

MAPPING THE ACADEMIC LANDSCAPE: A BIBLIOMETRIC JOURNEY THROUGH HIGHER EDUCATION IN AFRICA

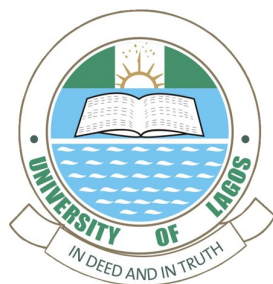
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Fourth International Biennial Conference

University of Lagos: 15-17 November 2023

Theme: Reimagining the Future of Higher Education in Africa

THE FOCUS OF THIS 20-MINUTE PLENARY PRESENTATION

To provide a comprehensive, data-driven overview of the academic discourse surrounding higher education in Africa, elucidating **historical trends, dominant voices, and areas of potential focus** for the future.

SEARCH STRATEGY FOR THE BIBLIOMETRIC REVIEW ON SCOPUS

TITLE-ABS-KEY(("higher education" OR "tertiary education" OR "post-secondary education" OR "university education" OR "colleges" OR "polytechnics" OR "academia" OR "academic institutions")) AND

TITLE-ABS-KEY(("Africa" OR "Sub-Saharan Africa" OR "North Africa" OR "Algeria" OR "Egypt" OR "Nigeria" OR "Kenya" OR "South Africa" OR "Ghana" OR "Ethiopia" OR "Uganda" OR "Tanzania" OR "Morocco" OR "Sudan" OR "Tunisia" OR "Libya" OR "Mauritius" OR "Botswana" OR "Rwanda" OR "Niger" OR "Senegal" OR "Zimbabwe" OR "Mali" OR "Malawi" OR "Zambia" OR "Madagascar" OR "Angola" OR "Namibia" OR "Mozambique" OR "Gabon" OR "Cameroon" OR "Chad" OR "Congo" OR "Democratic Republic of the Congo" OR "Republic of Congo" OR "Burkina Faso" OR "Sierra Leone" OR "Liberia" OR "Central African Republic" OR "Cape Verde" OR "Djibouti" OR "Eritrea" OR "Equatorial Guinea" OR "Gambia" OR "Guinea" OR "Guinea-Bissau" OR "Benin" OR "Burundi" OR "Comoros" OR "Lesotho" OR "Mauritania" OR "Sao Tome and Principe" OR "Seychelles" OR "Somalia" OR "South Sudan" OR "Eswatini" OR "Togo")) AND

TITLE-ABS-KEY(("educational policy" OR "education reform" OR "higher education policy" OR "academic policy" OR "curriculum development" OR "accreditation" OR "quality assurance" OR "curriculum design" OR "pedagogical approaches" OR "teaching methods" OR "educational technology" OR "e-learning" OR "MOOCs" OR "blended learning" OR "research output" OR "academic research" OR "innovation in education" OR "research funding" OR "scholarly publications" OR "research capacity" OR "student engagement" OR "student services" OR "campus life" OR "student leadership" OR "alumni relations" OR "student development" OR "international education" OR "global higher education" OR "cross-border education" OR "student mobility" OR "academic partnerships" OR "education financing" OR "tuition fees" OR "scholarships" OR "educational grants" OR "funding models" OR "financial aid" OR "academic staff" OR "faculty development" OR "staff retention" OR "professional development" OR "academic careers" OR "educational quality" OR "impact assessment" OR "graduate outcomes" OR "alumni success" OR "academic standards" OR "educational challenges" OR "barriers to education" OR "higher education crises" OR "academic freedom" OR "institutional challenges" OR "education and development" OR "socio-economic impact" OR "education and employment" OR "workforce development" OR "skill gap" OR "future of higher education" OR "emerging trends" OR "educational innovations" OR "new education models" OR "21st-century skills")) AND

TITLE-ABS-KEY(("case study" OR "literature review" OR "empirical study" OR "qualitative research" OR "quantitative research" OR "mixed-methods approach" OR "theoretical framework" OR "methodological considerations"))

The search strategy employed for this review encapsulates a comprehensive sweep of academic literature on higher education in Africa, targeting a wide range of educational settings from tertiary institutions to polytechnics, and spanning the breadth of African regions and countries. It also encompasses various thematic pillars in education policy and practice, including reforms, pedagogical approaches, technology in education, research, student services, and educational financing. Lastly, it filters for methodological diversity, capturing case studies, literature reviews, empirical research, and theoretical analyses to ensure a rich and varied corpus of evidence.

SEARCH STRATEGY FOR THE BIBLIOMETRIC REVIEW ON SCOPUS

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Advanced query

Search within Article title, Abstract, Keywords	Search documents * ("higher education" OR "tertiary education" OR "post-secondary education" OR "univ
AND	
Search within Article title, Abstract, Keywords	Search documents ("Africa" OR "Sub-Saharan Africa" OR "North Africa" OR "Algeria" OR "Egypt" OR "Nig
AND	
Search within Article title, Abstract, Keywords	Search documents ("educational policy" OR "education reform" OR "higher education policy" OR "acade
AND	
Search within Article title, Abstract, Keywords	Search documents ("case study" OR "literature review" OR "empirical study" OR "qualitative research" OR

JUSTIFICATION FOR 1990-2023 TIMEFRAME

The screenshot displays a search interface with three search criteria boxes, each containing a search scope (Article title, Abstract, Keywords) and a search query. The queries are: 1) ("Africa" OR "Sub-Saharan Africa" OR "North Africa" OR "Algeria" OR "Egypt" OR "Nig...), 2) ("educational policy" OR "education reform" OR "higher education policy" OR "acade...), and 3) ("case study" OR "literature review" OR "empirical study" OR "qualitative research" OR...). The interface includes options to save or set alerts for the search, and a search button. Below the search area, there are tabs for Documents, Preprints, Patents, and Secondary documents. A section indicates 691 documents found, with options to analyze results, show all abstracts, and sort by Date (newest). A table lists the first two documents:

