

Assessment of University of Ilorin (Unilorin) Website using Webometrics Ranking Parameters

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Abstract

The advent of internet and web has changed the world to global village where activities of various organizations are open and accessible. The quantitative characteristics of the construction and application of information resources, structures and technologies on the web is essential for rapid and competitive development. The University of Ilorin (Unilorin) has been taken the leading position but slipped to the eight positions in the recent university webometrics. What Unilorin can do in order to regain and sustain the first position in Nigeria and among the best 20 university in Africa? This study evaluates Unilorin website based on benchmark of rich files, size, Google Scholar, openness and visibility. It also explores the challenges and prospect of university webometrics ranking. The results indicate that the webometrics ranking of the university displays the accurate status of the web site. Suggestions offer to all stakeholders (scholars and administrators) to be more innovative, more quality open access publications, increases bandwidth and adequate power. All will enhance amenities to sustain good ranking position. Our collective responsibility to sustain “better by far” in all activities especially webometrics ranking position among the best 20 university in Africa is not unfixed.

Key Words: Web site, ranking, webometrics, university of Ilorin, Nigeria, Africa

Introduction The University of Ilorin (Unilorin) is one of the seven third generation Universities established by the Federal government of Nigeria in August 1975. The University of Ilorin has grown from three faculties in 1976 to twelve faculties with over 60 academic departments today; with the two new faculties have been established (Faculty of Veterinary Medicine and Faculty of Pharmaceutical Sciences). In January, 2010, Unilorin was rated as the best (1st) university in Nigeria and 20th in Africa (4icu.org, 2010) following the world university ranking.

The existing University website, which is being hosted at ICTP in Italy is maintained and updated by the Computer Services and Information Technology (COMSIT) Directorate

on daily basis. While this maintenance is going on, University is in the process of re-engineering the existing site to a world-class standard by designing and developing a new one which will compete with Websites of developed world. COMSIT directorate still has a great role to play in making this plan a reality. Besides, the maintenance and instant updating which is the main beauty of any site rests primarily on the COMSIT directorate. The University has a student population of 29,576, academic staff strength of 1,005 and non-teaching staff of 2,084 (Unilorin Annual Report 2011/2012). The University of Ilorin website is located at the Dodoman <http://www.unilorin.edu.ng> is designed and maintained by the Computer Services and Information Technology (COMSIT).

Organizational websites have different purposes, designs and implementations that indicate their focus or priority. The University of Ilorin attaches much value to a website and is reflected in the operations and content of the website. The University of Ilorin website as an institutional web site, provides information to users such as staff, students, prospective students and university community; allow contact with the University through feedback; discussion forum, courseware development, and advertises programs or courses for interested people. There are many other uses such as online surveys that websites can be put to. Due to the diverse nature of websites, there are various metrics that can be used to rank or evaluate them. The evaluation of websites has been implemented by several web ranking organizations such as Alexa ranking and Cybermetrics Lab in different ways.

The Webometric ranking of the World's universities done by Cybermetrics Lab is based on metrics such as web size, rich files, Google Scholar and link (visibility). These criteria require standardized implementation, if the weighted scoring is to be appropriate. Understanding the ranking methodology and how it applies to a website will assist in this study.

Therefore, the study will focus on the assessment of the University of Ilorin website using the webometric ranking parameters developed by Cybermetrics. The metrics will be used to identify issues that need to be addressed, if the university of Ilorin website should uphold “better by far” slogan and compete with the best five (5) universities in Africa and be among the best hundred (100) in the World Universities Webometric Ranking.

Background of the study

Webometrics is a website that releases a list of university rankings around the world. The ranking was initiated by an institution called the Consejo Superior de Investigaciones Científicas (CSIC), a public research institution in Spain. The Webometrics came from a special division that manages the dynamics of web information called Cybernetics Division.

The ranking was released by webometrics aims to measure the accuracy of a university in taking a snapshot towards the activities held by that university. The main objective is to improve the quantity and quality of their online documents, publications including one important elements, for instance, the scientific writing and research results. Through the released ranking, it is expected to encourage academicians in producing good quality scientific research that can be utilized by various parties from all over the world. Thereby, promotes open access policy.

Statement of Problem

In recent years, Nigerian universities has been bedeviled by a plethora of challenges which have resulted in their poor rankings both on the continent and in the rest of the world (Akpan, 2012). The recent online publication by 4icu.org university web ranking shows that no Nigerian university has been listed among the top 20 universities in Africa. This has once again drawn attention to the fact that, there is something wrong with the university webometrics ranking in Nigeria. The University of Ilorin has been consistently taken the lead among Nigerian Universities on webometrics ranking, but the recent slipped from 1st to 4th position necessitates this study, to identify factors responsible in order to proffer solution. Hence, the qualitative approach will be used for the analysis of the University of Ilorin website.

