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Path to World Class University: The African Perspective

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Abstract

The aim of this study was to explore the reasons behind the dismal performance by top ranking of universities in Africa compared to their global counterparts, with an aim of finding ways to improve the performance by African universities. The study sampled the top 15 universities in the world and compared them against the top 15 African universities. The study identified shared characteristics in top universities that catapult them to the top positions. Thus the study was descriptive and comparative in nature. The sampled universities were analysed on the basis of shared characteristics which included the type of university (comprehensive or programme specific, type and number of programmes offered by the universities, common courses across the universities as well as the correlation between the type and number of courses offered and the university's webometrics ranking. The study used the webometrics ranking. The study identified shared characteristics in top universities that catapult them to the top positions. The analysis of these characteristics allowed the study to make recommendations on how African universities can enhance their webometrics ranking to compete favorably against their global counterparts.

Key Terms: top ranking universities, dismal performance, African perspective, Webometrics.

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INTRODUCTION

Higher education institutions (HEIs) play a critical role in the development of a nation. They act as generators and repositories of knowledge and innovation to help a nation grow. Three main functions that support this role include research, teaching and community support (Asekun-Olarinmoye, 2015). Through research, new knowledge and technologies are developed which are then disseminated via teaching to support the development of a nation. As hubs of research, universities have the crucial responsibility of supporting their communities and nations by providing solutions to their problems. It therefore goes without saying that nations with the most prestigious institutions of higher learning are also those with the most development (Peters, 2019). Countries like the United States of America, Canada, the United Kingdom, Australia and the rest boast of the best universities in the world in terms of performance. Such universities, because of their prestigious reputation, attract the best students from around the world.

Sharing and disseminating of data by researchers is important to the role they play in the society. This is usually accomplished through community service and teaching. Usually, research findings are shared through presentation of papers at conferences, teaching, publication of data in reputable publications and public lectures. Because such knowledge is necessary for human development and welfare, it is imperative that researchers find ways of making it visible and accessible to the general public. The visibility also serves to enhance the researcher's reputation as well as the recognition of the associated university (Ati, 2017).

LITERATURE REVIEW

The advent and increasing uptake of new media (non-traditional media platforms) has presented researchers and higher education institutions with a perfect opportunity to widen their scope of influence by reaching out to a wider audience. Through the worldwide web (the internet), researchers, universities and other research institutions are able to enhance their visibility and, consequently, their reputation (Peters, 2019). Today, the internet is the major source of information as well as the primary platform for anyone (individuals, institutions or business organisations etc.) that desires to be recognised in the real world (Ati, 2017). Publications by scholars and universities are not only tools for scholarly communication, but also a way through which to reach a wider audience and improve the performance of the institution as perceived by the public.

With the advancement in technology and globalisation, it is now possible to study anywhere at any time. Students are now able to enrol at their university of choice and benefit from the unique benefits offered by institutions outside their geographical location. With this comes the need to compare various institutions. Comparison facilitates informed choice as learners endeavour to identify the best institution that matches their preferences (Peters, 2019). Therefore, there is a need to rank universities.

Ranking of higher education institutions is instrumental in highlighting the key features of academic performance, which may influence decision-making by policymakers (Shehatta et al., 2021). It motivates the academic community to strive for better quality, productivity and encourages competition. Ranking is an excellence benchmark for the public because it facilitates differentiation among institutions. The ability to tell institutions apart as a result of ranking is what contributes to differentiated academic goals and objectives (Shehatta et al., 2021).

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Although there are numerous ranking systems for higher education institutions, the current study chose to focus on the webometrics ranking system. This is a ranking system based on the composite indicators of visibility and activity measures (Khamala et al., 2018). Known as the Ranking Web of Universities, webometric ranking is conducted by Cybermetricscs Lab, a Spanish National Research Council group located in Madrid, Spain. The rankings are presented in January and July of every year. Formed in 2004, the webometrics ranking is the most comprehensive of all rankings, with the capacity to classify more than 17,000 institutions of higher learning globally (Webometrics, 2021). The ranking system focuses on activity /presence and visibility/impact indicators in a ratio of 1:1. These indicators include the total number of electronic publications in the institution's main webdomain as well as the visibility of its webpages based on the number of external inlinks received from other websites. Other aspects such as the accessibility of the website or its popularity (total number of visitors or visits) as well as the design are not considered.

