THE 2024 World University Rankings Data Masterclass – Africa

Loubaba El Wazir
Rankings Product Owner

Danae Banette
Senior Rankings Product Owner
Agenda

World University Rankings 2024

Methodology Review

Africa Trends and Analyses

How to participate

Sub-Saharan Africa University Rankings
To help **universities** understand their position against their mission. To help **students** find and access the university best suited to their abilities and aspirations. To help **higher education** deliver transformational teaching, research and innovation.

**1971**  
**2023**
Our Rankings

TEACHING

Focus: student satisfaction, employer reputation, graduation rate + more
Participation rules: country specific

RESEARCH

Focus: research output, research quality, research collaboration, reputation + more
Participation rules: 1,000+ publications over 5 years, teach undergraduates across a range of subjects

IMPACT & SUSTAINABILITY

Focus: research, teaching, stewardship and outreach against the UN’s 17 Sustainable Development Goals
Participation rules: all UG or PG higher education institutions
The world’s biggest university ranking

Universities
The world’s biggest university ranking
- Universities submitted data: 2,673
- Number of countries represented: 127

Universities Data
The world’s largest data gathering exercise from universities
- Data values: 411,789
- Data queries resolved: 34,455

Bibliometrics
In partnership with ELSEVIER
- Research papers: 16.5m
- Citations: 134m

Academic Survey
The world’s largest academic survey
- Respondents: 68,402
- Votes: 944,509
- Countries: 166
20\textsuperscript{th} Anniversary of THE World University Rankings

Number of universities which submitted data to THE World University Rankings

![Bar chart showing the number of universities which submitted data to THE World University Rankings from 2016 to 2024. The chart includes data for both ranked and unranked universities.](chart.png)
What is Field Weighted Citation Impact?

Let’s say I published a journal article in 2019 on artificial intelligence, and it received 6 citations so far...

...and the average number of citations received by publications of the same type, same year and same subject is 2...

...then the FWCI of this publication is 6/2 = 3
What about FWCI of an author or an institution?

FWCI of a tech oriented university in East Asia

... same university but log Y-axis
**THE World University Rankings Research Quality Metrics**

- **Citation Impact** – Mean FWCI of an institution’s output, but with tweaks
  - Kilo-author papers
  - Country normalisation
- **Research Strength** – 75th percentile FWCI of an institution’s output
- **Research Excellence** – Number of papers in top 10 percent by FWCI
- **Research Influence** – Different from others research quality metrics
  - Not all citations are created equal
  - Citations from important papers counts more
  - How to define “important papers”?
Research Influence - Papers

Both papers have 3 citations. Which one is likely to be more “influential”? 

Citing Paper -> Cited Paper
Research Influence - Universities

In Computer Science in 2022:

- University X has a set of papers with 1000 citations, all from University Y
- University Y has a set of papers with 900 citations, all from University X
- Papers from X & Y universities do cite other universities' papers
- University Z has a set of papers with 800 citations, from universities around the world, including universities who receive over 10000 citations for all their papers

Papers from University Z had the least citations, but it is the most influential university of these 3.
Research Influence – What is it?

Research Influence looks at the network of citations around papers to understand what impact they are having around the world.

In essence, it works like a popularity contest for papers. It's not just about the quantity of citations but also the quality, with citations from reputable papers carrying more weight.

Each paper gets an influence score based on how many other papers cite it and how influential those citing papers are. If a lot of influential papers cite a paper, it gets a higher influence score.

The calculation for Research Influence is based on Google’s “Page Rank” algorithm.
Research Influence – How it works

Papers start with the same influence

We can then think of some of a paper's influence being shared amongst the papers it cites

This process is repeated multiple times through a number of iterations (page rank is an iterative algorithm)

The effect is that papers that are well connected receive more influence scores than from papers that aren’t

This is then rolled up to the university level to calculate university influence

The diagram shows the effect at university level which is an aggregation of the papers produced by the university; this is done to aid understanding. The algorithm works at the paper level.

Deeper Blue indicates more Research Influence
Industry: Patents

• The extent to which universities are supporting their national economies through technology transfer is an area that deserves greater recognition. We will be introducing an additional measure.

• Directly measures research output, specifically how much an institution’s research is cited by patents. This is similar to one that we already use within the THE Impact Rankings (in SDG 9: Industry, Innovation and Infrastructure).

• This measure is subject weighted to avoid penalising universities producing research in fields low in patents.

• This is a count of patents, normalised by staff numbers.
International Outlook

• Large countries had been disadvantaged compared to small countries in our international metrics, in that it is “easier” for staff and students in small countries to work/study abroad.

