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## THE CONTRIBUTIONS OF IMPACT FACTOR PUBLICATION POLICY TO ACADEMIC DEVELOPMENT IN NIGERIAN HIGHER INSTITUTIONS OF LEARNING: A CRITICAL EVALUATION

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### Abstract

**Motivation/Background:** Publishing in highly rated journals has being the primary prerequisite for hiring, appraising and promoting academics in higher institutions since the beginning of the 21st century. Lecturers became concerned more with this than classroom activities. This paper seeks answers to the following questions: what is the nature of impact factor publishing? Is there any relationship between impact factor policy and the development of education and scholarship in Nigerian higher institutions?

**Methods:** Qualitative data gathering, content analysis, and Conservative Theory of imperialism as framework of analysis were adopted.

**Results:** The results reveal that impact factor is an ineffective index for academic evaluation, perpetuates academic and economic imperialism, and undermines the development of higher education and scholarship in Nigeria.

**Conclusions:** The mechanisms of impact factor rating are entirely western and neo-colonial, while its application as measurement index for evaluation of lecturers negates the goal for which it was introduced. The relevance of this conclusion for higher education in Nigeria lies in its advocacy for policy reforms and the abrogation of orthodox impact factor policy. Thess supports the recommendations of some scholars for the re-introduction of orthodox classroom performance evaluation index that has been discarded for the policy.

**Keywords:** Impact Factor Policy; Academic Performance; Evaluation; Education; Development; Classroom Activities; Intellectual and Economic Imperialism.

**Cite This Article:** Eze Malachy Chukwuemeka, Obidigbo Godwin Chekwubechukwu, and Nwobi Fidelia Obuteaku. (2018). "THE CONTRIBUTIONS OF IMPACT FACTOR PUBLICATION POLICY TO ACADEMIC DEVELOPMENT IN NIGERIAN HIGHER INSTITUTIONS OF LEARNING: A CRITICAL EVALUATION." *International Journal of Research - Granthaalayah*, 6(11), 398-408. <https://doi.org/10.5281/zenodo.2228735>.

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## 1. Introduction

The need for the revival of academic research and the development of education in Africa led to many international conferences (NEPAD, 2006a & 2006b; Gray and Burke, 2008) whose primary focus were the development of research, creation of knowledge networks, and sharing knowledge in the midst of knowledge diversity through the networks to enhance public good or development (UNESCO, 2005; Altbach, Reisberg & Rumley, 2009). These primary objectives stimulated the pursuit of using Information and Communication Technologies (ICTs) for data gathering, processing, analysis, publication, transfer, and storage. The integration of ICTs fosters higher access to materials, information, communication and publishing; breaking down the unequal and skewed relations in research and knowledge production between the West and the Third World particularly Africa; the prevalence of higher quality and pro-society transformative research products; promoting excellence to accelerate development; and lower research and publishing costs (Reddon, 2009). For instance, scholars from USA, the United Kingdom, Germany and Japan author 84% of articles published in high ranking international journals while 163 other countries – mainly Third World countries – lay claims to only 2.5% (Chan & Costa, 2005; Willinsky, 2006). The advances of these Western Countries in ICTs provide the background and equip them to control research and educational development agenda across the world. They pioneered, control, and manage the production and distribution of ICTs, information generation and distribution (Mirza, 2009; Thussu, 2007; Straubhaar & LaRose, 2004), and the establishment of international publishing and information dissemination organisations/institutions. Adjunct to these, they provide leadership and direction in most of the international organisations and research institutes charged with the responsibility of advancing and propagating knowledge such as UNESCO. Consequently, they set the template for, and determine thematic research scopes, research focus and objectives, and approaches or frameworks; which in most cases must serve their own national policies and developmental interests. Adebisi (2014, p. 569) summarised this thus, “The geographical patterns of internet usage no doubt reflect the dominance structure of knowledge production and distribution, based on western intellectual and technological apartheid, deliberately designed, developed and spread by its educational, cultural, economic and political institutions.” The method here is to foist their models, schemes, and templates on the Third world who by their neo-colonial status rely on them for virtually everything. For instance, Nigerian administrators and scholars trained in the Western world together with their Nigerian trained counterparts who adopt westernisation paradigm promote western models, schemes and templates through educational policies as a form of development orthodoxy. One of the prominent policies in this category is the impact factor publication policy, which requires academics to publish their articles in highly rated journals known as impact factor journals, as a primary index for hiring and promotion.