In the January 2021 ranking, none of the top African universities made it to the top 100 or even 200 positions in the world. The top positions have been dominated by American and European institutions of higher learning (Webometrics, 2021). This is a worrying trend especially with the increase in calls for Africa to become self-reliant and deal with other continents as an equal partner. Various factors have been presented as causes of this dismal performance by Africa universities compared to their global counterparts. They include low activity and visibility of scholars, researchers and institutions in Africa, deficient institutional frameworks for effective sharing of research findings and insufficient infrastructural support by the respective African governments (Ati, 2017; Anyira & Idubor, 2020). This situation, if not addressed, could result in the lowering of African universities' esteem in the eyes of both funding agencies and students. Additionally, collaborative effort and exchange programmes with reputable global universities may suffer. The current study hopes to provide insight into the causes of this phenomenon with the aim of providing solutions for improving performance by African universities. The study intends to analyse the shared characteristics by top global universities which will lead to recommendations on ways to adopt the same characteristics to enhance performance.

RESULTS AND DISCUSSIONS

The research was a descriptive and comparative study. It targeted the top 15 universities in the world and the top 15 universities in Africa for analysis. These two categories of universities were analysed on the basis of the criteria listed below:

- Type – comprehensive or programme specific
- Type and number of courses offered in the universities
- Common courses offered across all universities
- Relationship between course/programmes offered and the universities ranking

The findings were presented in Table 1 below.

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Table 1: Characteristics of the Top 15 Universities Worldwide and in Africa

University	Country	Type	Overall rank	Impact rank	Openness rank	Excellence rank
University of Washington	USA	Comprehensive	1	6	25	9
Cornell university	USA	Comprehensive	2	5	3	24
Johns Hopkins university	USA	Comprehensive	3	18	110	8
Yale university	USA	Comprehensive	4	10	2	26
University of California San Diego	USA	Comprehensive	5	30	1	19
University of Toronto	Canada	Comprehensive	6	35	4	11
University of Wisconsin Madison	USA	Comprehensive	7	13	5	43
Pennsylvania state university	USA	Comprehensive	8	11	11	51
New York University	USA	Comprehensive	9	26	8	40
ETH Zürich	Switzerland	Specific	10	42	12	32
Ohio State University	USA	Comprehensive	11	43	26	42
University of Florida	USA	Comprehensive	12	33	7	61
Harvard university	USA	Comprehensive	13	1	5963	1
Washington university Saint Louis	USA	Comprehensive	14	40	6	64
University of Pittsburgh	USA	Comprehensive	15	50	17	56
University of Cape Town	South Africa	Comprehensive	216	417	160	248
Stellenbosch University	South Africa	Comprehensive	367	656	272	458
Cairo university	Egypt		553	1430	537	456
University of KwaZulu Natal	South Africa	Comprehensive	570	1396	425	521
University of Johannesburg	South Africa	Comprehensive	690	2233	581	504
University of South Africa	South Africa	Comprehensive	816	1077	831	1026
Alexandria university	Egypt	Comprehensive	840	1900	689	807
University of Western Cape	South Africa	Comprehensive	862	1103	736	1139
University of Witwatersrand	South Africa	Comprehensive	864	698	5963	353
University of Pretoria	South Africa	Comprehensive	952	647	5963	501
Mansoura University	Egypt	Comprehensive	1011	3954	555	737
Rhodes University	South Africa	Comprehensive	1026	1550	847	1269
University of Nairobi	Kenya	Comprehensive	1055	1180	616	1637
Makerere university	Uganda	Comprehensive	1103	2159	1288	1077
University of Ghana	Ghana	Comprehensive	1172	2549	823	1201

(Source: Webometrics, 2021)

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Out of the 15 top universities in the world sampled, 13 are located in the United States of America, one from Canada and one from Switzerland. In Africa, 9 of the sampled top universities are from South Africa, 3 from Egypt and one each from Kenya, Uganda and Ghana (Webometrics, 2021). This shows that universities in the United States have mastered the art of increasing the web visibility of their research and programmes. Similarly, South African universities have a competitive edge when it comes to webometrics ranking compared to other African universities.

With regard to the university categories, out of all the 15 top world universities, only one, ETH Zurich, was found to be a programme-specific university. The university is a Swiss Federal Institute of Technology and was founded specifically to educate scientists and engineers. It focuses exclusively on science, technology engineering and mathematics, for which it has worn international acclaim. The rest of the universities in the top 15 positions globally are comprehensive and offer a broad range of courses to a diverse population of students. An analysis of the top 15 African universities also yields a similar result. All of these institutions of higher learning are comprehensive and offer students a wide choice of courses to study. This shows that there is not much difference in terms of categorisation between the top 15 universities in the world and the top 15 universities in Africa.

