

Web Presence and Impact Analysis of Achebe's Literary Books

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Abstract

Generally the web has been seen by the users as rich source with great potential to provide information about the wider impact of academic research, beyond traditional scholarly impact but report capability and network link strength have not been explored in the area of literary discipline. Literary books written by Achebe Chinua in the last decades were systematically sourced from AltaVista search engine data archive using Webometrics Analyst Software to report the web impact. Precision level search after spam filtering of Web pages accounts for match of 67%. Google time series analysis helped to determine the pattern of presence of Achebe literary books and web quest with the Pearson moment correlation technique to establish relationship. Evaluation of social network facilities and geographical/regional awareness of Achebe literary is used to establish the discussion and level of mentioning strength of Achebe and the literary book. The study concludes that Achebe literary book has seen much of web presence and impact with high significant relationship between Achebe quest and the literary world.

Key words: Time Series, Trends, Literary, Achebe, Social Network, Correlation, hits

1.0 Introduction

In the developed world, oral and written literatures have been preserved from generation to generation as instrument of didactic reference point for learning and teaching of moral in the earliest human times. It is viewed as a modernity of culture for generational change and development (BBC News, 2013). Today, social networking of literary works of great writers have been used to show case the rich culture and dynamism of the white, Arab, Asian and in most Latin American but scarcely in the case of African society especially Nigeria where the teaching and learning of history and literature at the secondary school levels is rare, if not gone in almost extinction. With the advent of computer and internet technology, the teaching, learning and literary works of others have taken a vital position in critical thinking, learning, watching, listening and speaking through entertainments to problem solving modelling theories of intellectual standard and applications (Richard, 2009). In modern society, digital natives and immigrants of earlier scholars, have their voice hard in the social networking environment. Social networking facilities such as Face Book, Twitter, Blog, MySpace, WalSap, Toggle, Skype, Google Trend and many more are playing significant role in the web quest, presence, impact reporting, entertainment, academic and research collaboration despite the geographical dimensional space differences, ethno-cultural and graphic divides (Thelwall, 2008). The use of web presence of literary work of art, science, culture and religion are taken toll in the fast growing six-degree separation connectivity technology.

The specific objective of the study is:

1. To evaluate the trend analysis of Achebe's web quest and the literary book impact.
2. To identify the most widely read literary books of Achebe on the web space.
3. To find out which of social network media discussing and mentioning Achebe's literary over time space.
4. To test for significant correlation between Achebe web quest and literary books geographically

2.0 Related Literature

Statistical Cyber metrics modelling of social networking and link network analysis have not much attention. Very rarely has been used to conduct research in Africa given the epileptic nature of internet and level of utilization for cyber research in the area of literary web presence. In many literature search, literary books evaluation is scarcely reported to apply mathematical model and network algorithms of directed graph of neural network application to understanding the concept of web presence, impact and link network analysis of literary books reading, teaching and learning as bases of critical thinking and reflective reasoning into the underlying fact of Achebe's literary books, as a Didactic and Problem Solving Models (DM and PSM) for generational

writers and literary readers across the world. However, it is paramount to study how mathematics and statistics can be applied to establish the rate of web presence and impact of Achebe's six literary books- *Things fall apart; Arrow of God; the man of the people; Anthills' of the Savannah; the Man of the People; No longer at ease and there was a country*, and their readership link network search analysis through social networking to evaluate the PSM connection in students logical mind using mathematics and statistics to devise a baseline model for evaluating literary writers in Africa. Given merit of exploits in internet trending Blog, Facebook, Tweeter, Search, Trend, MySpace, Toggle, LinkedIn, Skype, wall sap, you tube e.t.c, neural network search links diagrams using the internet source from archived data is appropriate in this study. Chinua Achebe and his contributions to the world of literature in the Great Black society via Achebe's literary books written since early 60s to date through readership metrics in the social network literary world presents the focal point of this research. The choice of the search engine is in line with high suitability relative to other search engines available on the Web using the AltaVista search engine (Thelwall, 2002a; Qiu, Chen, & Wang, 2004). Link analysis is based on the foundational and conceptual theories of (Payne & Thelwall, 2004; Thelwall & Wilkinson, 2005). The Web impact report of URLs and Domains with TLDs and STLs for evaluating presence and impact of literary books is connected to (Nwagwu and Agarin, 2008). This paper focuses on the trend analysis of web presence and impact reporting of Achebe's literary books, Google trend of Achebe's web quest and literary books with specific objective of link network Analysis of their readership within the social network frame.

