Scholarly Communication and Authorship Patterns in Language Research: Evidences from Citation Analysis of Language Theses in Nigeria

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Abstract

Investigation into citation and authorship patterns in language and linguistics research is of serious interest to librarians and researchers. The purpose of this paper is to examine scholarly communication behaviour in languages using theses and dissertations to enhance collection development policy in linguistics research. Bibliometric and informetrics indicators were used to examine a total of 87 theses and dissertations submitted to the Department of Linguistics and Nigerian Languages from 2005 to 2014. A retrospective descriptive study was conducted using bibliometric indicators such as types of cited sources, timeliness of cited sources, authorship pattern, rank list of frequently cited books and degree of research collaboration. A total of 5084 bibliographic references were extracted from the theses with an average of 58.4 citations per theses. Books and monographs dominated the entire citations with 63.6% while journal citations were 17.9%. Electronic resources accounted for 15.4% of the citations. This study provides useful evidence to librarians who would be interested in developing the language library collections. Monographs have been found to be more useful for language researchers and collection development librarians will be guided in policy formulation particularly academic libraries where language research needs to be supported. There has been paucity of citation studies in the humanities generally and linguistics in particular. This study is an original research adopting bibliometric approach to examine scholarly communication in language and linguistics using University of Nigeria, Nsukka as a case study.

Keywords: Bibliometrics, Citation Analysis, Authorship Pattern, Information Science, Language Research, Scholarly Communication

Introduction

Language plays very critical roles in the overall national development and global integration. This is why linguists are interested in the development of languages through research and enunciation of language policies in many cultures all over the world. Language features in different developmental discourses depending on whether it is conceived as a functional device for communication and technical education, or as a vehicle and manifestation of culture (Fardon & Fumiss, 2003). There are at least two areas in which language is crucial to national development: literacy and communication (Bamgbose, 2003) for there is an obvious link between literacy and development. For instance, the world's poorest countries are also the countries with the highest rates of illiteracy. Since literacy liberates untapped human potentials and leads to increased productivity and better living conditions, it is not surprising that countries with the highest rates of literacy are also the most economically advanced. The socio-economic and political life of any individual is propelled by the use of language. As a result of this Olaoye (2009) remarked that man's access to knowledge is facilitated through the use of languages.

According to Rufai (2000) language is defined as 'the spoken means by which human beings communicate and/or interact.' However, Trudgill (1983) believes that the purpose of language goes beyond communication since other animals can as well communicate without the use of a language. For people of the same linguistics background, language acts as a very strong unifying tool and reflects a kind of identity for them. In such environment, language is looked upon as an agent of social control since it is rule-governed and any breach of such rule is appropriately sanctioned (Gilbert, 2008). Every language has a speech norm that must be observed so as to avoid communication breakdown.

Language is often used to advance international political and economic power play in the global environment. Gilbert (2008) has remarked that every language in a unique way defines how things are talked about and which concepts for making sense of the world are fundamentally assumed. He argued that language is a very important tool in the exercise of power. The owner of a domineering language automatically becomes more powerful than those whose language is spoken by the minority. Observations have shown that more than eighty percent of global information is in the language of the Western countries, that is, English language and as a result major international discourses are conducted in the languages of domineering super powers. In addition to this function, Ogundare (2004) has noted that language plays very critical roles in the capacity of man to conquer and civilize his environment. It is a very powerful instrument of colonization and neo-colonization. The United States and other European countries have successfully used this in establishing their influence on other countries of the world particularly the developing countries. The socio-economic and

political functions of any language are usually dependent on the extent of research and utilization of such language. Such researches are made available to the global academic community through scholarly communication processes.

Scholarly communication is the processes of sharing research results through publication and other processes. Scholars who participate in the scholarly communication process perform different roles, not only as authors or readers. Borgman and Furner (2002) identify four different roles for researchers, namely: as *writers*, as *linkers* (e.g. to cite), as *submitters* (chooser of publication channel), and *collaborators*. Some other scholars also participate in the peer review mechanism as a form of quality control of the paper. These roles and their importance vary across scholarly fields and academic cultures.