Impact Factor as a concept refers to method of evaluating and ranking journals (Allen, 1929; Garfield, 1955 & 2006; Fatema, 2014). The origin and development of impact factor can be traced to the quest by librarians in the United States higher institutions of learning to develop an objective method of selecting journals for their holdings that serve national interests and education policies (Archambault and Larivière, 2009). Thus, impact factor model of evaluation refers to adopted measurement index with which research journals are measured to verify their quality in terms of contributions to United States’ interests, knowledge and development. Following the dominant role of the US during the unipolar international system, most researchers and institutes evaluate and rank journals solely by their adopted impact factors indexes, and strive to publish in highly ranked ones.

According to Williams and Padula (2017), the fundamental modality for ranking the journals, which are calculated at two and/or five year intervals, is the number of citations from a given journal within the period. Analysing the weakness of this index as a measure of journal quality, some scholars like Hoeffel (1998), Corbyn (2009) observed that regular or pervasive citing of articles in a journal is determined by the publication of large number of articles in a journal, publication fees or costs, high consideration of publishing ethics like plagiarism and duplicate submissions, indexing, accessibility of journal articles, and the thematic focus of journals. Many journals are not cited regularly not because they are bereft of contributions to knowledge and/or development but because they are not indexed, not online; lack of good mentors, there are difficulties in accessing their articles, they may not be a business concern, or may even be victims of racial bias (Fatema, 2014).

Holding the view of American superiority, most institutions particularly in the Third World introduced impact factor in research to enable researchers find or source for relevant journals articles that will aid their on-going works. However, it is currently and widely adopted as a way of demonstrating research quality, and as a measure for hiring, promotion, tenure, and funding proceedings in higher institutions and research institutes (Williams & Padula, 2017). International organisations such as UNESCO and consortia are at the vanguard of making the adoption of impact factor a developmental policy particularly in the Third World and Africa in particular.

The policy has been broadly applied by administrators in higher institutions of learning to evaluate the performance of academics. It tends to guide the process of selecting excellent candidates for positions such as best PhD student, post-doctoral and academic staff performance; selecting recipients of grants; promoting academic staff; distributing internal grants, resources and infrastructures in universities; establishing scientific collaborations in the context of international networks; selecting reviewers and editors for journals; selecting speakers during conferences and workshops; selecting members of academic commissions and boards; and determining research output in global university rankings, etc.

Abbasi (2004) observes that virtually all the higher institutions in Nigeria have adopted impact factor publication as an index for measuring the quality of academic research and contribution to educational development. The University of Nigeria, Nsukka was the first in Nigeria to introduce the policy in 2006 as a guideline for the appointment and promotion of academic staff (see University of Nigeria, 2007). To complement this, the university equally introduced weighting factor, which is used to multiply the raw score of any publication or work arrived at from the Yellow Book. Subsequently, almost all the higher institutions of learning in Nigeria adopted the same system. Consequently, the impact factor policy prevails in the psychic system of every academic staff in Nigerian higher institutions, not just to publish in journals but, to publish in journals with high impact factor ratings.

However, many scholars like Harnard (2004), Eston (2004), Kader & Cathey (2004), Scully & Lodge (2005) argue against the policy because of its flaws, bias and subjectivity. Others argue against it because of the prevailing ICTs skills gap amongst academics and/or researchers (Watts and Ashcroft, 2005), poor library and research facilities (Broug, et al., 2008), high cost or e-research and publishing, and poor internet accessibility that renders the application of impact factor

system inappropriate and ineffective. These factors have negative effect on the rate at which academics in Nigeria and Africa generally publish in international and IF-ranked journals.

There is little or no effort to investigate the implications or consequences of the strength and weaknesses associated with the introduction of impact factor policy on the development of education and scholarship in Nigeria, or even to show how the policy addresses the true impact of individual scholarly works, which it sorts to determine and accredit during evaluation. Therefore, this paper examines the dynamics of impact factor publication with a view to evaluate its contributions to academic development and scholarship in Nigeria. The paper seeks answers to the following questions: 1). what is the nature of impact factor publishing? 2) Is there any relationship between impact factor policy and the development of education and scholarship in Nigerian higher institutions?