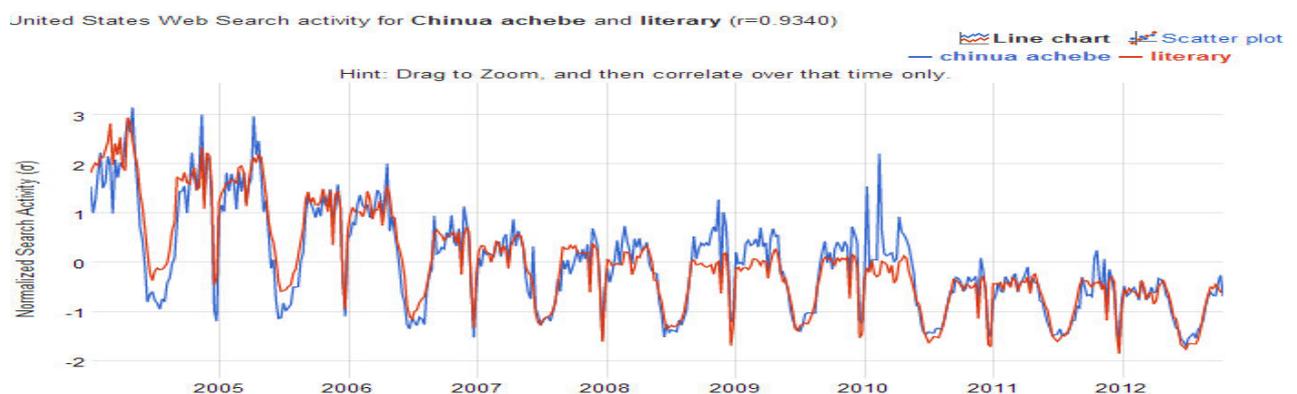
3.0 Methodology

This web presence, impact report and links analysis of Achebe's literary books is carried on the University of Wolverhampton Cyber metrics Research Gate with the assistance of the Wolf resource links. All the Achebe's seven identified literary books- *Things fall apart; No Longer At Ease, Arrow of God; Man of the People; Anthills' of the Savannah; The Trouble with Nigeria and There Was a Country* are systematically retrieved from the archive of the AltaVista search engine data web links to generate data and conduct analysis using Google Trend Search and Web Analyst Software to evaluate the web presence and impact report of Achebe literary book online (See Tang and Thelwall, 2003) patterns for university department interlinking. The data are validated using precision match. Hence, 87% precision level and large match recall are obtained from random matches search after spam filtering of Web pages. Google time series analysis is used to determine the pattern of presence of Achebe literary books and web quest with Pearson moment correlation. Evaluation of social network facilities and geographical/regional awareness of Achebe is computed using simple percentage analysis. The Bowtie concept of Web search structure is used to establish the link connectivity strength of the literary book. After filtering spam matches of literary books, a sample of 65% of each of the books is taking as true representative of average condition of sampling of data in the weblog study.

4.0 Analysis, Results and Discussions of Findings

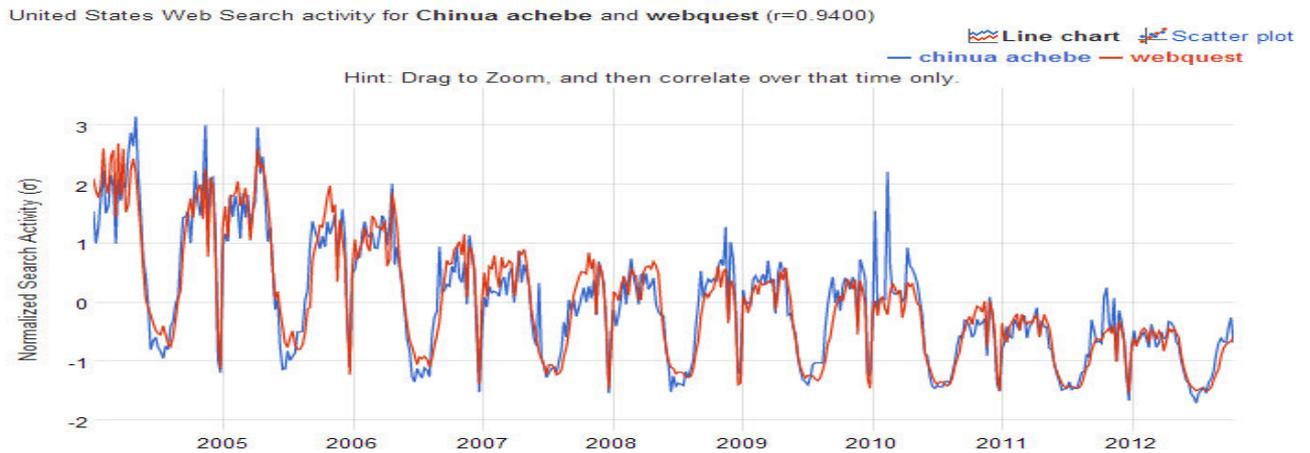
This section discusses the result of the Achebe and Achebe Literary Book in context and the findings.