Research activities and scholarly communication in Nigeria are generally low as bibliometric study by Ocholla and Ocholla (2007) shows that African scholars are behind the rest of the world in scholarly productivity. Similarly, Olukoju (2004) has regretted that scholarly publications in Nigeria have been decreasing since the 1980s. This development has often been associated with the pattern of information generation and dissemination in the global community. An effective and reliable method of examination of scholarly communication process in languages is to look at information resources researchers use in the field, citations and authorship patterns. This guides researchers and other stakeholders like librarians on how to support research through acquisition of research materials in the area. Citation analysis is a reliable method of determining the information resources which researchers use in a particular field with the intention of developing core literature for acquisition in the field. It is also useful in establishing the pattern of research communication in the field as well as the publication patterns and research impacts of scholars (Shaw & Vaughan, 2008; Singh, 2013).

Citation analysis has often relied on data from the Institute of Scientific Information (ISI) which was founded by Eugene Garfield in 1958 using three citation indexes (SCI, SSCI, A&HCI) which provide available information on systematic analysis of impact and influence of scholarly literature. They have long been the most common source data for citation analysis. However, Moed (2005) and Meho (2007) have observed that the indexes have limited coverage of citations; which is restricted only to the journal literature marginalizing other kinds of scholarly publications such as books, chapters in edited books, conference proceedings, technical reports, and patents. This implies that it is skewed against social science and humanities in favour of scientific fields covering mainly English language titles from North America and Western Europe. These are serious flaws, particularly to the researchers in humanities and the social sciences. As a result of this, citation studies have been conducted with journals not included in the databases (Singh, 2013; Ezema & Asogwa, 2014) while others resorted to the use

of theses and dissertations (Gooden, 2001; Tonta & Al, 2006; Riahinia, 2010; Fasae, 2011; Banateppanvar & Biraddar, 2013; Ezema & Ugwuanyi, 2014; Gasparotto, 2014; Abeyrathne, 2015) while conducting citation analysis.

In view of this development, this study relied on theses and dissertations as source data. Theses and dissertations have been found to contain results of preliminary studies or discussions of future research directions that would be very valuable to upcoming researchers in that area (Eaton, cited in Kiondo 2004). The doctoral theses in particular form the bulk of the academic programme and play very significant roles in higher education. In *The Role and Nature of the Doctoral Dissertation: A Policy Statement*, the Council of Graduate Schools (1991) remarked that "there is no question that, in the view of the faculty, students, and administrators participating in this study, the doctoral dissertation, as a demonstration of a student's ability to carry out research independently, defines the essence of the Ph.D degree." In corroborating this, Boyer cited in Gooden described the dissertation as the "capstone to formal academic training process." Similarly, Barry (1997) argued that a successful doctoral student tends to be comprehensive and up-to-date in reviewing the literature. Doctoral theses therefore are invaluable primary literature which cannot be ignored in the scholarly environment. This is because the doctoral thesis is an embodiment of primary research finding that has passed through a meticulous and rigorous peer review process through series of panels of experts. Kiondo (2004) has equally underscored the importance of theses and dissertations in the scholarly communication circle. According to her they are considered as valuable sources of research materials for not only students and scholars, but also for policy makers and other people who benefit from research findings.

Language studies in the University of Nigeria, Nsukka started in 1981 with the establishment of Department of Linguistics and other Nigerian languages, 21 years after the establishment of the university in 1960 (University of Nigeria Calendar, 2008). Available records of theses submission show that the department has produced over one hundred and fifty theses and dissertations since inception.

The purpose of this paper is to examine the citations and authorship patterns in language research using theses and dissertations submitted to Department of Linguistics and Nigerian Language, University of Nigeria Nsukka. Specifically, the paper intends to interrogate the authorship pattern (sole or multiple) sources, language, quantity, currency and frequency of sources among others. Other include:

- Determine the year-wise production of theses within the period under review;
- Find out the types of sources cited by language researchers;
- Determine the quantity of citation to electronic resources in language research;

- Determine the language of cited sources in the theses;

- Find out the age of the cited sources;

- Examine the authorship pattern in language research;

- Determine the authorship and degree of collaboration among authors;

- Develop a rank list of frequently cited books in language research.