With regard to the type and number of courses offered, the study established that the top 15 global universities offer a variety of courses to students in different colleges, schools and faculties. Common programmes included arts and social sciences, engineering, business studies, computer science and information technology, education, medicine and nursing, international studies and law. The top 15 African universities also offer similar programmes in colleges and schools like their international counterparts. Common courses in all universities include arts and social sciences, humanities, business studies, physical and life sciences, medicine and nursing as well as engineering and technology.

Regarding the relationship between the courses/programmes offered by top universities in the world and Africa and their ranking, there appeared to be no clearly defined correlation. Because the webometrics ranking purely focuses on the universities' website and research visibility, the number and types of courses/programmes offered could not affect the ranking of any institution (Shehatta et al., 2021). The three indictors adopted by webometrics for ranking universities include impact, transparency (openness) and excellence (Sariene et al., 2018). African universities were found to fare badly in all these three areas in comparison with the top universities globally.

Discussion

This study sought to investigate the ranking of top African universities as compared to their global counterparts with the aim of drawing insights for performance improvement. The web of university ranking shows that African universities continually perform poorly against the top global universities. For instance, while top universities in the world tended to rank in the top 100 in each of the three indicators adopted for ranking (except Johns Hopkins University, which ranked 110 and Harvard University, which ranked 5963 in the openness category) top African universities ranked between 200 and 1200 in each of the categories, hence the poor overall ranking (Sariene et al., 2018).

In investigating this phenomenon, various authors have identified a number of causes associated with these results. In a study to analyse the low webometric ranking of African universities, Ati (2017) identified factors such as low visibility and activity by African researchers, scholars and institutions as well as deficiency in institutional

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frameworks to disseminate research information, such that research findings hardly go beyond the four walls of the institutions of origin.

According to Ati (2017), there are three reasons to account for this dismal performance by African universities. First, most African institutions of higher learning have not yet developed and commissioned the necessary ICT infrastructure to guarantee robust web presence. This can partly be blamed on low funding, especially of public institutions, by the government or individual sponsors. Another reason to blame for this could be the lack of will and commitment on the part of institutional management to provide the tools and resources needed to develop web presence. The third reason is simply bad web practices adopted by institutions that have the ICT infrastructure in place. This includes constant change of webdomains, maintaining two or more webdomains as well as the lack of a clear web policy to guide the sharing and dissemination of information on the web.

These findings are in agreement with findings from studies by Anyira and Idubor (2020) and Khamala et al. (2018). Both studies identified a lack of access to study findings conducted in Africa by African universities due to insufficient ICT infrastructure. Although Africa as a continent is rich in local content as well as scholars who carry out extensive research, tools for sharing such findings are insufficient, meaning that the global scholarly community cannot access such knowledge for use. And since the webometrics ranking primarily considers research findings and publications on institutions websites, failure by universities to maintain a robust web presence results in their low ranking (Asekun-Olarinmoye, 2015).

Conclusion: World class universities rank high in webometrics. Since universities are institutions where research, teaching and community support are carried out, developing robust web presence for a university through clear and updated channels of research dissemination is the only way to make the university accessible to the global audience, thus becoming a world class university. Where there is no access to research information, development and advancement are not possible. This study was focused on analysing the performance of the top 15 African universities in comparison with the top 15 universities in the world. It was the intent of the researcher to draw lessons from this analysis by establishing the characteristics that catapulted the top 15 universities to that position. The study established that the top 15 universities in the world are characterised by top positions with regard to transparency (openness), visibility and excellence of their scholarly publications, while their African counterparts consistently ranked lower in all the three areas.

Recommendations: This study recommends that African universities update their depositories with local research findings, lecture notes, course outlines and lecture presentations so as to increase their web digital footprint. They should also strive to invest in modern ICT infrastructure to allow scholars and researchers have easier time sharing information. Funding support from governments to public universities for ICT development should also be encouraged. The ICT infrastructure put in place should be adequate for meeting the needs of the growing number of students and lecturers in these institutions.

In order to sustain the impact of enhanced web ranking strategies, institutions need to create awareness among their students and scholars on webometrics ranking system. Once all stakeholders are involved in contributing to favourable webometric ranking of the institution, the improvement will be rapid. Apart from sensitisation, it is also necessary to train all staff involved in digital repositories 'management on the best practices in the

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field. Harmful practices like changing of web domains and maintaining more than one domain should be discouraged. Scholars associated with the institution should be guided on how to create an online profile that takes the webometrics indicators into consideration. Lastly, governments in Africa are encouraged to implement some of the recommendations from studies conducted by universities under their jurisdictions. African governments are notorious for ignoring research by their own scholars and going overseas for benchmarking trips. Ogunnubi and Shawa (2017) argues that if only African governments would implement half of recommendations from these studies, Africa would experience exponential growth and development.

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