The Google Trend Search Result of Achebe Web quest and Literary Books



Source: Google Trend Search, 2013.

Fig. 1



Source: Google Trend Search, 2013.

Fig. 2

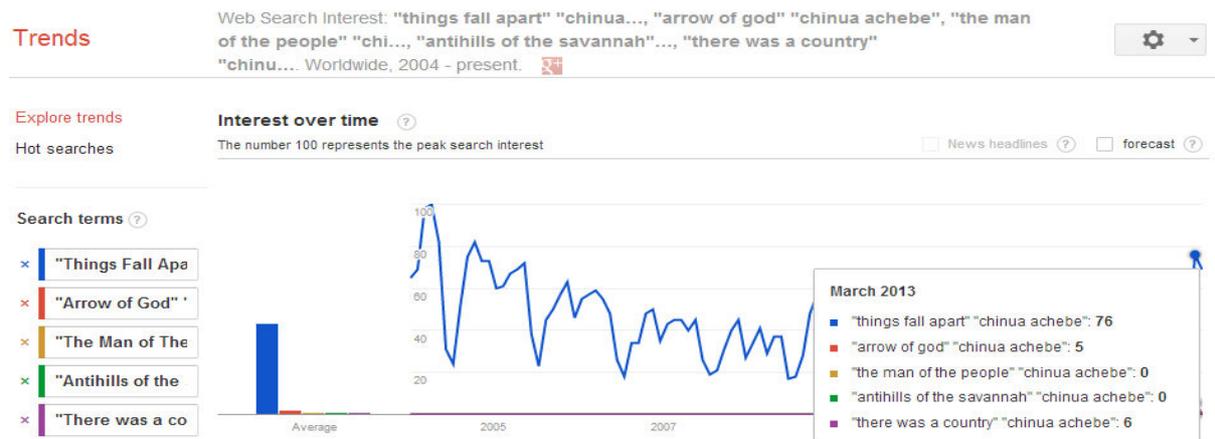
The Google Trend Search Result of Achebe Literary Books Impact and Prediction

In fig. 1, Achebe literary books record the highest spikes in 2004 by 3 digits follow by low spikes in July 2004 and steadily increases to 3 digits in October 2004 and May 2005 and record falls by -1 digit activity search in July 2005. The graphs maintain positive and negative sequence over time until in January through to April that 1 to 2 positive normalised activity search of Achebe is recorded whilst between September and November 2011. Achebe literary books again become a rising discussions indicating 2 digits normalised activity search by web crawler in 2005. Achebe spikes are evidence in 2003, 2004, 2005 and 2006 and very low record of Achebe mentioning on the search are experienced from the graph in 2007 to 2012 in almost similar frequencies as the literary books except in the months of 2010 and late 2011. Pearson moment coefficient value of 0.93 reveals that there is relatively positive high relationship between Achebe and his literary book normalised activity search on the web. In fig. 2 and the time series trend result of Achebe and web quest by people around the world presents nearly similar patterns as in the figure 1. In general there is 94% positive correlation between Achebe and the web quest.



Source: Google Trend Search, 2013.

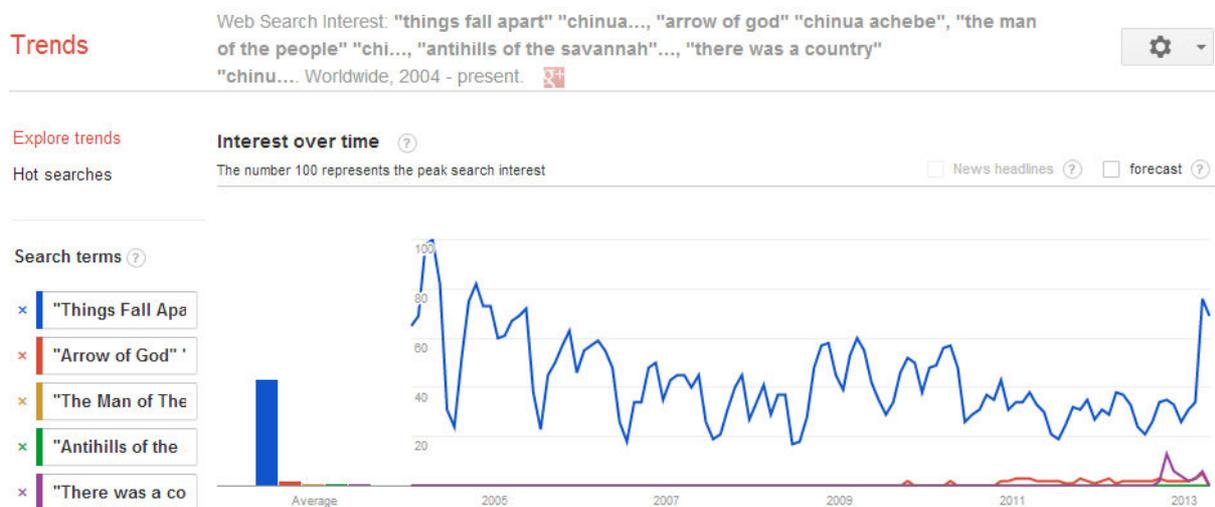
Fig.3



Source: Google Trend Search, 2013.