The significance of these goals is at two levels. Theoretically, it seeks to validate the theory of imperialism at the intellectual level and test the validity of the claim that impact factor publishing enhances public good or development in Africa visa-avis Nigeria. Empirically, the findings therein shall enable stakeholders in the higher education industry to articulate a modified version of academic research publication rating policy that facilitates the development of education and scholarship adequately in Nigeria.

## **2. Materials and Methods**

This paper adopts qualitative survey method of data gathering. In this method, extensive literature review was conducted to generate data from published materials such as books, journals, and workshop and lecture papers that are available and accessible in libraries and the internet. The data generated was analysed using content analysis for purposes of inference. The method here was to source for relevant and appropriate works, digest their contents and sift their findings as data. These data are reliable because they have stood the test of time as they have been criticized by researchers, civil society networks, and government agencies. We sifted the findings in such publications and works; checked the consistency of the opinions of either the authors and/or the actors; and evaluated such opinions with other findings and existing traditions in the discipline, and arrived at conclusions that structured the opinion of this paper.

The Conservative Theory of imperialism was adopted as the framework of analysis that guides inquiry. The principles of the theory hold that imperialism is necessary and works to preserve the existing social order in the Western countries; secure their trade and markets' interests, maintain employment and capital exports, and to divert energies and social conflicts of the metropolitan populations abroad (Kipling, 2008). The theory, which assumes western ideological and racial superiority over others, has the following traits: exploitation and control in the affairs of the dominated nations; dominated nations are considered a kind of ward within a tutelage system that must be taught the principles, values and systems of the dominant powers; dominated nations are expected to conform to certain aspects of western life, organization and rules; play a secondary role in their own affairs; and governed by surrogate regimes (Alatas, 2000). The theory enables the paper to seek for and identify traces of control and exploitation, advancement of economic and other western interests, imposition of value and tutelage system, and conformity to rules in the impact factor syndrome.

### 3. Results and Discussion

The nature of impact factor publishing is defined by the ownership, management, and editorial policies of international publishing conglomerates. The literature reveals that ownership of such conglomerates influences the focus and contents of the journals or books in pursuit of its interests (Deibert, 1997; Elina, 2010). Therefore, the ownership and management of impact factor publishing conglomerates determine the contents of the impact factor journals. Through journal thematic focus and editorial review, journals and their publishers propagate and safeguard the interests and objectives of their owners and management. For instance, the editorial crew of the impact factor journals as well as others choose thematic focus, which in most cases addresses the national policy focus of western countries, and are in the habit of instructing researchers even on how they should write their names, the style and version of English language to use, word preferences, and sentence structuring.

The consequence of the tutelage inherent in publishing is such journals is that researchers are forced to conform to western aspects of life, values, its organizations and rules in all their research reports. These rules or values are coined in editorial policies that inform the vetting and scrutinizing of all manuscripts, and the approval of manuscripts for publication. These requirements are integrated into the overall management policy of the impact factor journals and compliance this makes the article acceptable and standard. All these are organised towards achieving certain ends and purposes. Thus, the interests, ideological orientation, background, and economic character of publishers and management crew of impact factor journals determine their nature.

Contemporarily, the major international publishing conglomerates are Reed-Elsevier, Springer, Reed Information Access Company (IAC), Information Age Publishing, Wiley-Blackwell, Taylor & Francis, and Sage publishers. A summary of their owners, date of establishment, and country of origin is presented in the following table as follows:

s/n	Publisher	Date	Country of origin	Founder	No of Journals published
1	Taylor and Francis	1852	USA	William Francis &Richard Taylor	More than 1,500 journals, and around 1000 books a year
2	Reed - Elsevier	1992	London, United Kingdom	Reed International formed by Albert E. Reed in 1895 (USA) &Elsevier formed by Jacobus George Robbers in 1880 (Netherland)	More than 500 journals and 200 books
3	Springer	1950	New York City, New York, United States	Bernhard Springer	1000 journals and about 540 books

4	Wiley-Blackwell		Hoboken - New Jersey, United States USA	John Wiley & Blackwell Publishing	1,500 journals and more than 1,500 books
5	Sage Publication	1965	New York, USA	Sara Miller McCune	More than 1,000 journals, and more than 800 books a year
6	Emerald Group of Publishing	1967	Bingley - West Yorkshire. United Kingdom	Barrie Pettman& fifty other academics from the University of Bradford	More than 250 journals and 200 books
7	Information Age Pub. Inc. (IAP)	1999	Charlotte, North Carolina, USA	George Johnson	