• The existing metrics is now normalised to account for the populations size:
  • Proportion of international students
  • Proportion of international staff
  • Proportion of publications with at least one co-author from an international institution

• New Studying abroad metric at zero weight
Africa Trends and Analyses
Universities per country/region in the World in WUR 2024

There are a total of 1904 institutions in The World ranked in the World University Rankings 2024, from 108 countries 113 institutions from Africa were ranked.
The top ranked university in Africa is University of Cape Town, which is ranked 167th.
Across Africa, Physical Sciences was the most frequently ranked subject in 2024 where it was ranked for 98 universities. Law was the least frequently ranked subject in 2024 with just 12 universities ranked.
Africa vs the World WUR 2024 subjects comparison

The boxes for Africa are on the left, the boxes for The World are on the right.
Africa vs the World WUR 2024 metrics comparison

The boxes for Africa are on the left, the boxes for The World are on the right.
Africa vs the World WUR 2024 comparison heatmap

High Growth Areas
- Clinical and Health - International
- Arts and Humanities - Research Quality
- Education - International
- Education - Industry
- Education - Teaching

Low Growth Areas
- Computer Science - Industry
- Engineering - Industry
- Life Sciences - Industry
- Physical Sciences - Industry
- Psychology - Industry

The heatmap shows the difference in scores between Africa and The World, with green representing a higher score for Africa.
Africa vs the World Top 500 comparison heatmap

The heatmap shows the difference in scores between Africa and The World Top 500, with green representing a higher score for Africa.
The WUR Score for Africa has increased by an average of 10.4 between 2018 and 2024, The World has increased by an average of 8.3 during the same period.
The WUR rank for Africa has decreased by an average of 178 between 2018 and 2024, The World decreased by an average of 136. Note that the number of universities in WUR has risen from 1103 in 2018 to 1904 in 2024.

The WUR Score for Africa has increased by an average of 10.4 between 2018 and 2024, The World has increased by an average of 8.3 during the same period.
Between 2018 and 2024, the Research Quality score has increased by an average of 21.9.

Between 2018 and 2024, the Doctorates/Staff score has increased by an average of 22.3. Conversely, the Staff/Student score has decreased by an average of 6.5.
Between the years 2018 and 2024 Africa has improved in the Research Quality, Research Environment pillars in comparison with The World, but has dropped in Industry, International, Teaching.
Between the years 2018 and 2024 Africa has improved in the FWCI, Doctorates/Staff, Publications/Staff, Teaching Reputation, Research Reputation, International Staff metrics in comparison with The World, but has dropped in Doctorates/Undergrad, Income/Staff, Staff/Student, International Students, International co-authorship, Research Income/Staff, Industry Income.
How to participate?
Eligibility Criteria

Participation in THE World University Rankings (or any other THE rankings) is always free of charge. However, there is a set of eligibility criteria

• Must teach at undergraduate level

• Publication requirements
  • At least 1000 publications in 5 years
  • At least 150 publications each year
  • Separate publication requirements for the subject rankings

• Must not be a subject specialist
How to take part

We need your help for the **institutional data**

1. **Nominate a Data Provider**
   A Data Provider for your institution will need to be nominated. Please email us at profilerankings@timeshighereducation.com

2. **Connect to the Portal**
   Your Data Provider will receive login details to connect to the Data Collection Portal
   The Portal will be open between 8 January and 30 March 2024
Complete the stages of the data collection process

Data collection materials are available for download in 12 languages
We collect **data** at the institution level and in our 11 subjects:

- Staff and international staff
- Students and international students
- Undergraduate degrees awarded and doctorates awarded
- Income data

Since 2022: outbound exchange students

Art and Humanities
Business and Economics
Clinical and Health
Computer Science
Education
Engineering
Law
Life Sciences
Physical Sciences
Psychology
Social Sciences
Once you finish data entry, please go to this tab to review and submit your data.
Sub-Saharan Africa University Rankings

• In partnership with Mastercard Foundation, the rankings was developed by a consortium of African and international higher education organisations and Ghana-based Ashesi University in conjunction with THE’s data team

• Closely tied to the United Nations’ Sustainable Development Goals (SDGs) and the African Union’s Agenda 2063

• The Sub-Saharan Africa University Rankings assesses universities based on five pillars: **resources and finances, access and fairness, teaching skills, student engagement, and Africa impact**
Sub-Saharan Africa University Rankings 2023

88 ranked institutions and a total of 120 submitted their data in SSA 2023
Sub-Saharan Africa University Rankings

We need your help for the institutional data

1. Nominate a Data Provider
   Please email us at ssaranking@timeshighereducation.com

2. Connect to the Portal
   The Portal will be open for the next cycle in early 2024

3. Enter and Submit Data
   Universities will be requested to submit 3 types of data: continuous data, evidence for policies and initiatives. We collected bibliometric data (via Elsevier).

   Eligibility criteria: (1) offering undergraduate degrees and (2) a minimum of 50 responses per institution.
Q&A
Explore more of THE's datasets

Would you like to assess the impact of WUR 3.0 on your ranking performance?

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Universities can submit to as many SDG’s as they like, be it just one, or all 17