Fig.4

The trend spikes and normalized active reports of the web crawler between 2003 to 2013 based on search items in figure 3 and 4 reveal that; *The Things Fall Apart* novel records the high normalised search Achebe literary book matches in 2004 and 2012 follow by *Arrow of God* and *There Was A Country* in 2012 and 2013. The correspondent normalised activity search crawler reports of *The Things Fall Apart* and other Achebe literary books per thousand search return by crawler indicate 100% and negligible (0.00%) reports in 2004 respectively. In the year 2013, three novels; *The Things Fall Apart*, *There Was A Country* and *Arrow of God* contribute 87.4%, 6.9% and 5.9% search reports per one thousand.



Source: Google Trend Search, 2013.

Fig. 5

In fig. 5, the graph smoothing and bar confirm the track records of the literary presence, impact and web normalised activity search by web crawler per one thousand search return from 2001 to early 2013. The trend clearly explains the relevance of the Achebe's *The Things Fall Apart* novel of 60s on global research, entertainment, literature and other aspect of human life as it teaches the didactic and critical thinking stand point for future generations. More so, *Arrow of God* and *There Was A Country* with relative presence of *There Was A Country* but enjoys most comments among others (*No Longer At Ease*, *Man of the People*; *Antihills' of the Savannah* and *The Trouble with Nigeria*) on the web.

The Google Trend Search Result of Achebe Literary Books Geographical Divide Impact

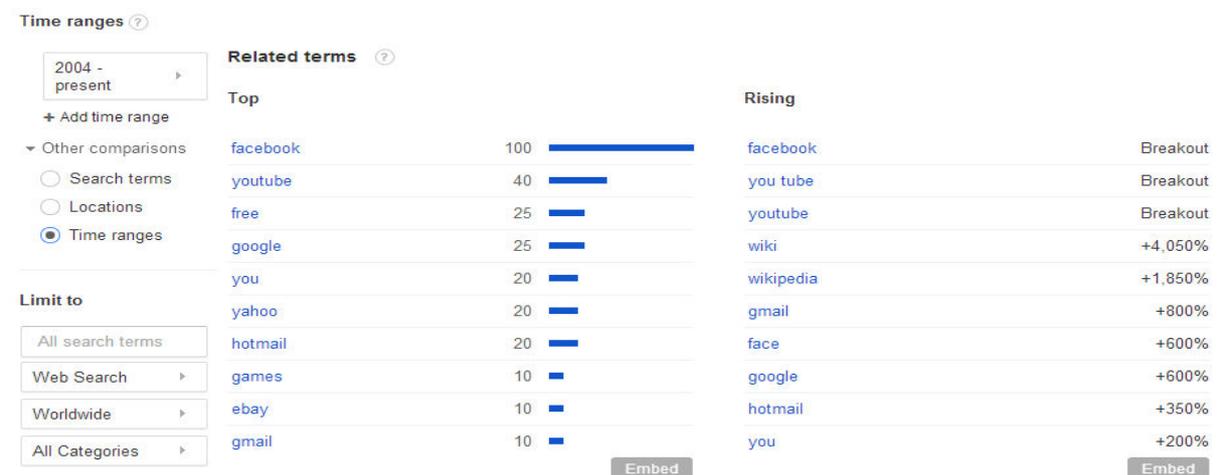


Source: Google Trend Search, 2013.

Fig. 6

Geographically, Google trend search in figure 7 reveals that available locational mention of Achebe literary books cut across nearly one-third of the world regional locations, of the total 360 report matches reveal that 27.8% are mentioning Chinua Achebe quotes, 20.8% Chinua Achebe books, 18% about Chinua Achebe whilst equal proportional records of 16.7% are talking about Chinua Achebe biography and the Okonkwo entertainment views. Out of the visible continents reporting Chinua Achebe, larger proportions from the African countries such as South Africa and Nigeria have the highest records. Similar results are confirmed in the USA, Canada and South Asia with low degree of distribution of comments. Philippines maintain highest records among the countries beyond the African shores reporting about Chinua Achebe quotes, books and Chinua Achebe, biography and entertainment views of the Okonkwo.