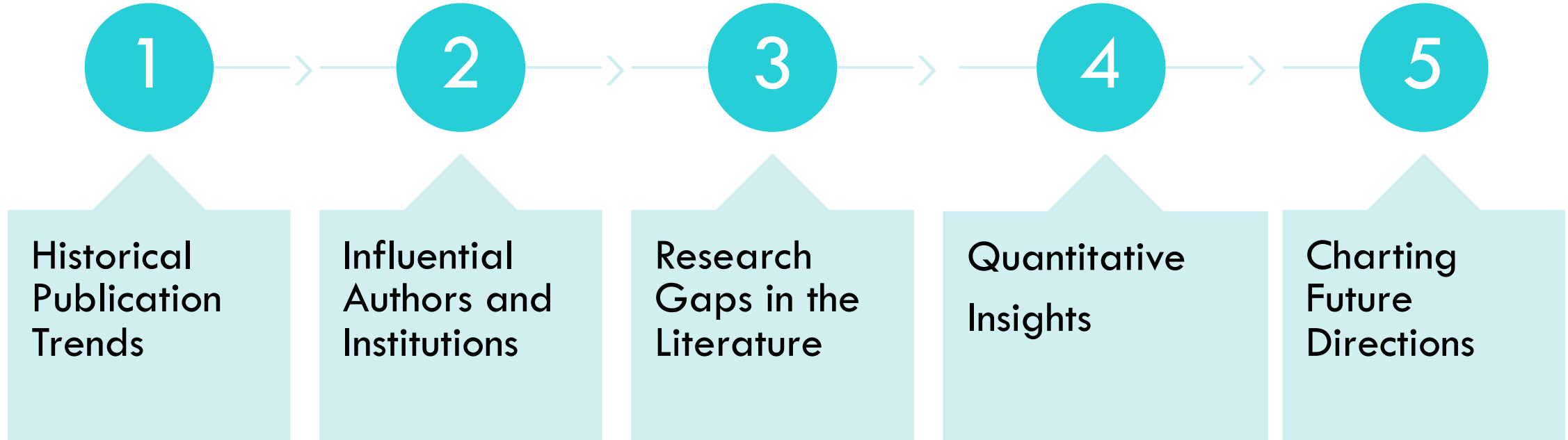
Document title	Authors	Source	Year	Citations
1 A call to enhance transparency among Egyptian medical schools	Talaat, W., Amin, M.A., Bassiouny, M.R., Hassan, N.H., Hamed, O.	BMC Medical Education, 23(1), 489	2023	0
2 Spatial perspectives on student profiling to inform open distance e-learning (ODEL) in various geographical contexts: a case study from the Global South	Carow, S., Schmitz, P., Pretorius, R.	Dis...	4(1)	

At the bottom left, a bar chart shows the number of documents published from 1992 to 2023, with a search range selector set to 1992-2023. A modal window at the bottom right indicates "Exporting 691 documents to CSV" with a progress bar at 14%.

The 1990-2023 timeframe spans a pivotal period of political, economic, and technological change that has profoundly shaped higher education in Africa, including democratic transitions, educational reforms, and the advent of digital learning. This era also saw increased global cooperation and the implementation of strategic frameworks like the African Union's Agenda 2063, which underscore education's role in sustainable development.

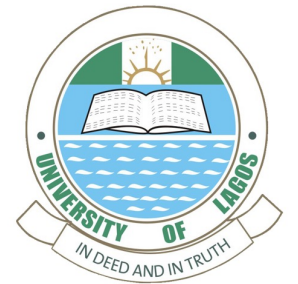
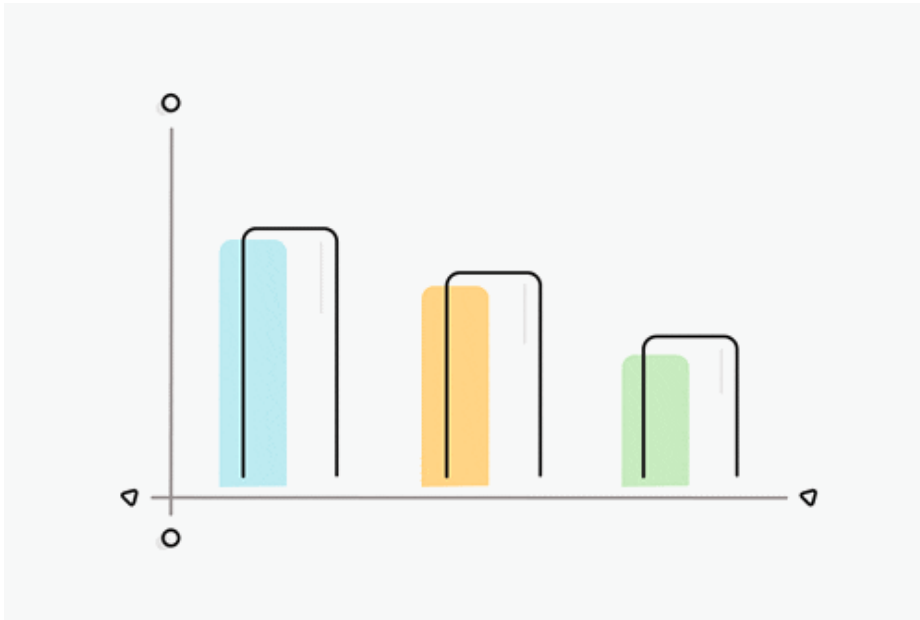
Selecting this timespan allows for a bibliometric analysis that is both retrospective and current, capturing the essence of a transformative phase in African higher education.