Scope of study

The study covered only University of Ilorin web site activities specified in the ranking metric.

Justification

The Webometrics University Ranking is a ranking system based on university web presence, visibility and web access. The web presence is a reliable indicator of the global performance and prestige of the universities and as such, is an indirect way to measure all the university missions (teaching, research, and learning).

The webometrics of universities is necessary to promote healthy rivalry among universities, which could lead to a rapid open, accessible and visible research development, thereby boasting the image of the university in particular and

country in general. In addition, it makes university authorities to reconsider their web policy, promoting substantial increases of the volume and quality of their electronic publications.

Limitations of the study

The results may raise some fundamental concern and operational issues that cannot be addressed in this paper. The mission and vision of the various universities in Nigeria are not the same, though they are all working towards the same goal. Policies of the constituted authority vary from institution to institution. Therefore, the result of this study cannot be generalized.

Literature Review

Computer Services and Information Technology (COMSIT) is a Directorate of the University charged with the responsibilities of deploying ICT infrastructure and services for administration, teaching, research, learning to the University and to the community at large. Prominent among the duties and schedules of this directorate are the following:

- Attending to Computerization of University Management Information System comprising of Staff, Students and financial/Audit information system.
- Design, Provision and sustainability of Internet access to the University Community.
- Design, Provision and Maintenance of University Area Network.
- Help desk support services to the University community on ICT applications and facilities.
- Ensuring that the University community has a standard and robust Website through a constant maintenance and updating of the site.
- Maintenance of application software, minor repairs of faults on desktop and Laptop computers for the University Community.
- Research support through Statistical Analysis of Postgraduate and undergraduate research activities in the University Community.
- Providing ICT capacity building for staff and students of the University through various training programmes.
- Augmenting the revenue generation for the University through regular ICT part-time training programmes for the public outside the University Community.

The University of Ilorin mission to provide a world-class environment for learning, research and community

service in this information driven age where intellectual capital is of the utmost value, can only be actualized with a well articulated, well managed information technology strategy. To achieve this, the Computer services and Information Technology (COMSIT) Directorate is saddle with this responsibility to ensure that services delivered are of the highest technical content and of the best quality for the University to maintain her position “better by far” There are a number of on-going ICT projects and future initiatives in the University Community which require an ICT workforce for its sustainability. Some of the on-going ICT projects include; University Management Information System, Internet Access, University Campus Network, Unilorin website, University Library Services Automation etc. There is new initiative of wireless network technology for the University equally requires the role of the directorate in the deployment and maintenance to the University campus. The COMSIT directorate has six units; Research, Training & Development, Portal Services Unit, Web Services, Computer Based Test (CBT) Unit, Network Services and Procurement & Maintenance Support Services.

The field of webometrics was popularized by the “Ranking of World Universities” project that rated the web presence of most universities in the world. Web presence is a collection of Web files on a particular subject that includes a beginning file called a home page. The prime objective of webometrics (also cybermetrics) is to measure the [World Wide Web](#) to get knowledge about the number and types of [hyperlinks](#), structure of the World Wide Web and usage patterns.

According to Björneborn and Ingwersen (2004), the definition of webometrics is "the study of the quantitative aspects of the construction and use of information resources, structures and technologies on the Web drawing on bibliometric and informatic approaches." The term webometrics was first coined by Almind and Ingwersen (1997). A second definition of webometrics has also been introduced, "the study of web-based content with primarily quantitative methods for social science research goals using techniques that are not specific to one field of study" (Thelwall, 2009), which emphasises the development of applied methods for use in the wider social sciences. This emerging research field has been called Cybermetrics or Webometrics. Webometric could be defined as web measured on the basis of web characteristics or presence on the Internet (NUC, 2006a).

The measurement could be done using various characteristics or attributes of the Web. The "Web Impact Factor" (WIF) introduced by Ingwersen (1998) is an example. The WIF measure may be defined as the number of web pages in a web site receiving links from other web sites, divided by the number of web pages published in the site that are

accessible to the crawler. WIF is not used due to complications in calculations. Similar indicators using size of the institution instead of number of web pages have been proposed using volume of published materials of institutions (institutional repositories) /individual (self-archiving) on the web, and the visibility and impact of the web pages measured by the citation (site citations) or links they receive (NUC, 2006a).