The Google Trend Search Result of Achebe Literary Books Social Network Sources



Source: Google Trend Search, 2013.

Fig. 7 Achebe Literary Book (ALB)

From the Google trend search of the 10 social network sites available mentioning Achebe literary books impact, out of total of 280 report matches indicate that 35.7% are face book comments, 14.3% is on the you tube, an equal proportion of 8.9% are on Google. In addition, free search, you, yahoo and Hotmail have percentage view of 7.1% each on the literary book web presence. Finally, games, ebay and Gmail indicate least reports on the Achebe's

books. These confirm that the rising comments are mostly face book and you tube comments break out follow by Wiki, Wikipedia and Gmail representing 4.1%, 1.8% and 0.8% per 1000 searches.

Web Analyst Software Procedure

The followings are the procedural approach to executing the identified social network software for title mention Achebe literary book using the internet base system:

Step1: Run window based Webometric Analyst software

Step2: Upload the pseudo file from Notepad in design folder in a location of your choice

Step3: The analyst runs and generates bing result from the archive of the AltaVista search engine data web

Step4: For web report click on run selection and upload the long bing result and report on the software to generate report.

The code

The Query and Network Draw Algorithm 1 and 2

Start interface

"No longer at ease" "Chinua Achebe"

"Arrow of God" "Chinua Achebe"

"A Man of the People" "Chinua Achebe"

"Things fall apart" "Chinua Achebe"

"There was a country" "Chinua Achebe"

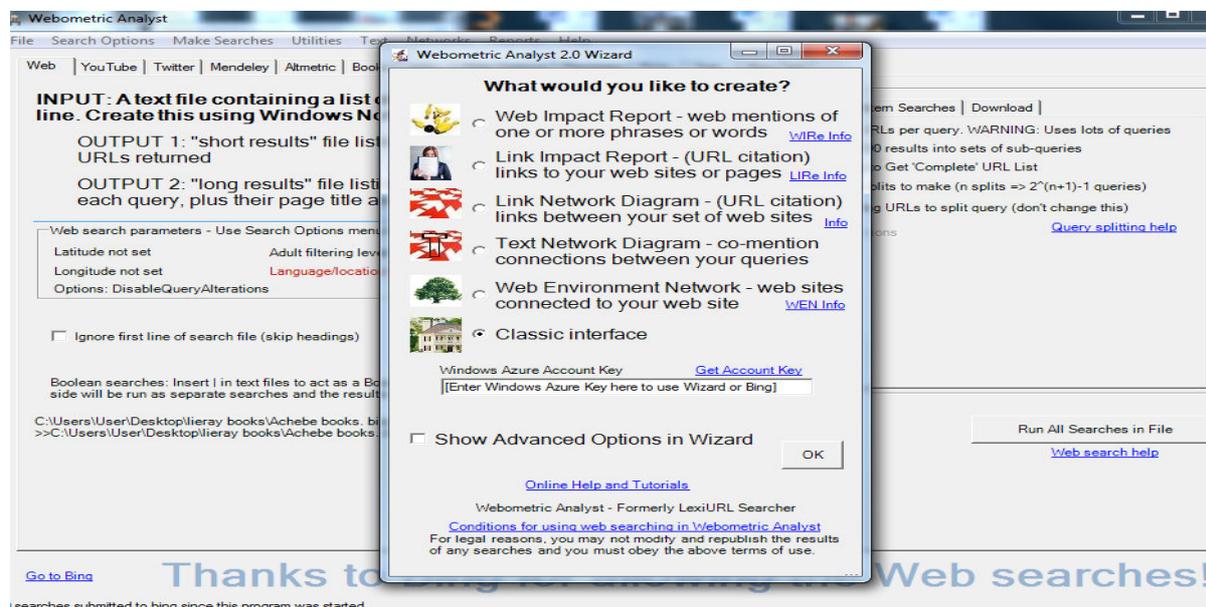
"Antihills of the Savannah" "Chinua Achebe"