CONTENT OF THE PRESENTATION



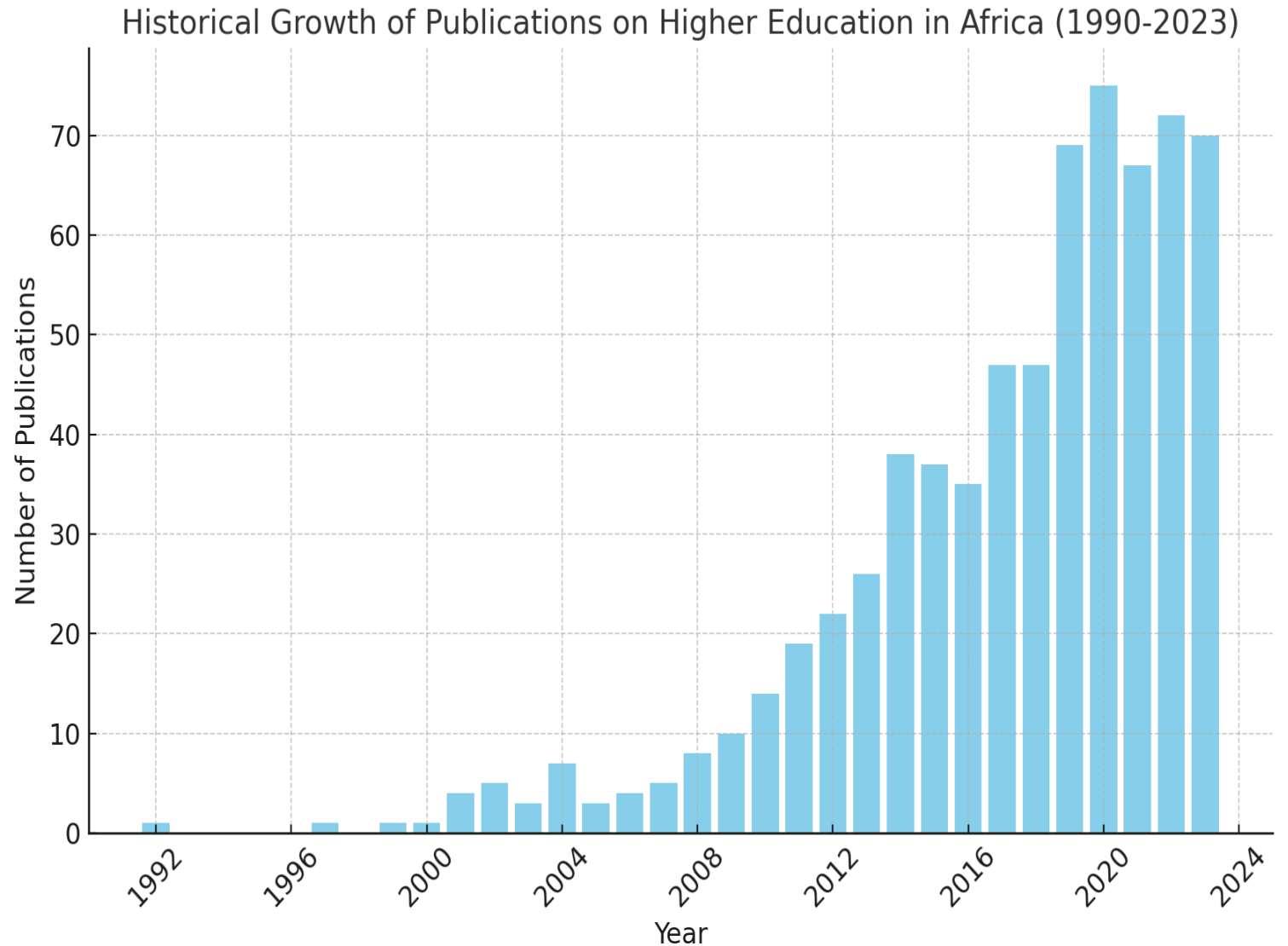
1 HISTORICAL PUBLICATION TRENDS

- Analysis of publication growth from 1990-2023
- Identification of key periods of significant research activity
- Graphical representation of publications over time



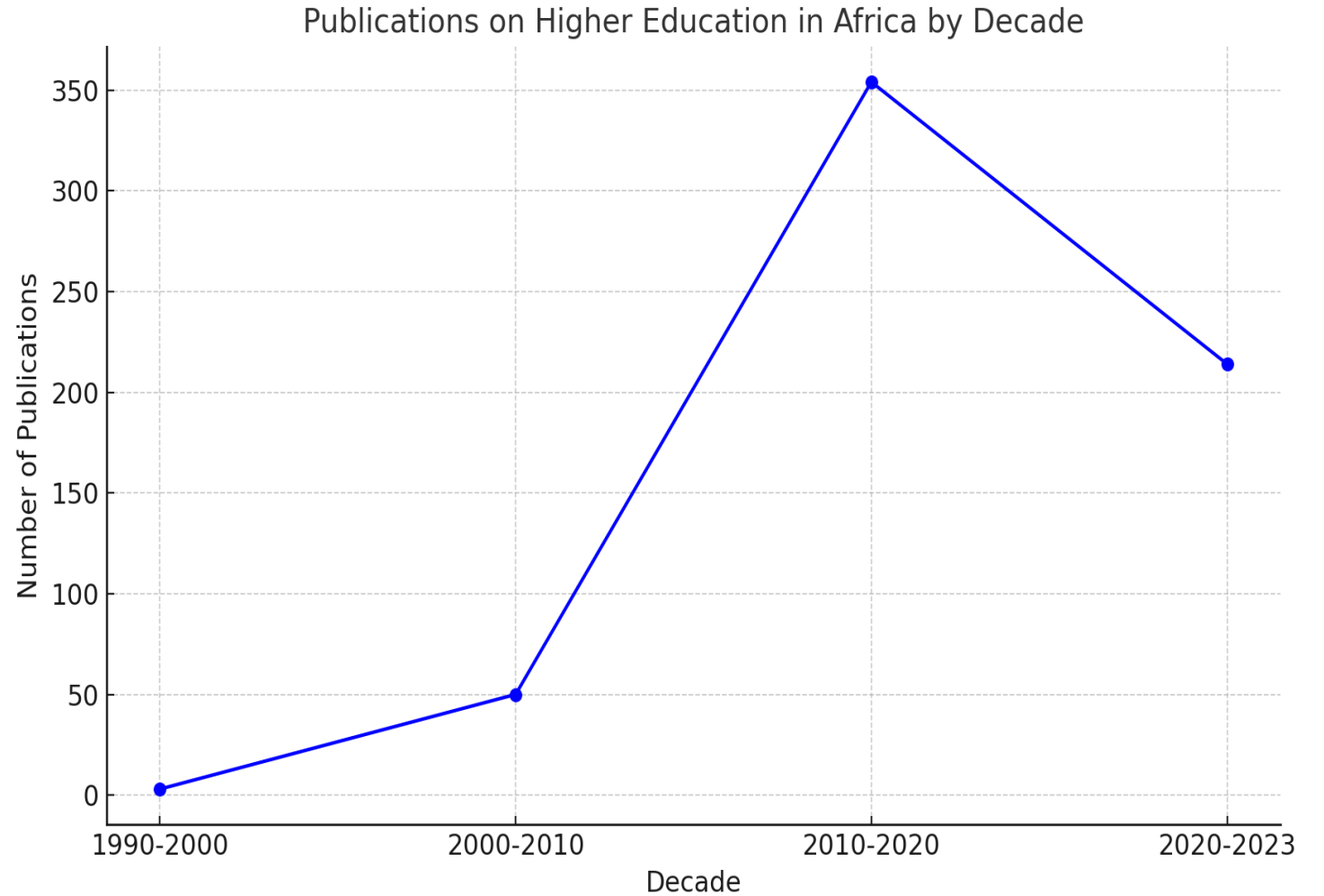
HISTORICAL ANALYSIS OF HIGHER EDUCATION PUBLICATIONS IN AFRICA

As evident from the graph, there has been a noticeable increase in the number of publications over the years. This trend underscores the expanding scope of research, policy analysis, and scholarly discussions centered on higher education in Africa. The growth trajectory indicates not only a rising academic interest but also the increasing complexity and relevance of higher education issues in the context of Africa's development goals.

