Webometrics, Altmetrics and Web Analytics

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Webometrics

- This is a ranking system of the world's universities based on a composite indicator that takes into account both the volume of the Web content and the visibility and impact of these web publications.
- The ranking is published by the Cybermetrics Lab, a research group of the Spanish National Research Council (CSIC) located in Madrid.

Webometrics

- The original aim was to promote academic web presence; supporting the open access initiatives for increasing the transfer of scientific and cultural knowledge to society.
- Has ranked universities worldwide every six months since 2004.
- The latest ranking (December 2024) placed TUK at #8 out of 125 institutions in Kenya.

Webometrics

- The objective is not to evaluate websites; their design or usability or the popularity of their contents.
- The aim of the ranking is to improve the presence of the academic and research institutions on the Web and to promote the open access publication of scientific results.
- The ranking started in 2004 and is updated every January and July.

Webometrics

- **Presence** – accounts for 20% of the score. Total number of web pages; considers all formats of documents on the web site.
- **Impact** – accounts for 50% of the score. Measured using backlinks the web site receives from other web sites external to the university. The number and diversity of links matter.

Webometrics

- **Openness** – accounts for 15% of the score. Measures the number of documents published in the institutional repository. Currently focusing on recent publications (from 2007).
- **Excellence** – accounts for 15% and counts the articles published in high impact international journals.

Webometrics

INDICATORS	MEANING	METHODOLOGY	SOURCE	WEIGHT
PRESENCE	Public knowledge shared	**DISCONTINUED**		
VISIBILITY	Web contents Impact	Number of **external networks** (subnets) linking to the institution's webpages (normalized averaged value is chosen). Check the Notes section about bad practices	*Majestic*	**50%**
TRANSPARENCY (or OPENNESS)	Top cited researchers	Number of **citations** from **Top 310 authors** (excluding the top 20 UPDATED outliers) See Transparent Ranking for additional info	*Google Scholar Profiles*	**10%**
EXCELLENCE (or SCHOLAR)	Top cited papers	Number of **papers** amongst the top 10% most cited in each one of the all 27 disciplines of the full database Data for the five year period: **2019-2023** UPDATED	*Scimago*	**40%**

Kenya

ranking	World Rank	University	Det.	Impact Rank*	Openness Rank*	Excellence Rank*
1	1045	University of Nairobi		944	824	1756
2	2121	Kenyatta University		2267	1497	3183
3	2226	Jomo Kenyatta University of Agriculture and Technology		3342	1547	2855
4	2794	Moi University		4949	1975	3336
5	2875	Egerton University		3594	2624	3886
6	3578	Strathmore University Nairobi		2725	4360	5050
7	4020	Maseno University		7166	2273	4668
8	4049	Technical University of Kenya		7793	2876	4415
9	4961	Masinde Muliro University of Science & Technology		8774	2691	5744
10	5901	Catholic University of Eastern Africa		6578	6566	6624
11	6118	Kenya Methodist University		1257	8255	7505
12	6328	Daystar University		8735	5529	6784
13	6331	Mount Kenya University		3691	4515	7505
14	6510	United States International University		4405	4541	7505
15	6618	University of Embu		5252	3801	7505
16	6740	Murang'a University of Technology		5061	4860	7505
17	6949	Meru University of Science & Technology		6135	4544	7505
18	7027	Kenya Forestry Research Institute		11838	4781	6967
19	7227	South Eastern Kenya University		7793	3519	7505
20	7292	Jaramogi Oginga Odinga University of Science & Technology (Bondo University College)		8148	3394	7505
21	7970	Dedan Kimathi University of Technology (Kimathi University College of Technology)		9526	4018	7505
22	8240	Kabarak University		9067	5102	7505
23	8579	Machakos University		10573	4346	7505
24	8747	Chuka University		11383	3765	7505
25	8828	Pwani University		11231	4167	7505

Limitations of Webometrics

- Focused on size (number of pages).
- Favours large, old universities with many members of staff.
- Complications about affiliations of mobile academics.
- Open to manipulation e.g. by creating foxy web sites to provide in-links.
- Methodology changes frequently.

Altmetrics

- Short for “alternative metrics”
- Altmetrics is anchored on the understanding that conversations of scholarly nature happen in day-to-day interactions.
- Most of these interactions and conversations happen online.
- Using conventional metrics and approaches leave out these important conversations.

Altmetrics

- Altmetrics basically measure the following:
  - **Attention** – number of people exposed to and engaged with a scholarly work.
  - **Dissemination** – where and why a piece of research is being discussed and shared, both among other scholars and in the public sphere.
  - **Influence and impact** – digital footprints and digital shadows; digital reputation; impact on peers and society at large.

Altmetrics

- Some of the interactions/conversations "counted" by altmetrics include:
  - Article downloads
  - Article views
  - Article sharing
  - Tagging
  - Following
  - Tweeting and retweeting

Altmetrics

- The advantages of using altmetrics over the traditional metrics include:
  - Quicker
  - Inclusive
  - Flexible
- Altmetrics is not seeking to replace the traditional metrics. It just provides other perspectives; it is complementary.

Web Analytics

- Web analytics is the process of analyzing the behavior of visitors to a Web site.
- Web analytics is often used as part of customer relationship management analytics
- May include tracking the behaviour of customers within the Web site e.g. the sites from which customers most often arrive.

Web Analytics

- Web analytics can be used to:
  - Assess likelihood that a given customer will repurchase a product after having purchased it in the past;
  - personalize the site to customers who visit it repeatedly;
  - monitor the dollar volume of purchases made by individual customers or by specific groups of customers;

Web Analytics

- Web analytics can be used to:
  - observe the geographic regions from which the most and the least customers visit the site and purchase specific products; and
  - predict which products customers are most and least likely to buy in the future.
- The objective is to promote specific products to those customers most likely to buy them, and to determine which products a specific customer is most likely to purchase.

Web Analytics

- Web analytics approaches include:
  - Web server log analysis
  - Page tagging
  - Geolocation of visitors based on IP
  - Click analytics
  - Customer lifecycle analytics
  - Packet sniffing
  - Hybrid approaches