Literature Review

Citation analysis is an aspect of bibliometric studies which deals with analysis of references listed at the end of a research work, usually done through citation counts. It is a wide ranging area of bibliometrics that studies the relationship between a work and documents citing the work or an author and other authors citing him (Gooden 2001; Aina & Ajiferuke, 2002). Citation analysis has been applied in several disciplines and geographical regions to determine types of sources used in research, citation patterns of researchers, authorship patterns timeliness of cited sources, rank list of journals among other issues and variations in information sources used in different fields of study.

Gooden (2001) explained that citation analysis is "an excellent unobtrusive method to determine which resources researchers are using." Citation analysis is associated with Eugene Garfield (cited in Leydesdorff 2011) who proposed a citation index that offered a new approach to subject control of the scientific literature. Garfield argued that there exist some relationships between a particular article and its references. This similarity between an article and its references is the cornerstone of citation analysis since this relationship is of great interest to scholars. Meho (2007) noted that citation analysis as a branch of information science assumes that influential scholars and important works are cited more than the others. The belief is that references to a particular journal reflect a scholarly impact of that article on the author of the citing work. Another assumption is that the accumulated citations to a given author's work in some sense reflect the impact of that author on scholarship and research.

Citation Patterns and Scholarly Communication in Languages

Scholarly communication in languages and linguistics in Nigeria may not be different from other disciplines. However, the channel of communication and pattern of citations may be quite different from other fields. Channels of scholarly communication are usually through the journals, books, conference proceedings and later through online platform such as institutional repositories, blogs, social media among others (Heinzkill, 1980; Zwaan & Nederhof, 1990; Georgas & Cullars, 2005) which is typical of all humanities fields. Their reliance on books and monographs is so deep that it is doubtful

whether there are core journals in languages. Few citation studies provide more glaring picture of the citation patterns in the languages and linguistics and the controversy on how to classify the field of linguistics. Tannen (1989) has argued that linguistics (the science and study of languages) can be "scientific, humanistic and aesthetic" and therefore has been regarded as "the most scientific of the humanities and the most humanistic of the sciences." Though Zwaan and Nederhof (1990) in their investigation concluded that theoretical linguistics reflects a publication pattern closer to the social sciences than the literary and historical studies, linguistics generally has been classified in the humanities (Georgas & Cullars, 2005, Knieval & Kellsey, 2005). Some linguists for example are historians of languages; others work quite closely with philosophers, anthropologists, sociologists and literary artists.

This controversy about its classification may have contributed to a very scanty study on the citation patterns of the linguists and literary scholars as has been reported by Karisson (1994) and Georgas and Cullars (2005). Karisson contends that humanities in general have not been favoured by citation analysis, but linguistics is one of the lowest of the humanities disciplines. His argument is that the culture and language bound fragmentation of the humanities is a serious problem from the perspective of citation analysis as "most small cultures and languages are not covered by standard citation indexes such as A&HCI from Institute for Scientific Information (ISI). Another reason for this lack of coverage is that like other humanities fields, linguistics relies mainly on books and monographs, which are not in the data base of ISI. For example, in the investigation on the citations of Finnish linguists using a popular linguistics journal *Virittaja,* Karisson (1994) demonstrated that the first ten most cited works were books.

An investigation (Georgas & Cullars, 2005) using *Language and Linguistics Behavioural Abstracts* (LLBA) and MLA bibliography indicates that the linguistics citation patterns relate to social sciences, with 49.7% citations to books and 42.8% to journal. This is contrary to humanities citations which range from 60% to 80% citations to books and monographs. An earlier study (Heinzkill, 1980) equally faults Georgas and Cullars' investigation. Using a total of 9556 references from 15 journals in English language and literature, Heinzkill reveals that 75% of the citations in the study were to books and 20% to journals and the remaining 5% to other materials. A recent study by Gasparotto (2014) also provides evidences that monograph remained heavily used in linguistics research. Ezema & Asogwa (2014) also conducted a citation analysis of 884 papers from two linguistics journals. Of the 15,283 bibliographic references, 53.3% were citations to books and monographs; while 35.9% were journal citations and the remaining distributed to conference papers, theses and dissertations.