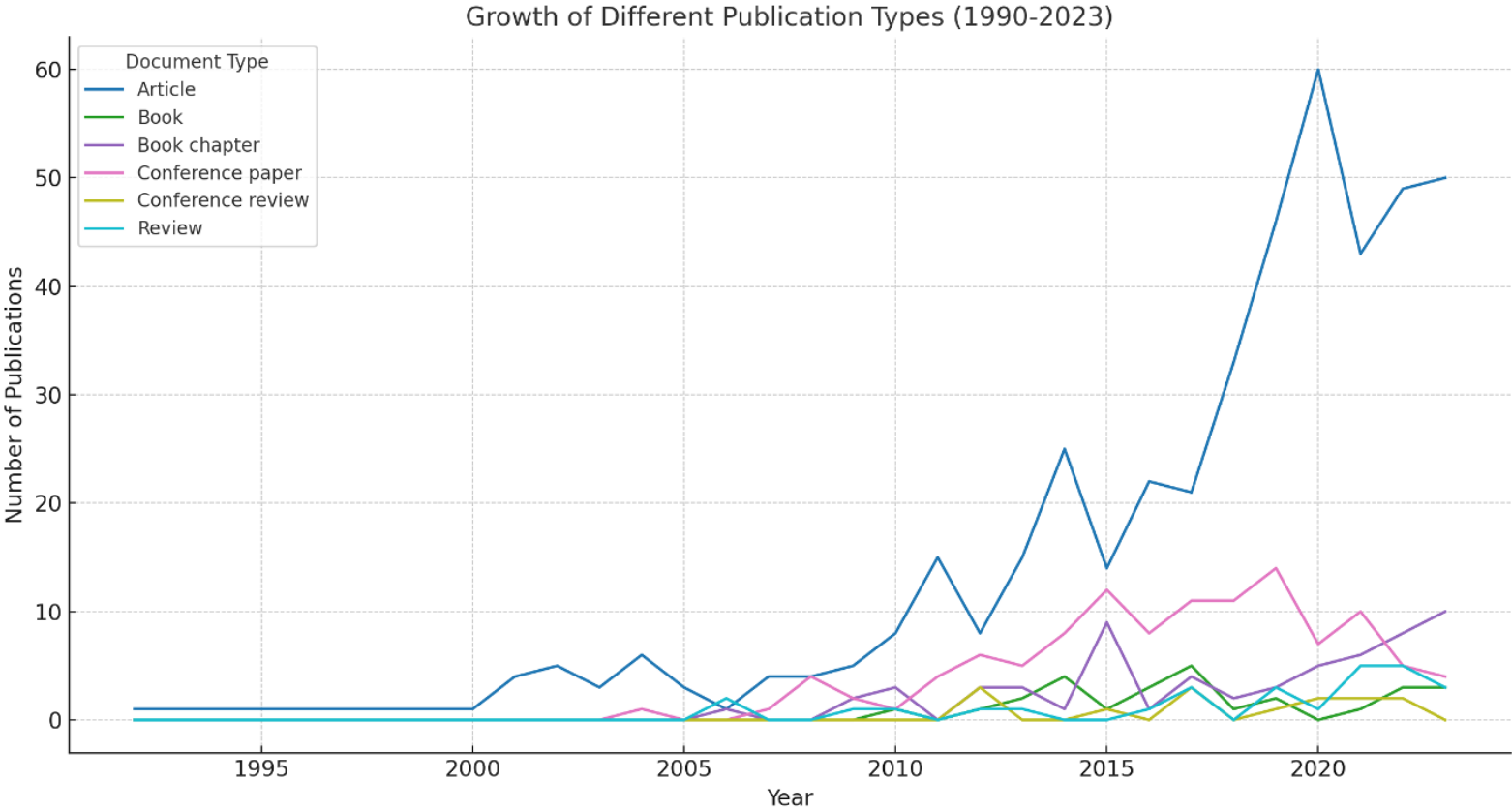


DECADAL ANALYSIS OF HIGHER EDUCATION PUBLICATIONS IN AFRICA

The graph exhibits distinct trends and shifts in publication volume over the specified periods, reflecting the changing dynamics and focus of higher education research in Africa. The latest period, from 2020 to 2023, although shorter than a decade, is of particular interest as it indicates a continuation of the upward trajectory in scholarly attention, potentially signifying a response to recent global events and educational reforms.



GROWTH OF PUBLICATION TYPES IN HIGHER EDUCATION IN AFRICA (1990-2023)



The multicolored line graph illustrates the changing trends in scholarly communication, with articles showing steady growth, reflecting their role as the mainstay in peer-reviewed academic discourse. Conference papers demonstrate a pattern of peaks and troughs, indicating the fluctuating nature of scholarly meetings and the importance of immediate knowledge exchange. Meanwhile, book chapters and books, though less frequent, represent in-depth, reflective scholarship and major research milestones in the academic narrative.

2

INFLUENTIAL AUTHORS AND INSTITUTIONS

- Top ten authors by publication volume and their affiliations
- Impact of leading institutions and countries in shaping the discourses
- Discussion on the collaborative networks among authors