According to Wikipedia (2011), Cybermetrics Lab is devoted to the quantitative analysis of the Internet and Web contents specially those related to the processes of generation and scholarly communication of scientific knowledge. The ranking project was led by Cybermetrics Lab, a research group of the Centro de Ciencias Humanas y Sociales (CCHS), part of the National Research Council (CSIC), the largest public research body in Spain. Currently more than 45,908 web domains of academic and research organizations are analyzed, and over 18,000 are ranked according to their web presence and link visibility.

The main objective of the “Ranking of the World Universities” was to promote Web publication such as Open Access initiatives, accessibility and visibility to scientific publications and to other scholarly materials. Conversely, web indicators are very useful for ranking purposes too as they are not based on number of visits or page design but on the global performance and visibility of the website.

Web indicators based ranking reflect the whole picture well, as many other activities of researchers and professors are showed by their web presence. The Webometrics ranking has a larger coverage than other similar rankings, see Table 1.

Table 1: Comparison of the main World Universities' Rankiings

Criteria	WR (Webometrics)		ARWU(Sanghsai)	
Universities Analyzed	15000		3000	
Universities Ranked	5000+		500	
Quality of Education			Alumni Nobel &Field	10%
Internationalization				
*Size	Web Size	20%	Size of Institution	10%
*Research Output	Riche	15%	Nature and	20%

	Files		science	
	Google Scholar	15%	SCI % SCCI	20%
Impact	Visibility (Link)	50%	High cited researchers	20%
*Prestige			Staff Nobel & Field	20%

(Source Cybermetric Lab. 2011).

* changed criteria

The ranking is not only focused on research results but also on other indicators that may reflect the global quality of the scholar and research institutions worldwide.

The development of webometric ranking of universities is as a result of the need to measure universities' adoption of the web for research, teaching and learning. It is assumed that universities at the top are those that have integrated the web into their research, teaching and learning culture. These universities tend to have more resources in the web, and also tend to have more links to and from other sites. They are therefore, perceived to be more globalized. This increases their perceived impact, improves their visibility and makes stakeholders perception about them positive. Smith (2004) provides a vivid picture of the benefits and motive for web links which are adoptable to universities with frequent and high volume of links.

The Web covers not only formal documentation such as e-journals, repositories but also informal scholarly communications such as PowerPoint slides. The web publication is cheaper, and it's maintaining the high standards of quality of peer review processes. It reaches much larger potential audiences, donation access to scientific knowledge to researchers and institutions located in developing countries and also to third parties (economic, industrial, political or cultural stakeholders) in their own community.

Four indicators were obtained from the quantitative results provided by the main search engines as follows:

Size (S). Number of pages recovered from four engines: Google, Yahoo, Live Search and Exalead.

Visibility (V). The total number of unique external links received (inlinks) by a site can be only confidently obtained from Yahoo Search.

Rich Files (R). After evaluation of their relevance to academic and publication activities and considering the volume of the different file formats, the following were selected:

Adobe Acrobat (.pdf), Adobe PostScript (.ps), Microsoft Word (.doc) and Microsoft PowerPoint (.ppt). These data were extracted using Google, Yahoo Search, Live Search and Exalead.

Scholar (Sc). Google Scholar provides the number of papers and citations for each academic domain. These results from the Scholar database represent papers, reports and other academic items.

Improvement in Webometrics Criteria

There are slight changes in criteria used in July, 2012, as part of the commitments to improve the quality of the ranking. Webometrics, four components were used, that become the main indicator in the evaluation as follows: Presence (20%), Impact (50%), Openness (15%), and Excellence (15%). Presence is the amount of website (html) pages and dynamic pages captured by search engine (Google) excluding rich files. Impact is the amount of unique external links (amount of back links) accepted by university web domain (in links) captured by search engine. Openness is the amount of Adobe Acrobat (.pdf), Adobe PostScript (.ps, .eps), Microsoft Word (.doc, .docx) and Microsoft Power Point (.ppt, .pptx) documents that are online/open under the domain of website captured by search engine, while Excellence is the amount of scientific articles published by the university and indexed.

The four ranks were combined according to a formula where each one has a different weight but maintaining the ratio 1:1. The inclusion of the total number of pages is based on the recognition of a new global market for academic information, so the web is the adequate platform for the internationalization of the institutions. A strong and detailed web presence providing exact descriptions of the structure and activities of the university can attract new students and scholars worldwide. The success of self-archiving and other repositories related initiatives can be roughly represented from rich file and Scholar data. The huge numbers involved with the pdf and doc formats means that not only administrative reports and bureaucratic forms are involved. PostScript and Power point files are clearly related to academic activities.