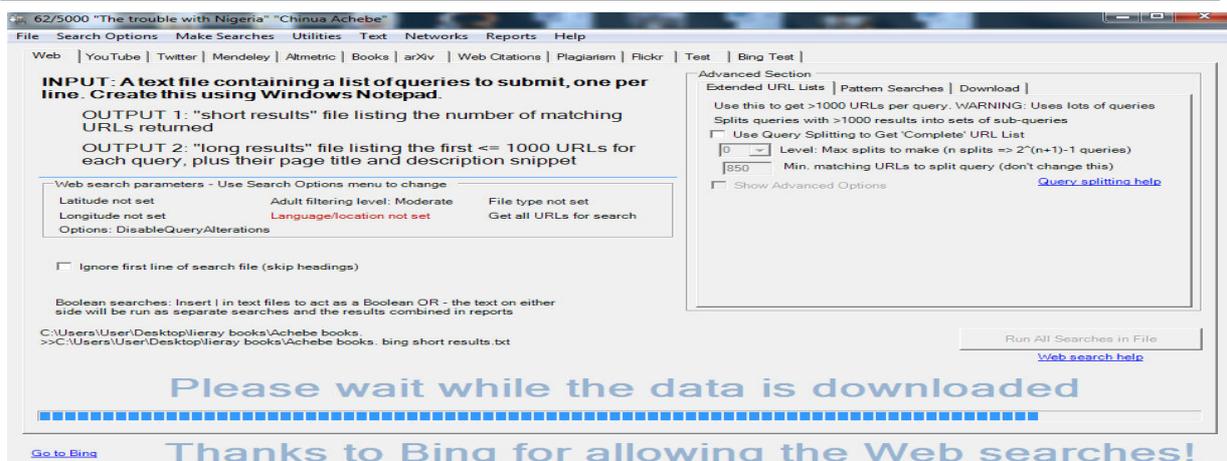
"The trouble with Nigeria" "Chinua Achebe"