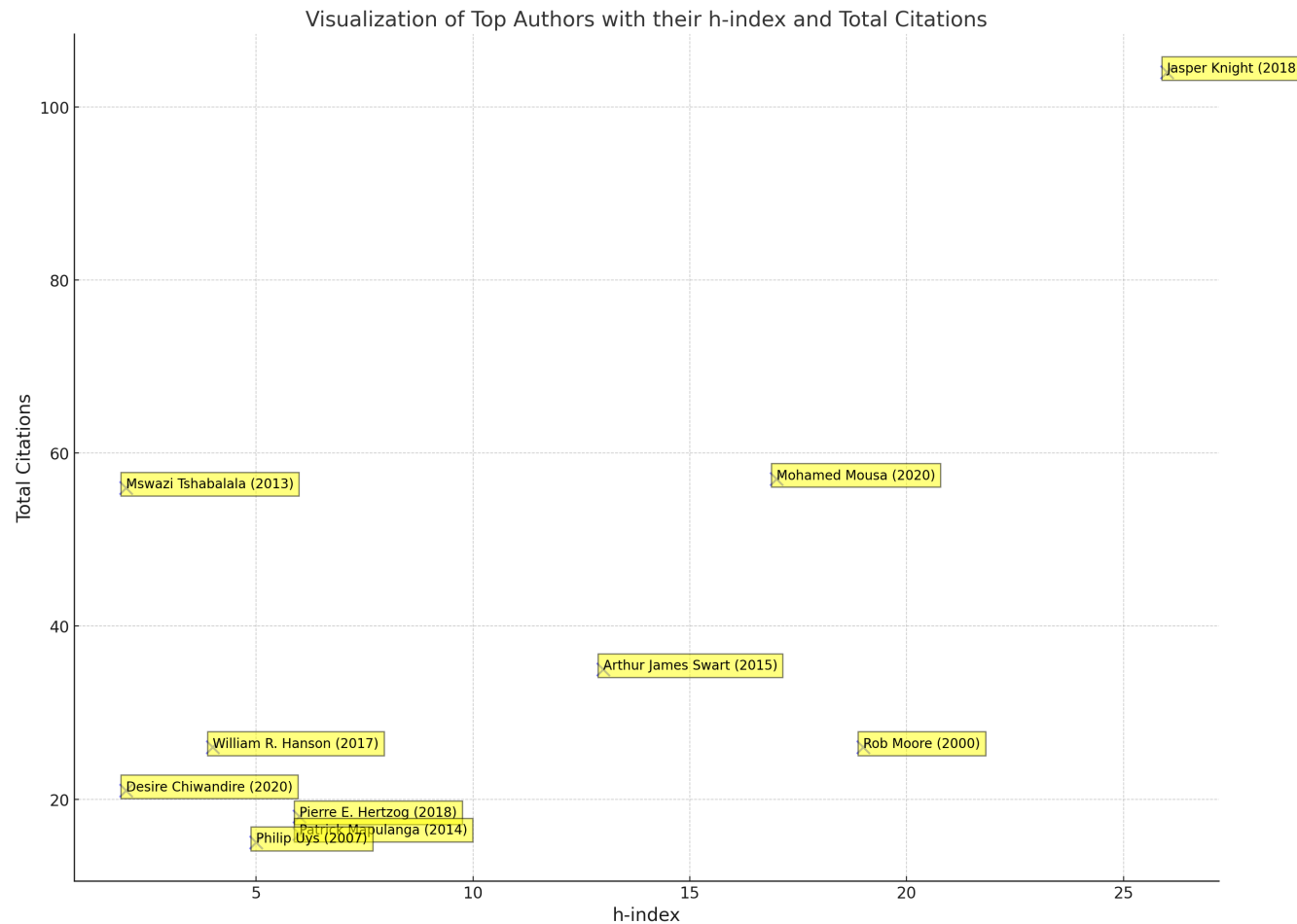


TOP 10 AUTHORS INFORMATION

Full Name & Scopus ID	Affiliation	h-index	Number of publications	Total Citations	Publication Year
Knight, Jasper (7401751663)	School of Geography, Archaeology & Environmental Studies, University of the Witwatersrand, Johannesburg, South Africa	26	202	104	2018
Mousa, Mohamed (57189701889)	Pontificia Universidad Catolica del Peru	17	63	57	2020
Tshabalala, Mswazi (56103599100)	University of Zululand, Ulundi, South Africa	2	3	56	2013
Swart, Arthur James (56747481700)	Central University of Technology, Bloemfontein, Free State, South Africa	13	108	35	2015
Hanson, William R. (36188270700)	Anderson University South Carolina, United States	4	8	26	2017
Moore, Rob (57207374495)	Centre for Higher Education Development (CHED) at the University of Cape Town, located in Rondebosch 7701, Private Bag, South Africa.	19	55	26	2000
Chiwandire, Desire (57216258806)	University of Illinois at Chicago, United States	2	4	21	2020
Hertzog, Pierre E. (56747481700)	Central University of Technology, Bloemfontein, Free State, South Africa	6	36	18	2018
Mapulanga, Patrick (54414544900)	Kamuzu College of Nursing Library, University of Malawi, Lilongwe, Malawi	6	26	16	2014
Uys, Philip (15761455900)	Charles Sturt University, Bathurst, Australia	5	24	15	2007

This bibliometric review profiles ten distinguished authors, highlighting their scholarly impact across diverse academic disciplines and global institutions. Jasper Knight leads with an h-index of 26 and 104 citations, representing the University of the Witwatersrand, while Rob Moore's work from the year 2000 still resonates, reflected in his h-index of 19. The collective body of work from these authors, with affiliations ranging from South Africa to the United States and Australia, underscores the extensive reach and collaborative spirit of contemporary research.

VISUALISATION OF TOP AUTHORS WITH THEIR H-INDEX AND TOTAL CITATIONS



This visualisation highlights the scholarly impact of ten distinguished authors, juxtaposing their h-index against total citations, anchored by the peak publication year of their most influential work. Jasper Knight leads with an exceptional h-index, denoting sustained academic influence, while Mohamed Mousa's recent works signal his rising prominence. The range of publication years across the authors reflects the enduring relevance of their contributions to their respective fields.

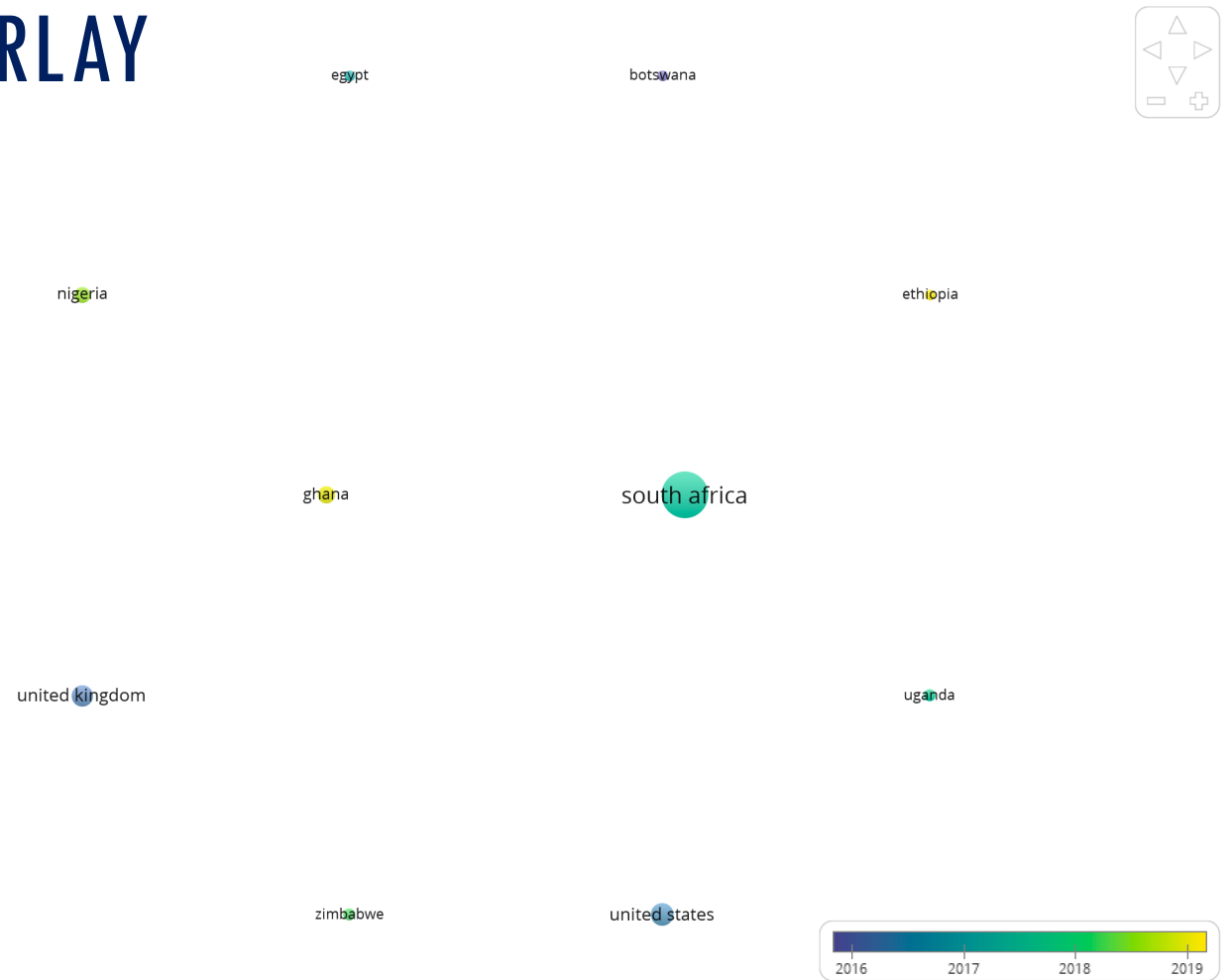
SELECTED TOP 10 COUNTRIES - DOCUMENTS AND CITATIONS

In a bibliometric analysis of global research output, thresholds were established to select countries with significant scholarly contributions, requiring a minimum of 17 documents and 10 citations. Out of 88 countries evaluated, 11 surpassed these criteria, with South Africa leading in both documents and citations. The selected countries' data underscores the concentrated nature of research productivity and the importance of setting benchmarks to identify key players in the academic landscape.