Methodology

The qualitative approach was used for the analysis of the University of Ilorin website. The tools applied are observation and comparison with the ranking metrics that was used as benchmark. This study was carried out by repeated interaction with the university website between July and December 2012. The website was examined for design issues, content, use and impact. The observations from the interactions with the website were then grouped.

The grouped interactions used the ranking metrics of visibility, rich files and Google scholar.

Results

The results from this study will be presented using the me of the webometrics ranking of the world's universitie headings

[Post-UTME Instructions](#)

[Post-UTME Specific Registration Instructions](#)

[General Portal Help Desk](#)

[Postgraduate Portal](#)

If you are student and your name does not appear on the goodstanding list write a letter to your Head of Department and copy Deputy Registrar (Academic).

If In Goodstanding

- i. If in good standing or on probation, proceed to the course registration link and register for courses as appropriate, i.e. register for courses failed before you register for courses in the current level.
- ii. Print out completed course form and forward to your Level adviser, who would authenticate the courses you have selected. ... [read more](#)

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Frequently Asked Questions (FAQ)

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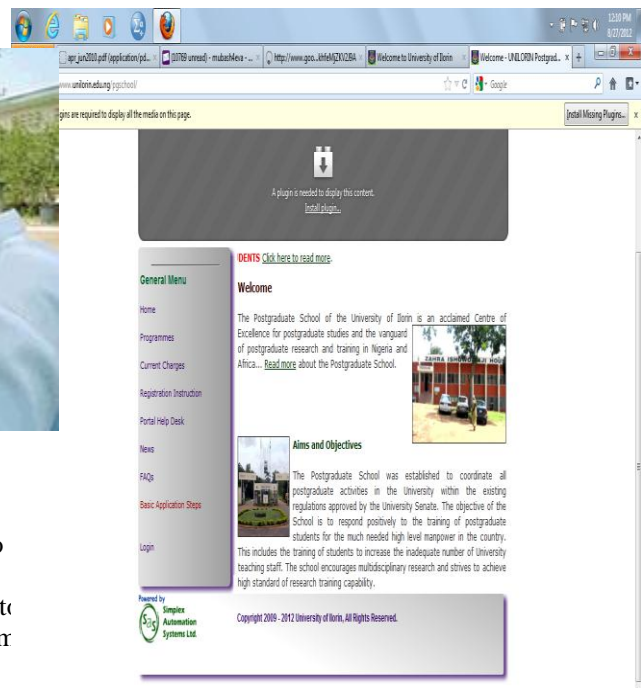
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Registration Procedures for Returning Students

Returning students of the University are to check their good standing status on the University of Ilorin website, by logging into their account, using their matriculation number and password.



Results;

Table 2: Webometric ranking for University of Ilorin (Unilorin)

YEAR	RANKING					
	JANUARY			JULY		
	World	Africa	Nigeria	World	Africa	Nigeria
2008	NA	NA	NA	6,602 nd	77 th	2 nd
2009	7,902 nd	31 st	1 st	NA	32 nd	2 nd
2010	5,846 th	55 th	1 st	2,668 th	21 st	1 st
2011	3,342 nd	20 th	2 nd	2,261 st	39 th	2 nd
2012	4,302 nd	63 rd	8 th	3,342 nd	47 th	4 th

NA = Not available.

In Table 2: the available data about ranking of the University of Ilorin (Unilorin) website is shown.

The data shows a downward trend since 2011. In 2009, Unilorin took first and second positions among Nigeria Universities for the month of January and July respectively. In 2010, Unilorin displayed her better by far attribute and recorded huge success throughout the year. In the following year (2011), there were slight fall in position but Unilorin retained second best University in Nigeria, 20th and 39th position in Africa. In 2012 Unilorin performance was not good enough with 8th and 4th position in Nigeria for the month of January and July, respectively. This decline trend calls for urgent attention, to address the factor(s) responsible for the poor positions in universities webometrics ranking performance.

Web Size

This is the number of pages recovered from four engines: Google, Yahoo, Live Search and Exalead.

An online search produced the following results:

Table 3: Web size of University of Ilorin website

Searched Results	Number of Results	Number of pages indexed
Google	866000	2,229
Yahoo	798000	5,000
Live Search (Bing)	846000	8740
Exalead	75462	-

Visibility

This is the number of unique external links received by a site in links that can be from partner organizations or search engine.

Table 4: Measurement of Visibility of University of Ilorin

Total	Number of inlinks		
Yahoo site explorer	1982		
Alexa	-		
Mikes marketing tools/ammmap.com	Google	Yahoo	MSN
	187	3245	5

Rich files

Presence of files in the following formats PDF, PS, DOC and PPT indicating research work. The directory <http://unilorin.edu.ng/sites/default/files/> contains specially formatted files such as PDFs. A cursory look at the university website shows that courseware, VC seminars and lectures, university bulletins, staff publications, admission lists, announcements e.g vacancies, post Unified Tertiary Matriculation Examination (UTME) past questions are in PDFs. As time goes, other form of file will be located on the website.