See bing hits result in appendix

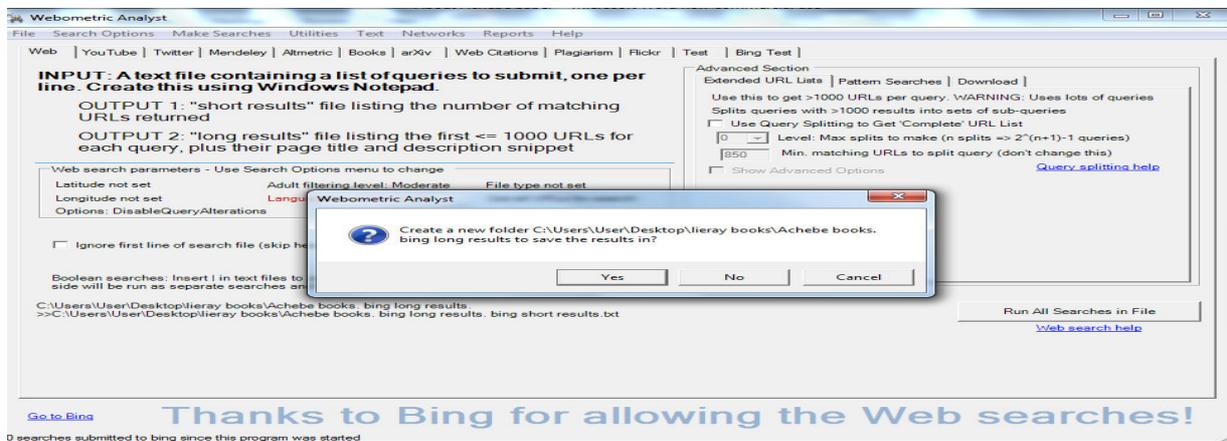
The Web metric Analyst Implementations

Interface 1





The Execution Interface 2



Bing of Literary Book Impact Reports from the Alvista Archival Data

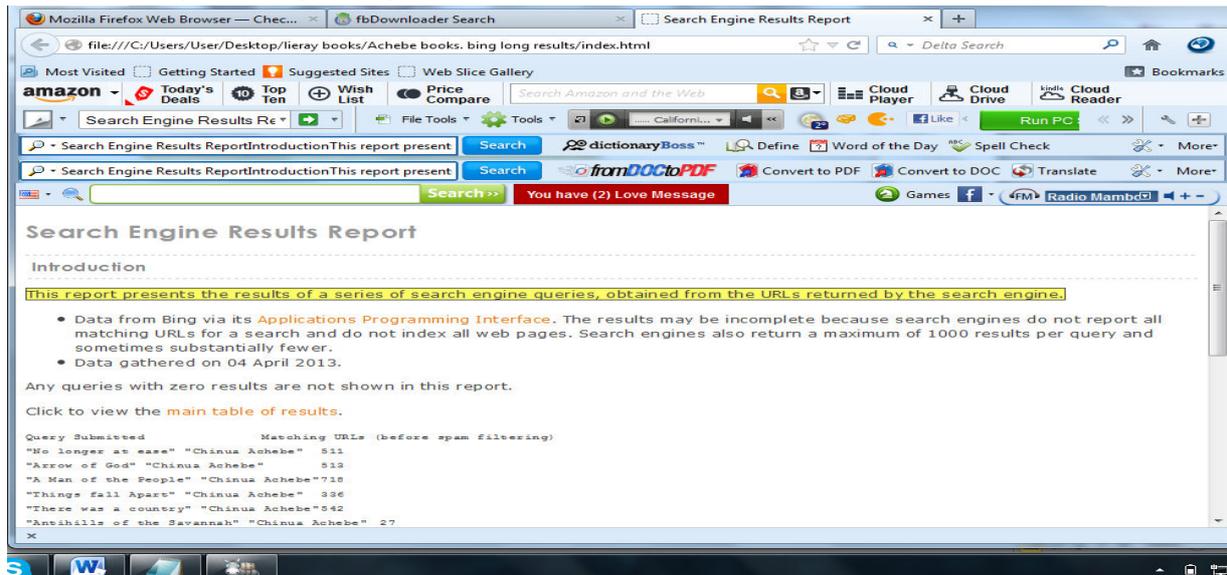
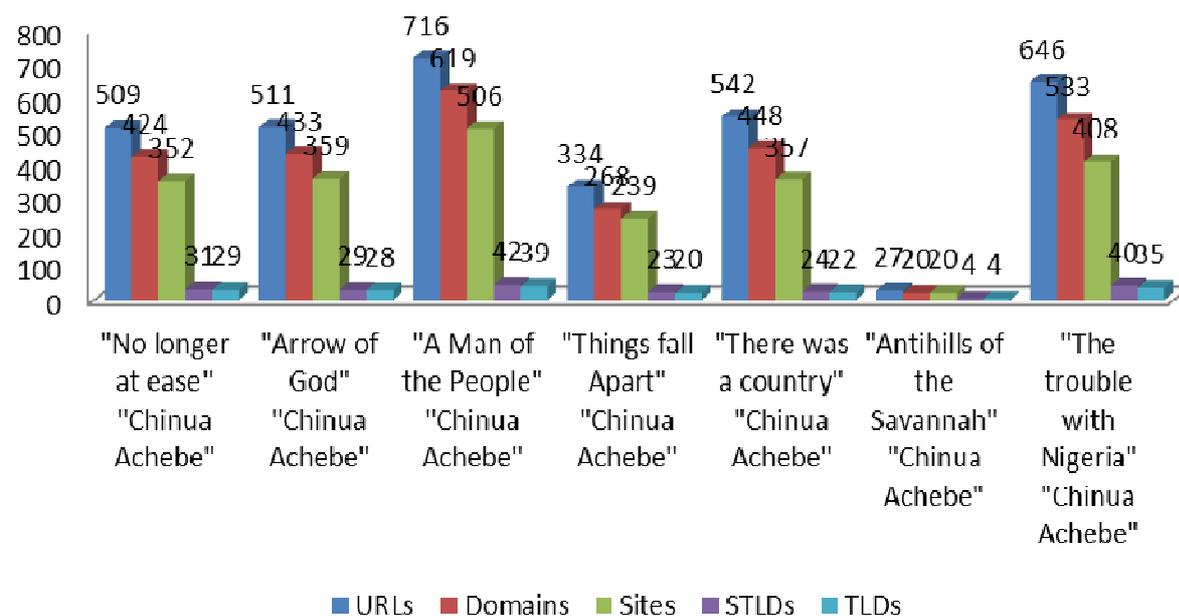


Table1: Literary Book Impact Query Domain Report

Sample	Base query	Domains Reports
1	"No longer at ease" "Chinua Achebe"	424
2	"Arrow of God" "Chinua Achebe"	433
3	"A Man of the People" "Chinua Achebe"	619
4	"Things fall Apart" "Chinua Achebe"	268
5	"There was a country" "Chinua Achebe"	448
6	"Antihills of the Savannah" "Chinua Achebe"	20
7	"The trouble with Nigeria" "Chinua Achebe"	533
Total		2745

Source: Bing Archival Data, 2013.

Fig. 8 Bar Graph of Literary Book Impact Report



Source: Bing Archival Data, 2013.

Table 2: Percentage Analysis of Achebe Books Domain Ranking Reports

Base query	Domains	Domains Ranking Reports
"A Man of the People" "Chinua Achebe"	619	22.6%
"The trouble with Nigeria" "Chinua Achebe"	533	19.4%
"There was a country" "Chinua Achebe"	448	16.3%
"Arrow of God" "Chinua Achebe"	433	15.8%
"No longer at ease" "Chinua Achebe"	424	15.4%
"Things fall Apart" "Chinua Achebe"	268	9.8%
"Antihills of the Savannah" "Chinua Achebe"	20	0.7%
Total	2745	100%

Source: Author's computation, 2013.