Country	Documents	Citations
South Africa	284	1744
United States	70	886
United Kingdom	64	795
Uganda	22	186
Botswana	17	151
Nigeria	38	149
Ghana	40	139
Egypt	17	138
Ethiopia	17	64
Zimbabwe	19	44

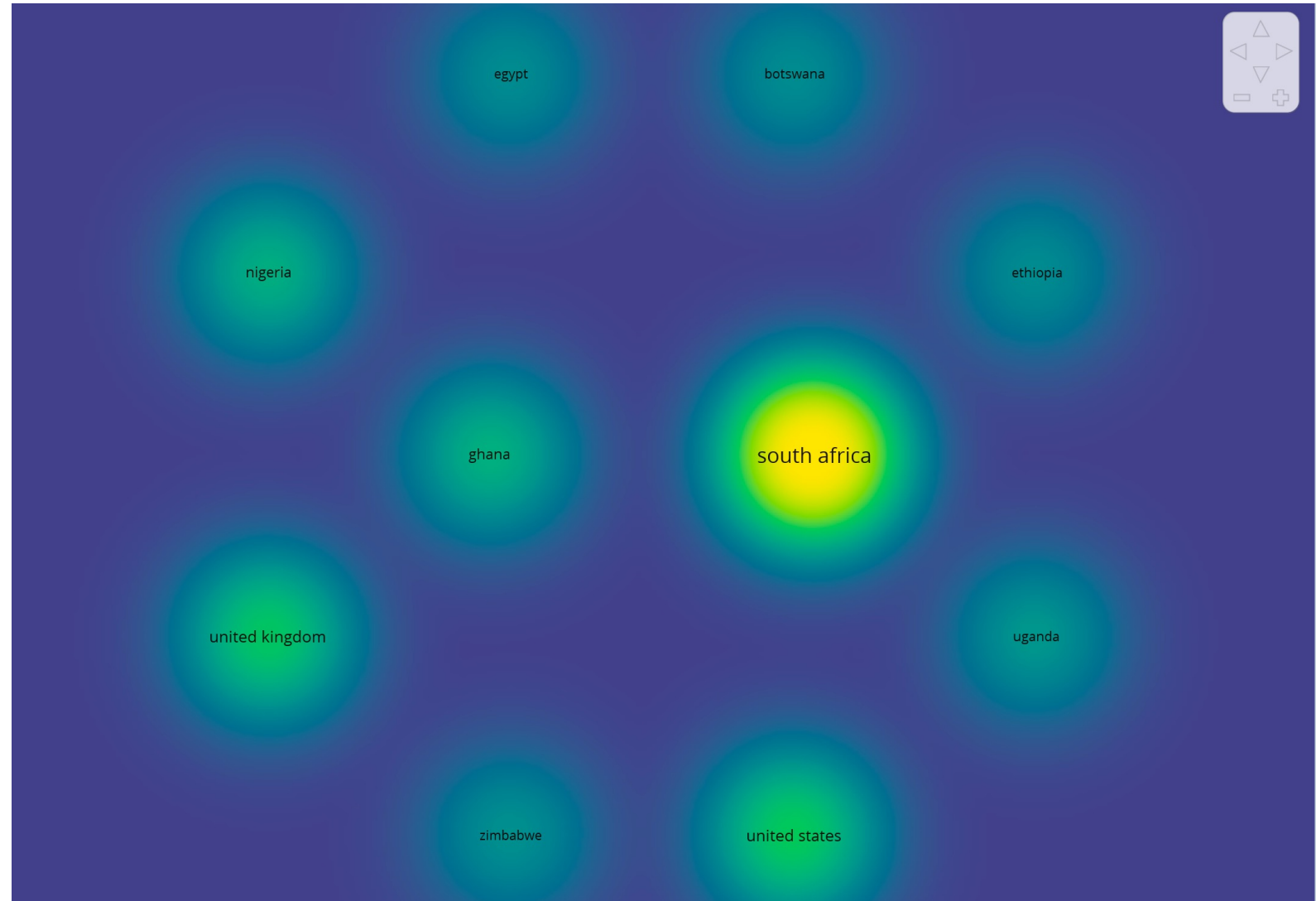
TOP 10 COUNTRIES - DOCUMENTS AND CITATIONS (NETWORK & OVERLAY VISUALISATION)

This network map showcases the research collaborations between countries, with South Africa positioned as a key hub. The color gradient represents the timeline of research output, highlighting the dynamic flow of academic contributions over recent years. Each country's placement reflects its collaborative frequency and scholarly impact within the global research landscape.



TOP 10 COUNTRIES - DOCUMENTS AND CITATIONS (DENSITY VISUALISATION)

This heatmap illustrates the concentration of research activity across various countries, with South Africa glowing prominently as a significant research hub. The gradation from blue to green to yellow indicates increasing research intensity and collaboration. Notably, regions like Ghana and Nigeria also emerge as active nodes in this scholarly network.



3

RESEARCH GAPS IN THE LITERATURE

- Identification of underrepresented topics in the literature
- Emerging areas of research that warrant future investigation
- Visualisation of niche keywords suggesting potential research avenues



ARUA
African Research
Universities Alliance



CLUSTERS OF KEYWORDS AND PHRASES

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Learning	Education	Library	Study	Students
Education	Higher	College	Education	Learning
Study	Higher Education	Participants	Research	Study
Higher	Study	Training	University	Education
Students	Quality	Libraries	Case	Student
Higher Education	Research	Staff	Development	Data
Teaching	Institutions	University	South	Higher
University	South	Work	Africa	University
Technology	Africa	Management	Higher Education	Research
Research	Development	Uganda		Academic

This table categorises the prominent themes in higher education research across five distinct clusters, each highlighting the complex facets of academic inquiry in Africa. Cluster 1 emphasises the foundational elements of academia such as 'Learning' and 'Education', while Cluster 2 shifts towards the institutional quality and regional focus, as seen in terms like 'South' and 'Africa'.