Linguists also cite older materials like other fields in humanities for instance, the studies of Karisson, (1994) and Gasparotto, (2014) indicate that a large proportion of

publications cited were published between 1745 and 1910 and more than 60% of them were to books published between 1940 and 1970. Similarly, more than 70% of the cited sources in Ezema & Asogwa's (2014) study exceeded ten years old. Another study by Nkiko and Adetoro (2007) examined timeliness of cited sources and found out that more than 60% of citations were less than ten years old. Georgas and Cullars (2005), in their study, also found that the ages of citations were between one and fifteen years, and more than 5% of the citations were published between 1600 and 1960, which suggests that old materials were fairly cited.

Studies have indicated no clear core journals in linguistics research. In a study by Heinzkill (1980), only very few core journals were identified in the study with the publications of Modern Language Association dominating the citations. The investigation also shows that citations in language and literature do not conform to Bradford's law of scattering, but the indication is that language and literature seem to value current materials. The study of Georgas and Culler (2005), however, failed to identify any set of core journals in the field contrary to Zwaan and Nederhof's who found ten core journals in linguistics. Evidences from Knievel and Kellsey's (2005) and Karisson's (1994) show that language and literary scholarship rely heavily on books and monographs, citing older publications, making use of essentially primary information sources and near absence of core journals.

Citations and Authorship Patterns of Other Disciplines

Some citation studies are conducted to determine authorship patterns and degree of collaboration (Vimala & Reddy, 1996; Ezema & Asogwa, 2012, Kumar & Kumar, 2011; Pradhan, Panda & Chabdrakar, 2011; Singh, 2013). The study of Vimala and Reddy revealed a dominance of multiple authorship patterns in Zoology, solo research also existed. Though proportion of single authored papers has shown a declining trend, the degree of collaboration in research was 0.75. Similarly, Ezema and Asogwa's (2012) found more multiple authors than single authors in Agricultural research, while Singh (2013) found more single authorship patterns (65.92%) in the field of Library and Information Science. Singh & Bebi (2013) also found more single authorship patterns (83.94 %) in the same field.

The study by Pradhan, Panda and Chandrakar (2011) which examined the trends and authorship pattern and author collaborative research in Indian chemistry literature indicates that the degree of collaboration (C) during the overall 10 years (2000-2009) was 0.03, but the year – wise degree of collaboration is almost same in all the years of mean value 0.97. In the period under review, the multi-authorship articles were higher than single authorship. The study of Kumar and Kumar (2011) using *Journal of Oilseed Research* (JOR) found that collaboration coefficient is very high during all the years ranging from

0.76 to 0.84 and more multiple authorship – an indication of high collaboration among scientists. However, humanities research has often shown more single authors than multiple authors as revealed by Thompson (2002).

Other citation studies have been conducted to develop rank lists of core journals. Udofia (1997) conducted citation analysis for selection of principal veterinary medical journals. The result of the study shows that *Bulletin of Animal Health and Production in Africa* is the most cited journal with 605 citations representing 66.2% of the entire citations. Another study by Okiy (2003) examined educational dissertations at Delta State University and developed a rank list of 18 most cited journals, 12 of which are published in the United States. A study by Dabrishus (2005) analyzed the citation pattern of Classics using three journals and identified a total of 63 most frequently cited journals with *Classical Quarterly* ranking first. Enger (2009) also employed citation analysis to develop core books for collection development in the Social Sciences and found that the methods accounted for circulation of nearly 95% of the social science collection.