Sources: Review of Literature

An analysis of the above table and others such as Cambridge University Press, Oxford University Press, Rutledge, Thomson Reuters, Blackwell publishers, McGraw Hill among others, reveals that most publishers of impact factor journals and their locations are in the West (i.e. the United States of America and Europe) and are established in their hemispheres. According to Darko-Ampem (2003), the ownership of these companies singularly and collectively own and control the intellectual output of universities in the Western world, and subsequently in the Third World as a result of colonialism and neo-colonialism. Their method is to set thematic focus and editorial policies that guarantee their interests. These policies, which researchers must strictly comply with in order to secure the publication of their articles and their promotions tend to integrate and perpetuate Western interests and pursuit (Alatas, 2000).

For instance, the open but restricted access to impact factor journals in terms of publishing articles and accessing them for further research was designed by their ownership and management to generate corporate and national income for their founders and countries of origin. Simply put, publishing and having access to the published material in these journals have non-negotiable prices attached as costs (Caldararo, 2013). Even when a researcher pays to publish his work, he still has to pay for author's hard copy and postage, yet such authors scarcely receive any percentage share of the profits made in the sale of the journals (Björk et al, 2010). In most cases, the prohibitive subscription (or access) costs of such journals are very high such as US\$30 per paper charged by Elsevier journals and Science Direct' US\$31.50 as of November 11, 2013 (see Science Direct. <http://www.sciencedirect.com/science/journal/14635003>). Some costs as high as US\$750, 985, 1250, etc. This has led to non-publication of some scientific research breakthroughs relevant to Africa particularly Nigeria in these journals because their authors cannot afford the fees. The scenario is inimical to evaluation and promotion of these authors by their employees.

Further, the determination of which one constitute impact factor journal and their rankings have been the preserve or exclusive role of Western countries and institutes, and characterised by high level interest politics (Lewis, 2000). In most cases they value publications by their publication venue instead of its actual contents and merit (Lee, 2014), while their rankings are influenced by

the subjective impressions of the scholarly community, the number of times each won scientific associations prizes, and the reputation of journal publishers (Steele, 2008). Thus, the impact factor rating is purely a pro-western phenomenon. This does not only manifest the domination or colonisation of the publishing industry by the West but showcases bias that undermines individual scholar's effort to publish and to address relevant thematic issues in Nigeria their research.

Similarly, the literature such as Archambault and Larivière (2009), reveals that impact factor was not designed from the beginning as an objective evaluation of the contributions of research articles to general or international public good or development. It focuses on journal consideration (i.e. the number of times a journal is cited by researchers or authors in civilised works within a given period such as 2years) and not on the quality of findings made by individual articles published in the journal and the contributions of such articles to public good. It is a method of sustaining and advancing US interests therefore lacks the credibility to measure the quality of individual research articles. Consequently, this approach to evaluation demoralises researchers whose articles, though rich in quality, were not accepted by such journals for reasons like thematic focus, anti-western interests, ideology, lack of fund to pay for access charges etc. but published in other journals without wide citation.

The ascendancy of impact factor policy, which is characterised by e-research and e-publishing, as a measure of evaluation and promotion tend to undermine the publication and use of hard copies of journals and books from Nigerian Higher Institutions of learning. This is showcased by the dilapidating and disappearing nature of analogue libraries and their replacement by e-libraries. The costs of establishing and maintaining e-libraries are exorbitant while websites that host printable copies of journal and book publications are fast disappearing. These demand that researchers must pay and handsomely too any time they need to consult any article in such journals. They are even deprived of the right to republish their materials in another journal unless stated in writing (Caldararo, 2013). Institutions that create corporate access to such e-libraries exploit academics and students as they are forced to pay compulsory internet levy periodically in exchange for access pin.