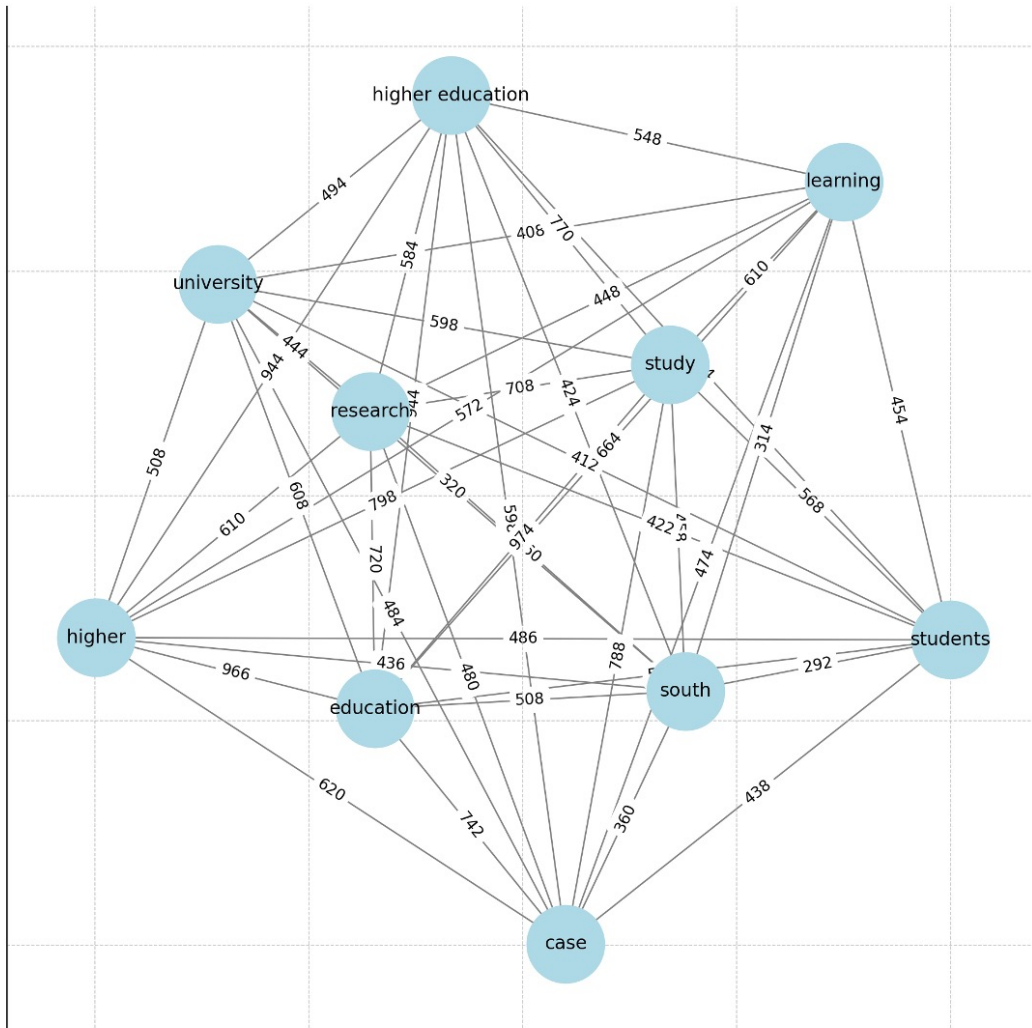
Clusters 3 to 5 diversify further, encompassing operational aspects like 'Library' and 'Management' in Cluster 3, the methodological focus in Cluster 4 with 'Case' and 'Study', and the experiential perspectives of 'Students' and 'Academic' in Cluster 5.

TOP 10 KEYWORDS AND PHRASES

The table presents the Top 10 Keywords and Phrases, showcasing the most central and recurring concepts within higher education research in Africa. 'Case' and 'South' top the list, indicating a strong methodological and geographical focus, while 'University' and 'Research' underscore the academic settings and activities driving scholarly work. The prevalence of 'Students' and 'Higher Education' reflects the core subjects of educational research, affirming their significance in the ongoing discourse.

Rank	Top 10 Keywords and Phrases
1	Case
2	South
3	University
4	Research
5	Students
6	Higher Education
7	Higher
8	Study
9	Learning
10	Education

KEYWORD ANALYSIS AND CLUSTERING IN HIGHER EDUCATION RESEARCH IN AFRICA



The network graph illustrates key themes in higher education research within Africa, highlighting the interconnectivity between concepts like "higher education," "research," "university," "students," and "learning," with "case" studies being central, and a focus on the "south" suggesting a geographical emphasis.

The major point of this visualization is to demonstrate the interconnected nature of various concepts in higher education research in Africa, with a particular emphasis on case studies and a geographical focus on the southern region.

4 QUANTITATIVE INSIGHTS

- Statistical overview of publication venues and their influence
- Analysis of authorship patterns reflecting collaborative trends



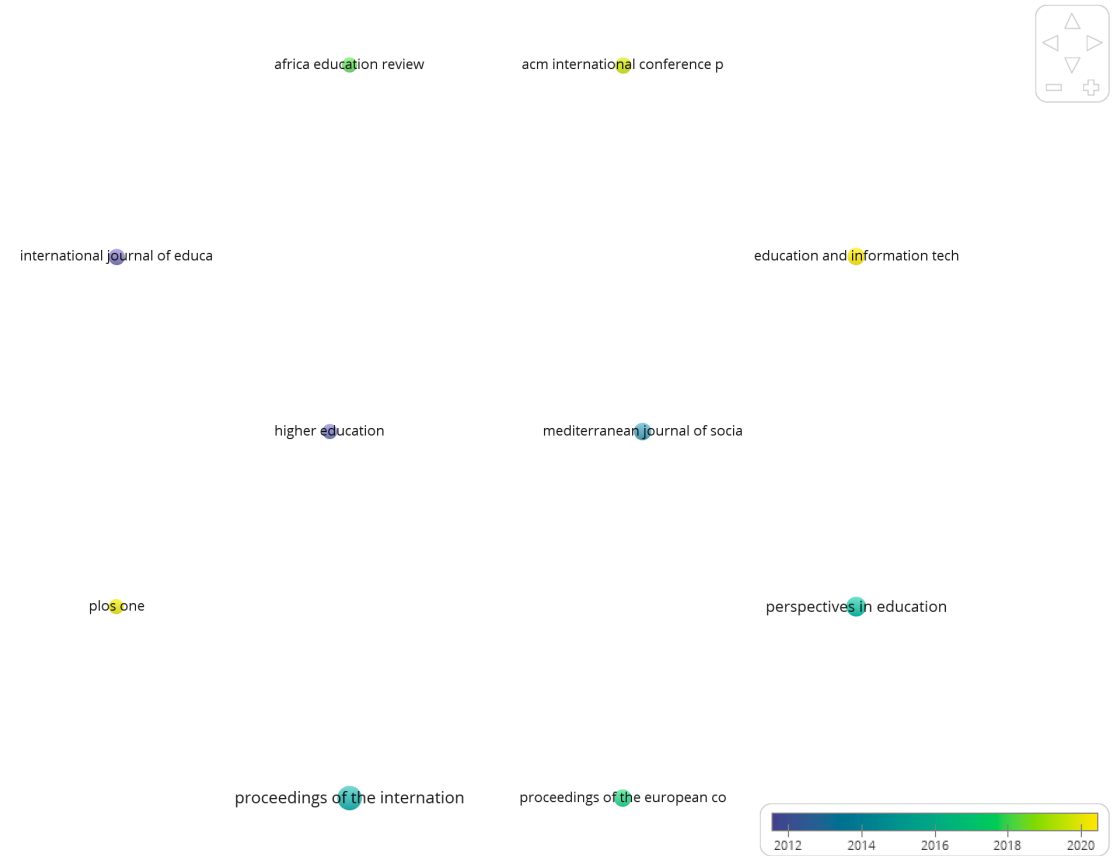
BIBLIOMETRIC ANALYSIS: TOP ACADEMIC SOURCES BY DOCUMENTS AND CITATIONS

Among 462 sources evaluated, these top 10 journals stand out in a bibliometric analysis for meeting stringent criteria set to gauge their academic impact—each with at least 6 documents published and a minimum of 5 citations received. The International Journal of Educational Development leads the pack with an impressive 216 citations, indicative of its significant contribution to the field of educational research. This curated list represents a refined selection of sources recognised for their influential research, providing a snapshot of leading voices and platforms in the global academic community.