Other citation studies have been employed to determine the use of electronic resources in research communication. For example, Harter (1996) conducted a citation analysis to determine the impact of electronic journals on scholarly communication using thirty-nine scholarly journals that began electronic publications not later than 1993. Findings show that great majority of scholarly e-journals have had essentially no impact on scholarly communication in their respective fields. Only eight of the 39 e-journals (20.5%) have been cited ten or more times over their lifetimes. Similarly, Zhang (1998) investigated the impact of internet-based electronic resources on formal scholarly communication in the area of library and information science and found that of the 1,175 citations, 7.49% articles have electronic references while the average e-reference was 3.78%. The study concludes that the impact of e-citation is very low when compared with the print types.

Another investigation by Herring (2002) revealed that 8% of the electronic citations were to such unpublished or ephemeral resources and 27% of the electronic citations were categorized as interdisciplinary. Jan's (2009) investigation on the use of electronic resources in *Library Trends* revealed that 44.51 % print books were cited compared to 0% electronic books and 44.04% print journals were cited as against 11.82% electronic journals. In another recent study, (Singh 2013) citation to electronic resources was 25.8%. Perhaps the low citations to electronic resources made Ezema (2011) to call for building of open access institutional repository in African universities to facilitate access to research materials scattered in many universities.

Methods

The research method adopted for this study was citation analysis. This method is appropriate for the analysis of cited reference sources in language theses in the University of Nigeria, Nsukka. A total of 87 theses and dissertations submitted from 2005 to 2014 to the Department of Linguistics and Nigerian Languages of the university found in the university library were used for the study. The citations documented as references in the theses were used. The classification of sources cited was developed following earlier citation studies found in earlier literature (Georgas & Cullars, 2005; Karisson 1994). Citations documented as references were extracted and analyzed in relationship to the objectives of the study. Items of the same theses which were cited more than once in references were counted as one. The data were analyzed using descriptive statistics of frequency and percentage and presented in tables and charts. The rank list of most frequently cited books was determined by inclusion of all the books that met the average citations of 63.2 to books and monographs. To determine the collaboration coefficient among the authors, the paper adopted the formula by Subramanyan (1983) as follows:

The degree of collaboration C =

Where C = Degree of collaboration in a discipline

Nm = Number of multiple authored papers in a discipline

Ns = Number of single authored papers in a discipline

Results

Table 1: Year wise distribution of the theses

Year	No of theses	%
2005	6	6.9
2006	9	10.3
2007	11	12.6
2008	8	9.2
2009	12	13.8
2010	9	10.3
2011	10	11.5
2012	7	8.0
2013	8	9.2
2014	7	8.0
Total	**87**	**99.9**

Table 1 presents the result for the year wise distribution of the theses used for the study. From the Table one can observe that the highest number of theses was recorded in 2009 with 13.8% followed by 2007 with 10.3%. The least number of theses was recorded in 1997 with 5.7%. It can be seen from the table that the theses are not evenly distributed over the years.

Table 2: Type of cited sources

Types of Sources	No of citations	%
Books/monographs	3232	63.6
Journals	909	17.9
Theses and dissertations	408	8.0
Conference/Seminar papers	332	6.5
Lecture Notes	49	1.0
Reports	44	0.9
Govt. Pub	35	0.7
News Pub.	32	0.6
Interview	19	0.4
Inaugural lectures	17	0.3
Mimeograph	7	0.1
Total	**5,084**	**99.9**

The result of the types of cited sources is presented in Table 2. It can be seen from the table that books and monographs received the highest citations (63.6%) followed by journals (17.9%) and then theses (8%). The least cited sources are interview (0.4%), inaugural lectures (0.3%) and mimeograph (0.1%). The findings reveal that books and monographs are mainly used by language researchers.