The implication here is that research, publishing, and education in Nigeria is highly dependent on the western owned publishing conglomerates for survival, while a good percentage of students and academics' incomes are continually expropriated to the west. These have consolidated the prevailing cycle of domination and exploitation initiated by colonialism. Thus, higher education system in Nigeria is essentially a consumer of knowledge structured after the values and interests of the Western industrialised countries (Garreau, 1985; Abrahams et al, 2008). This scenario branded as 'mental captivity' by Syed Hussein Alatas branded and which is filled with ethnocentric bias in the Western social sciences, hinders the development of education and scholarship in Nigerian higher institutions of learning. Alatas (1974, p.692) defined captive mind as an "uncritical and imitative mind dominated by an external source, whose thinking is deflected from an independent perspective"

In addition, there is a deliberate decision or policy on the part of Editors of impact factor journals to reject or not publish research articles from Africa, Nigeria inclusive, not because of their poor quality but because of racial and geopolitical bias. According to Corbyn (2009), Richard Horton (the editor of the Lancet) observed that many journals record very low citations compared to others

because they published of articles from African authors. He argued that the most cited articles in medical journals are studies from rich countries that have minimal or little health cases. Consequently, there is inbuilt racism in editorial decisions on articles sent for review and publication (Farooq 2004). This bias works against the hiring, evaluation, and promotion of academics in Nigeria higher institutions who insist on impact factor publication as a major performance index. The consequences are look-warmness and indifference to responsibilities and faculty activities.

Therefore, impact factor ranking is an ineffective index for measuring the value of research article and the performance of academics in Nigeria higher institutions. Rousseau (n.d.) argued, "Although this impact factor is the best known and most used, it suffers from a number of drawbacks. This is not surprising as one single number cannot possibly describe all aspects related to the visibility, let alone quality, of a scientific journal." p.2 This is because it ignores three primary areas of concern in the traditional or orthodox appraisal of the performance of academics, which are teaching, research, and service (Turk, 2005). The traditional approach addresses lecturer's input such as qualification, number of students produced and courses taught, professionalism such as approaches to teaching, student involvement and feedback, and output such as qualifications of students and their employment rates, staff publications.

Consequently, Igbojekwe and Ugo-Okoro (2015) observe that the impact factor policy has negative effect on institutional performance and quality i.e. growth of education and scholarship. In-class activities and effectiveness of academic staff was no longer closely monitored and considered as vital. Academics pursue journal publications only with little or no attention to classroom activities. Secondly, the evaluation criteria fail to enhance the quality of performance and credibility of graduates of tertiary institutions (Hill, Lomas & MacGregor, 2003) because such evaluation give little or no priority to the quality of teaching, which has been habitually very poor. Rather, it emphasis is not just research publications but impact factor (Ofoegbu, 2001; Adomi and Mordi, 2003).

#### **4. Conclusions and Recommendations**

The application of impact factor publications as a primary index for academic performance evaluation and accreditation in Nigeria negates the original goal for which it was introduced. It was introduced to guide the selection and arrangement of research/and or publications that advance US interests in libraries across their high institutions of learning. The politics and measuring of placing values and ranking on the publications are inimical to Nigeria's national interest and education policy. Its method does not assess individual research articles but focuses on the journal as an entity.

Therefore, the mechanisms and dynamics of impact factor rating are entirely western, imperial and neo-colonial in nature. The dynamics of this imperialism is located in the editorial policies and requirements for publishing in the impact factor journals, the costs of publishing articles in journals, and accessing the electronic copies of the journals hosted in the internet. These enhance and consolidate the perpetuation of western values in Nigeria's higher educational system, expropriation of financial endowments, subordination of Nigerian scholarship, and incapacitation of academics, which leads to indifference and fatigue. Therefore, since academic promotion and

accreditation in Nigerian higher institutions is predicated on publishing in impact factor journals, which are instruments for propagating western values and interest, education and scholarship in Nigeria is therefore an imperial surrogate and none developing.

Therefore, this paper recommends that the abrogation of impact factor policy as an index for academic hiring, evaluation, and promotion. However, publication as one of the major indices of evaluating academics is essential but should not be restricted to impact factor publishing. To ensure diverse cultural and regional research experiences, education stakeholders should introduce the policy of continental equity in research and publication as a measure for evaluation. In this, awarding of values or marks to academics during evaluation should be structured by the number of research articles published across the five continents and major sub-regions in the world. Finally, the orthodox classroom performance evaluation index should be adopted as co-fundamental yard stick for hiring and promoting academics.

