.

The paper maps the trajectory of research activity at UMP, a significant Islamic educational institution, in relation to the growth of Islamic studies in Indonesia. It draws attention to the university's contributions to Indonesia's larger academic scene, especially in the area of Islamic studies. The article demonstrates how lively Islamic scholarship is in the nation by highlighting the rise in research production, international cooperation, and the importance of Islamic subjects. Additionally, it highlights how UMP advances Islamic education via research and intellectual discourse, supporting the national objective to elevate Islamic studies as an important academic field.

The outcomes of the essay have a number of implications on how Islamic science and studies are developed. First off, UMP appears to have a dynamic academic atmosphere that can serve as a model for other Islamic educational institutions, as seen by the research output's demonstrated expansion and variety. A more comprehensive approach to Islamic education is being promoted by the growing integration of Islamic studies with worldwide academic trends, as seen by the emphasis on interdisciplinary research and international cooperation. Future study agendas will be guided by the article's insights on the most referenced sources and prominent papers, which also identify important areas of focus within Islamic studies. These contributions have the potential to influence academic policies, research goals, and curriculum development in Islamic educational institutions.

In particular, educational institutions that specialize in Islamic studies stand to benefit greatly from the research described in this article. The paper offers a model for other academic institutions looking to improve their research and academic capacities by highlighting UMP's strategic expansion and its involvement with international research communities. The results recommend that educational institutions expand their research portfolios, promote international cooperation, and incorporate contemporary scientific approaches with conventional Islamic learning. This method not only raises the standard of instruction but also equips scholars and students to make valuable

contributions to the international academic community. Furthermore, the focus on current and pertinent research topics might encourage academic institutions to match their curricula to the demands of the modern society, increasing the applicability of Islamic education.

Conclusion

The comprehensive analysis of Muhammadiyah University of Purwokerto's (UMP) scientific output and research impact from 2010 to 2023 paints a vivid picture of its dynamic role in the global academic community. UMP's remarkable annual growth rate underscores its unwavering commitment to advancing knowledge and contributing to scholarly discourse on a global scale. This dedication to growth is mirrored in its diverse and contemporary dataset, which spans numerous research themes and remains consistently up-to-date. Collaboration has been a driving force behind UMP's success, with a significant percentage of its documents featuring international co-authorships. This global engagement not only enriches research but also facilitates the exchange of diverse perspectives and methodologies. The fluctuating citation impact and changing citable years reveal the evolving research focus and academic impact of UMP over the years, reflecting the institution's adaptability to emerging trends and challenges. The prominence of specific sources within the dataset highlights UMP's strengths in physics, materials science, and its significant influence in broader research areas. Prolific authors, affiliations, and country-wise contributions further underscore UMP's substantial role in Indonesia's research landscape and its global reach. Moreover, the institution's impact extends beyond borders, with Indonesia emerging as a frontrunner in research citations. Influential documents within the dataset showcase UMP's contributions to global research. As UMP continues to evolve and adapt to the ever-changing academic environment, its commitment to fostering international research collaborations positions it as a vital player in the global research landscape. UMP's multifaceted contributions and collaborative spirit reflect its dedication to advancing knowledge, making a lasting impact on the world of academia.

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