Source	Documents	Citations
International Journal of Educational Development	7	216
Higher Education	6	75
Education and Information Technologies	8	58
Perspectives in Education	10	51
PLOS ONE	6	50
ACM International Conference Proceeding Series	7	34
Proceedings of the International Conference on E-Learning (ICEL)	15	24
Africa Education Review	6	23
Mediterranean Journal of Social Sciences	8	19
Proceedings of the European Conference on E-Learning (ECEL)	8	5

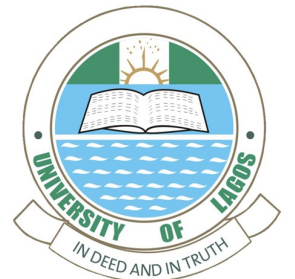
BIBLIOMETRIC ANALYSIS: TOP ACADEMIC SOURCES BY DOCUMENTS AND CITATIONS (OVERLAY VISUALISATION)

This bibliometric map positions key academic sources in a relational space, reflecting their interconnectedness based on citations and research themes. The proximity of sources indicates thematic similarities or collaborative links, with the colour gradient marking the temporal dimension of publications. It serves as a visual guide to the academic landscape, spotlighting the most influential journals and conferences within the field.



5 CHARTING FUTURE DIRECTIONS

- The need for multidisciplinary research to tackle complex educational challenges
- Emphasis on international collaborations to enrich scholarly discourse in African higher education



INNOVATING HIGHER EDUCATION RESEARCH IN AFRICA: MULTIDISCIPLINARY, COLLABORATIVE, AND CULTURALLY INCLUSIVE APPROACHES

01

**Multidisciplinary
Research in
Higher Education**

02

**The Power of
Collaboration**

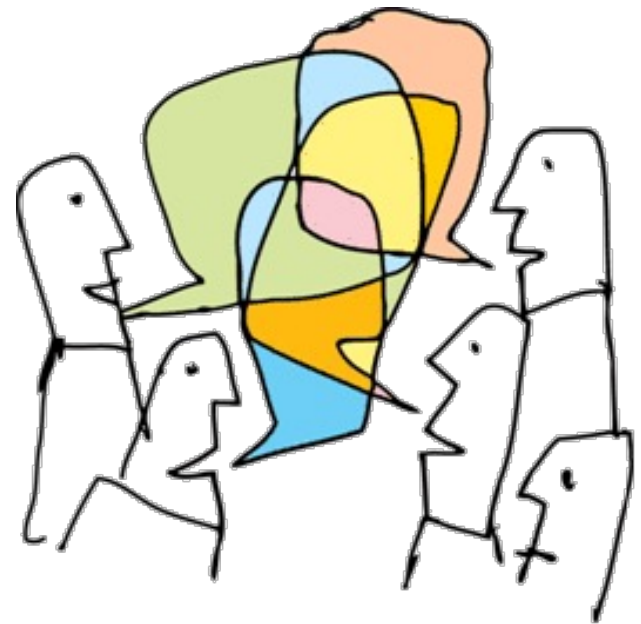
03

**Valuing
Indigenous
Knowledge**

01 MULTIDISCIPLINARY RESEARCH IN HIGHER EDUCATION

"Multidisciplinary research is breaking new ground in African higher education, weaving together diverse fields to forge innovative solutions."

- I. Evidence of extensive research across diverse fields.
- II. Shift towards interdisciplinary solutions for educational challenges.
- III. Future of academia lies in the integration of various disciplines.



02 THE POWER OF COLLABORATION

"Collaboration is the cornerstone of modern research, uniting scholars across continents to amplify the impact and reach of their work."

- I. Data indicates a strong trend of collaborative research efforts.
- II. International authorship exemplifies unity in knowledge creation.
- III. Importance of cross-border partnerships in advancing research.



03 THE VALUE OF INDIGENOUS KNOWLEDGE

"Indigenous knowledge is emerging as a powerful force in academia, offering unique insights that enrich and diversify the global educational narrative."

- I. Recognition of indigenous knowledge as a valuable research component.
- II. Potential of Africa's cultural heritage to contribute unique perspectives.
- III. Imperative to incorporate this wisdom into educational research.

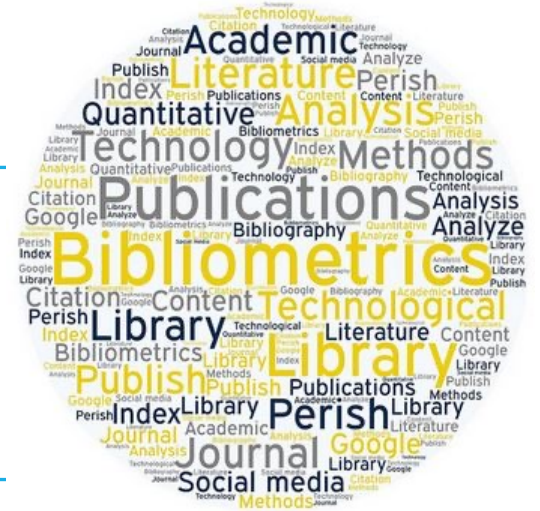


SUMMARY & FUTURE PATHWAYS: CHARTING FUTURE PATHWAYS IN HIGHER EDUCATION RESEARCH

Bibliometric data showcases the evolving landscape of academic research in Africa.

Emphasises breaking down disciplinary barriers and fostering global research communities.

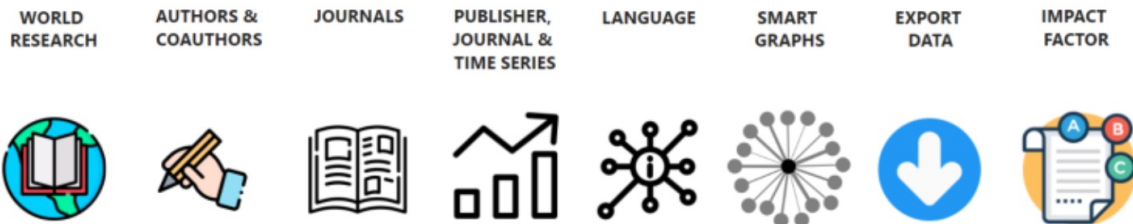
Emphasises the integration of traditional knowledge into scholarly inquiry.



FINAL THOUGHTS



Bibliometric reviews serve as a powerful analytical lens, offering us a data-driven foundation to articulate the transformative potential of higher education in Africa — a future that is envisioned to be comprehensive, cooperative, and deeply integrated with the continent's rich traditions and knowledge systems.



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