### Acknowledgements

This research was not funded by any organization, institution, government or agency but by the authors themselves. We acknowledge all authors whose works were cited in this paper. They were of great importance.

### References

- [1] Abbasi, K. Let's dump impact factor, 2004. Downloaded on 17/7/2018 from <http://www.bmj.com/cgi/content/full/329/7471/0-htm>
- [2] Adebisi, M.A. Knowledge Imperialism and Intellectual Capital Formation: A Critical Analysis of Colonial Policies on Educational Development in Sub-Saharan Africa. *Mediterranean Journal of Social Sciences*, 5/4(2014), 567 - 572
- [3] Adomi, E.E. & Mordi, C. Publication in foreign journals and promotion of academics in Nigeria. *Learned Publishing*, 16/4(2003), 259 - 263
- [4] Alatas, S.H. Intellectual Imperialism: Definition, Traits and Problems. *Southeast Asian Journal of Social Science*, 28/1(2000), 23 – 45
- [5] Allen, E.S. Periodicals for mathematicians. *Science*, 70/1825(1929), 592 – 594.
- [6] Altbach, P.; Reisberg, L.; & Rumbley, L. Trends in global higher education: Tracking an academic revolution. Report prepared for the UNESCO 2009 World Conference on Higher Education, United Nations Educational, Scientific and Cultural Organization, Paris, 2009. Downloaded on 12/7/2018 from <http://unesdoc.unesco.org/images/0018/001831/183168e.pdf>
- [7] Archambault, É. & Larivière, V. History of the journal impact factor: Contingencies and consequences. *Scientometrics*. 79/3(2009), 635-649 Downloaded on 12/7/2018 from <http://link.Springer.com/>
- [8] Bloom, D.; Canning, D.; & Chan, K. Higher education and economic development in Africa. Washington: World Bank, 2005
- [9] Brischoux, F. & Cook, T. Juniors seek an end to the impact factor race. *Bioscience*. Volume 59 (2009), 238-239
- [10] Broug, E., et al. Authorship in Africa, 2008. Downloaded on 12/7/2018 from <http://info.emeraldinsight.com/pdf/report.pdf>
- [11] Chan, L. & Costa, S. Participation in the global knowledge commons: Challenges and opportunities for research dissemination in developing countries. *New Library World*, 106/3&4(2005), Downloaded on 17/7/2018 from <http://www.emeraldinsight.com/Insight/viewContentItem.do?sessionId=78>