The domains results ranking of literary books search by Achebe shows that the most highly linked domains are "Man of the People" "Chinua Achebe" with a total domain matches of 612 representing 22.6%, "The Trouble with Nigeria" "Chinua Achebe" by 19.4%(533) and "There Was a Country" "Chinua Achebe" making 16.3%(448). Whilst "No Longer At Ease" "Chinua Achebe" "Arrow of God" "Chinua Achebe" record nearly the same percentage of 15.4%(424) and 15.8%(433) respectively; the list domain search by 0.7%(20) being the "Anthills' of the Savannah". See bar graph in table 2 above for details.

Conclusion

The empirical analysis of the cyber metrics techniques reveal that; *A Man of the People*, *The Trouble with Nigeria* and *There Was a Country* are the most highly domain ranked hits. *No Longer at Ease* and *Arrow of God* have high impact reports. However, *Antihills of the Savanna* has fairly low impact with each other. In general, the study shows that; *A Man of the People* and *The Trouble with Nigeria* are considered as the most widely read Achebe literary books over time. This study has empirically shown the reason Achebe's literary book is viewed as the most paraphrased in the literary world with wider coverage of geographical presence and social network impact.

ACKNOWLEDGEMENT

This work is inspired by Mike Thelwall Professor of Information Science, webometrics and sentiment analysis, School of Technology, University of Wolverhampton, Wulfruna Street, Wolverhampton WV1 1LY. <http://www.scit.wlv.ac.uk/~cm1993/mycv.html>

References

- Björneborn, L. (2004). *Small world link structures across an academic web space: A library and information science approach*. Phd thesis. Department of Information Studies, Royal School of Library and Information Science, University of Copenhagen.
- Bookshy (2012). 52 years of Nigerian literature: First Generation; An African book lover; posted on Blog: TwitterShared to Facebook at 11.09 Thursday 28 March 2013.
- The Guardian Newspapers (2013). The time and life of Chinua Achebe, the African literary Icon gone literature: the roots and literary documentary broadcasted on the BBC, New, 11 pm March 28, 2013 WMF London, UK.
- The New York Time Magazines (2009). Evaluating the African literature: the roots and literary documentary broadcasted on the 11 pm BBC, New, 2013 WMF London, UK.
- Nwagwu, Williams E., & Agarín, Omoverere (2008). "Nigerian University Websites: A Webometric Analysis" *Webology*, [online]. 5(4), Article 62. [Accessed 26 March 2013]. Available at: <http://www.webology.org/2008/v5n4/a62.html>
- Q Qiu, J., Chen, J., & Wang, Z. (2004). An analysis of backlink counts and Web Impact Factors for Chinese university websites. *Scientometrics* 60(3), 463-473

- Richards, P. and Elder, L (2006) *Learning to think through: a guide to critical thinking and reflective writing across the curriculum*: 3rd ed. Pearson Prentice Hall, NY. USA.
- Tang, R., & Thelwall, M. (2004). Patterns of national and international web inlinks to US academic departments: An analysis of disciplinary variations. *Scientometrics* [online]. **60**(3), 475-485. [Accessed 26 March 2013]. Available at: <http://link.springer.com/article/10.1023%2FB%3ASCIE.0000034388.70594.cc>
- Thelwall, M. (2002a). A comparison of sources of links for academic web impact factor calculations. *Journal of Documentation* [online] **58**, 60-72. [Accessed 26 March 2013]. Available at: http://www.scit.wlv.ac.uk/~cm1993/papers/2001_Extracting_macroscopic_information_from_web_links.pdf
- Thelwall, M. (2002c). An initial exploration of the link relationship between UK university websites. *ASLIB Proceedings* [online] **54**(2), 118-126. [Accessed 26 March 2013]. Available at: <http://www.emeraldinsight.com/journals.htm?articleid=863949&show=abstract>
- Thelwall, M. (2004). Link analysis: An information science approach. Amsterdam: Elsevier [online]. [Accessed 26 February 2013]. Available at: <http://linkanalysis.wlv.ac.uk/>
- Thelwall, M., Harries, G., & Wilkinson, D. (2003). Why do web sites from different academic subjects interlink? *Journal of Information Science* [online]. **29**(6), 453-471. [Accessed 26 February 2013]. Available at: <http://jis.sagepub.com/content/36/6/671.full.pdf+html>
- Thelwall, M., & Wilkinson, D. (2005). Three target document range metrics for university web sites. *Journal of the American Society for Information Science and Technology* [online]. **54**(6), 489-496. [Accessed 16 March 2013]. Available at: [http://www.eicstes.org/EICSTES_PDF/PAPERS/Three%20Target%20Document%20Range%20Metrics%20for%20University%20Web%20Sites%20\(Thelwall\).pdf](http://www.eicstes.org/EICSTES_PDF/PAPERS/Three%20Target%20Document%20Range%20Metrics%20for%20University%20Web%20Sites%20(Thelwall).pdf)