Table 3: Citations to electronic resources

Types of Resource	No of e-citations	%of e-resources N =781	% of total citations N = 5084
Books/monographs	121	15.5	2.4
Journals	537	68.8	10.6
Theses and dissertations	40	5.1	0.8
Conference/Seminar papers	33	4.2	0.7
Reports	21	2.7	0.4
Govt. Pub	18	2.3	0.4
Newspapers/magazines	9	1.2	0.2
Inaugural lectures	2	0.2	0.04
Total	**781**	**100**	**15.4**

The results of citations to electronic resources is presented in table 3, where citations to e-journals contributed over 68% of the overall e-citations, followed by citations to e-books with 15.5%. Other electronic resources cited are theses and dissertations (5.1%), conference/ seminar papers (4.2%), reports (2.7%), government publications (2.3%), news publications (1.2%) and inaugural lectures (0.2%).

Table 4: Timeline citations to electronic resources

Year	E-citations	%
2005	23	2.9
2006	48	6.1
2007	57	7.3
2008	67	8.6
2009	79	10.1
2010	84	10.8
2011	92	11.8
2012	101	12.9
2013	109	14.0
2014	121	15.5
Total	**781**	**100**

In table 4, the timeline citation to e-resources is presented. It is evident from the table that there has been progressive increase in citation to electronic resources from 2.9% in 2005 to 15.5% in 2014. This implies the language researchers are gradually adopting the use of the Internet in their research activities. Figure 1 below provides a graphical illustration of the trends in electronic resources citations among language researchers within the period under review.
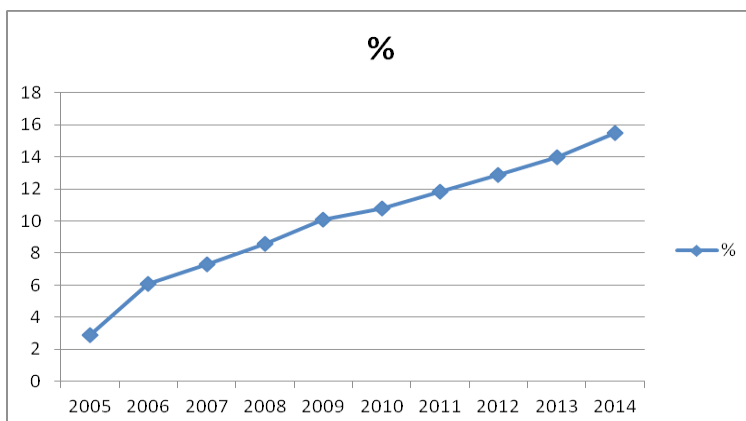
Figure 1: Trend of electronic citations

Table 5: Language of cited sources

LANG.	No of Citations	Percent
English	4689	92.2
Igbo	356	7.0
French	16	0.3
German	14	0.3
Hausa	7	0.1
Yoruba	2	0.04
TOTAL	5084	99.9

Table 5 presents data for the result of languages of the cited sources generated from the theses. English language is the dominant language of the sources cited (92.2%) followed by Igbo language sources (one of the major Nigerian languages) with 7% of the citations. French and German sources received 16 and 14 citations while Hausa and Yoruba sources (two major Nigerian languages) have 7 and two (2) citations, respectively. The findings reveal that scholarly communication among Nigerian language researchers are mainly in English.

Table 6: Summary of age of the cited sources

Period	Total citations	%
Pre – 1900	16	0.3
1900 – 1960	290	5.7
1961 – 1970	435	8.6
1971 – 1980	1281	25.2
1981 – 1990	1475	29.0
1991 – 2000	957	18.8
2001 – 2010	460	9.0
2011 – 2014	123	2.4
No Dates	47	0.9
Total	5084	

The summary of the timeliness of the cited sources is presented in Table 6. The period 1980s recorded the highest number of citations with 1475 (29%) followed by 1970s with 1281 citations (25.2%). After 1980s, the number citations came down to 957 (18.8%) in the period 1991 to 2000 and 460 (9%) for the period 2001 to 2010. The lowest citations were to materials published before 1900.