- [12] Corbyn, Z. A threat to scientific communication. *Times Higher Education*, 13 August, 2009. Downloaded on 12/7/2018 from <http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=407705&c=>
- [13] Darko-Ampem, K.O. Scholarly publishing in Africa: a case study of the policies and practices of African university presses. Dissertation presented to the Graduate School of the University of Stirling in fulfilment of the Requirements for the Degree of Doctor of Philosophy, 2003
- [14] Deibert, R.J. *Parchment, printing, and hypermedia: Communication in world order transformation*. Columbia: Columbia University Press, 1997
- [15] Elina, N.L. The media as effective tool for national security. *International Journal of Security Studies*, 6/4(2010), 1-13
- [16] Eston, G.G. Judgment of scientific quality by impact factor is no substitute for reading the paper, October 22, 2004. Downloaded on 21/7/2018 from [www.bmj.com/cgi/letters/329/7471](http://www.bmj.com/cgi/letters/329/7471)
- [17] Farooq, S. Impact factor has bad impact in South Asia, 2004. Downloaded on 21/7/2018 from [www.bmj.com/cgi/letters/329/7471](http://www.bmj.com/cgi/letters/329/7471)
- [18] Fatema, J. The predicament of impact factor publications and ethical values. *Journal of Pakistan Medical Association*, Karachi, 2014.
- [19] Garfield, E. Citation Indexes for Science. *Science*, 122/3159 (1955), 108–111.
- [20] Garfield, E. The history and meaning of the journal impact factor. *JAMA-Journal of the American Medical Association*, 295/1(2006), 90-93.
- [21] Gray, E. & Burke, M. African universities in the knowledge economy: A collaborative approach to researching and promoting open communications in higher education. In L. Chan & S. Monati (Eds.) *Open scholarship: Authority, community and sustainability in the age of web 2.0*. Proceedings of the 12th International Conference on Electronic Publishing, Toronto, Canada, 25 – 27 June 2008
- [22] Harnard, S. Enrich impact measures through open access analysis, 2004. Downloaded on 12/7/2018 from [www.bmj.com/cgi/letters/329/7471](http://www.bmj.com/cgi/letters/329/7471)
- [23] Igbojekwe, P.A. and Ugo-Okoro, C.P. Performance Evaluation of Academic Staff in Universities and Colleges in Nigeria: The Missing Criteria. *International Journal of Education and Research*. 3/3(2015), 627-36
- [24] Kader, A. & Cathey, J.T. The impact of the impact factor. *Saudi Medical Journal*, 2004,511-537. Downloaded on 12/7/2018 from <http://www.sciencedirect.com/science/article/B6WVB-4C6YWC339p/2/2dd13ffa/e804c1707c41db95e70377f>
- [25] Lee, I. Publish or perish: The myth and reality of academic publishing. *Language Teaching*, 47/2(2014), 250-261
- [26] Lewis, J.S. An assessment of publisher quality by political science librarians. *College and Research Libraries*, 61/4(2000), 313 - 323
- [27] Lindsey, D. Using citation counts as a measure of quality in science: measuring what’s measurable rather than what’s valid. *Scientometrics*. 15/3&4(1989), 189–203.
- [28] Mirza, J. Globalization of Media: Key Issues and Dimensions. *European Journal of Scientific Research*, 2/1(2009), 66-75. Downloaded on 21/7/2018 from <http://www.eurojournals.com/ejsr.htm>
- [29] NEPAD. Africa's science and technology consolidated plan of action. Pretoria: NEPAD Office of Science and Technology, 2006a
- [30] NEPAD. African science, technology and innovation indicators (ASTII): Towards African indicator manuals: A discussion document. Pretoria: NEPAD Office of Science and Technology, 2006b
- [31] Ofoegu, F.I. Motivational Factors and Teacher Classroom Evaluation and Management in Edo State. *Current Issue in Educational Management in Nigeria*, 1/1(2001), 1-12
- [32] Opthof, T. Sense and nonsense about the impact factor. *Cardiovascular Research*, 33/1(1997), 1–7.

- [33] Reddon, E An academic revolution Inside Higher Education. 22 November, 2009. Downloaded on 17/7/2018 from <http://www.insidehighered.com/news/2009/07/07/unesco>
- [34] Rousseau, R. African journals in ISI databases. Belgium: The STIMULATE - 4 Group, N.D..
- [35] Scully, C. & Lodge, H. Impact factors and their significance: overrated or misused? British Dental Journal. 198/7(2005), 391-393. Downloaded on 12/7/2018 from [http://www.sciencedirect.com/science/article/B6WVB-4G3MBIC-178/2/664cda448d8630055bdc\\_b3E7d73c4oc2](http://www.sciencedirect.com/science/article/B6WVB-4G3MBIC-178/2/664cda448d8630055bdc_b3E7d73c4oc2)
- [36] Seglen, P.O. Why the impact factor of journals should not be used for evaluating research. British Medical Journal, 314 (1997), 478-497
- [37] Steele, C. Scholarly monograph publishing in the 21st century: The future more than ever should be an open book. Journal of Electronic Publishing. 11/2(2008)
- [38] Straubhaar, J. & LaRose, R. Media now: Understanding media, culture, and technology. Thomson: Wadsworth, 2004
- [39] Thussu, D.K. Media on the Move: Global Flow and Contra-flow. London: Routledge, 2007
- [40] Türk, K. The Study of Performance Appraisal and Compensation in Estonian Public and Private Universities. Estonia: University of Tartu, 2005
- [41] UNESCO Towards Knowledge Societies. Paris: UNESCO World Report, UNESCO Publishing, 2005. Downloaded on 21/7/2018 from <http://www.unesco.org/en/worldreport>
- [42] University of Nigeria. The yellow book: Guidelines for appointment and promotions of academic staff. 4th ed. Nsukka: University of Nigeria, 2007
- [43] Williams, C. & Padula, D. The Evolution of Impact Indicators: From bibliometrics to altmetrics. London: Altmetric and Scholastica, 2017
- [44] Willinsky, J. The access principle: The case for open access to research and scholarship. Cambridge, MA: MIT Press, 2006

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