Google Scholars

This is the number of papers and citation for each domain. The website is currently indexed by the Google Scholar. Google Scholar indexes all papers found on a website and check them for use by other researchers. A search of the Unilorin website shows;

- The library is not adequately represented on the website especially digital library with digital contents
- Full papers published articles in journals by academic staff are available online as PDF but many of senior colleagues fail to upload their publications on the university portal.
- Many departments are yet to upload their courseware for various courses assigned on the portal.

Discussion

The website started with Hypertext Mark-up Language (HTML) coded pages and is currently running on a content management system (CMS). This changes recorded is due to availability of technology and skills at arm reach (locally). The ranking data shown in Table 2 confirms that the website ranking has slipped from the first position to fourth position within four years (2009 to 2012). The slightly changed downward was asserted due to some ongoing restructuring, this is explicable and necessary in order to provide sustainable platform for maintenance of its superlative position in the comity of universities.

The Web size results in Table 3 indicate that the university website has a few pages.

The university should make adequate provision to increase its web size through inclusion of domains belonging to its sub-units or campuses. Efforts are on top-gear in this direction.

Visibility

This has the highest percentage of all the parameters.

Table 4 shows the values for the University of Ilorin website visibility. The most reliable is from Yahoo. The low numbers of in links indicate that the university website has not been fully utilized as a tool in boost up university's image. Also it could be administrative policy or inadequate knowledge by management on the use of the website.

With the up-to-date information that users can rely on, the visibility of the website will be high. Visitors, prospective students, grant donors and employees, and other curious mind people are expected to access the website or create links to it. A website without useful content will not be visited or linked to. Therefore, the contents should be overloaded in term of quality, recency, informative and educational. The insufficient content on Unilorin website limits the number of possible entry points to the website.

The following actions will improve Unilorin website visibility;

- Provision for mobile phone version because appreciable numbers of Internet users in Nigeria access the Internet through mobile devices. Devices that will prevent Internet hackers should be installed.
- Renaming Unique sub domain e.g CIS faculty should be cis.unilorin.edu.ng, law should be law.unilorin.edu.ng
- Language barrier; language translation options should be allowed because of the internationalization policy of the university e.g Yoruba ,Ibo, Hausa, Spanish, French, German
- Register the website on applications such as Google map, Google Scholar etc.
- Provision for the use of RSS feeds to facilitates other websites subscription to Unilorin website
- IT officers should be willingly, to assist academic staff to upload their publications/update their information on the portal.

- Sample opinion of users by provision for online poll to gather information on the needs of people from the website.
- Need to expand the available infrastructure to compete with some of the best Universities in the World

Rich files

The quantity of rich files on the university website is insufficient. The website has only picture and pdf files available. The quantity available is limited because only the webmaster and IT officers are uploading files and other content to the website. The administrative procedure and daunting habit of IT officers to do the upload has turned staff away from engaging in the process.

The University management also makes limited use of the website to distribute content. The only medium currently used is the News Bulletin which is provided in pdf format and published on the website. The current University of Ilorin School calendar is not available in a format downloadable by students and staff.

The pictures on the website are displayed in a gallery on the home page. The pictures should have alternative tags for easy Google indexing and for fast links. The website should contain videos coverage of university events, seasonal banners or social media links on the website.

Google Scholar

The university website is indexed by Google Scholar. The impact of this is that the university of Ilorin website supposes to gain 15% but gained 11.46 of the marks used in the webometric ranking (ammap.com).

The university plays host to local, national and international journals but only few available online. Online journal systems should be deployed for the hosting of these journals within the university web domain.

Publications, complete articles or abstracts, should be made available through the University website. In cases where the copyright law or agreement prohibits it, a link should be created to the original article. This will promotes open access policy.

The University Library should be mandated to upload and update abstract of journals in their possession as well as recently acquired abstract of books and summary with full bibliographic information.

Conclusion

The University of Ilorin website requires content that will enhance its use and impact positively on patronage. The huge and sustainable success will be recorded, if it maintains the level of activities or increase content steadily. The analyses indicate the need, to develop progressively strategies that will make better performance. Staff should be allowed to use blogs.

University library should be mandated in digitization exercise of paper format materials especially staff publications stored in print format to boost the ranking. In addition, University website should be redesigned to give better look and feel, as well as improve interactions with users.

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