Table 7: Authorship pattern for language research

S/N	Periods	Single Authors	Two authors	Three authors	More than three authors	Total of all Authors	Percent of periods	Collaboration coefficient
1	Pre – 1900	12	3	1	0	16	0.3	0.25
2	1900 – 1960	223	52	11	4	290	5.7	0.23
3	1961 – 1970	301	84	47	3	435	8.6	0.31
4	1971 – 1980	871	256	111	43	1,281	25.2	0.32
5	1981 – 1990	1,007	288	123	57	1,475	29.0	0.32
6	1991 – 2000	637	226	67	27	957	18.8	0.33
7	2001 – 2010	298	86	57	19	460	9.1	0.35
8	2011 – 2014	87	21	11	4	123	2.4	0.29
9	No Date	34	9	3	1	47	0.9	0.28
	Total	3,470 (68.3%)	1,025 (20.2%)	431 (8.5%)	158 (3.0%)	5,084	100	0.32

Data on the authorship pattern are presented in table 7. It can be seen that single authored sources dominate the citations (68.3%), followed by citations with two authors (20.2%). Cited sources of three authors recorded 8.5% while citations of more three authors yielded 3.0%. The collaboration coefficient is generally low (0.32), however the highest collaboration coefficient was from 2001 – 2010 (0.35) with the lowest during the period of 1900 to 1960.

The degree of collaboration C =

Where C = Degree of collaboration in a discipline

Nm = Number of multiple authored papers in a discipline

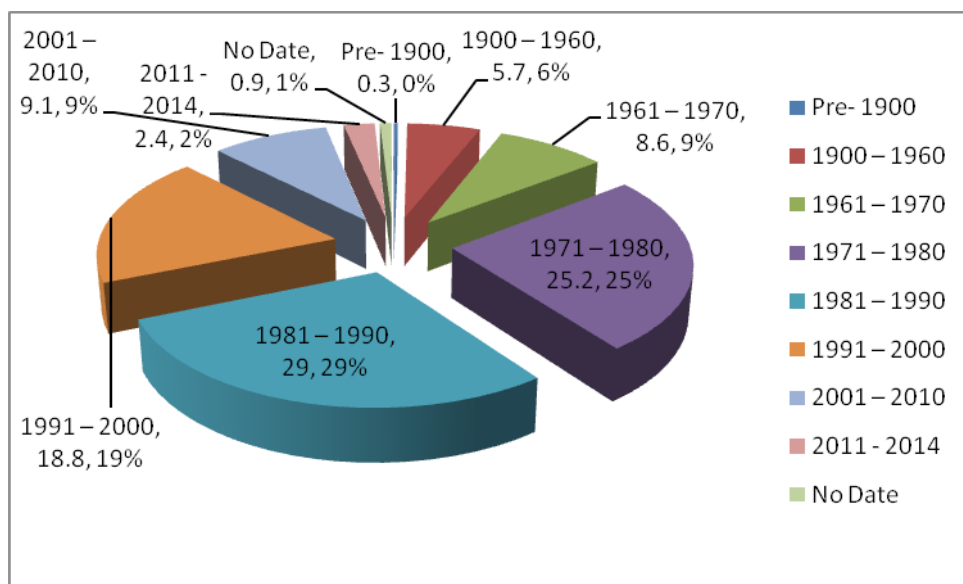*Ns* = Number of single authored papers in a discipline

Therefore, C = = 0.32

Fig 2: Pie chart showing year wise authorship pattern

Table 8: Rank list of most frequently cited books

Rank	Books	Author	Date of pub	Citations	% of freq cited books N = 2,688	% of books citations. N = 3,232
1	Aspect of the theory of syntax	Chomsky, N	1965	132	4.9	4.1
2	Yoruba oral tradition	Abimbola, W	1975	121	4.5	3.7
3	Igbo-English dictionary	Williamson, K	1972	117	4.4	3.6
4	Oral literature in Africa	Finnegan, R	1970	107	4.0	3.3
5	Exploration in the functions of language	Halliday, M.A.K	1977	105	3.9	3.2
6	Language of Africa	Greenberg, J.H	1963	102	3.8	3.2
7	Language, culture and society: a reader in linguistics and anthropology	Hymes, D.H	1964	100	3.7	3.1

Rank	Books	Author	Date of pub	Citations	% of freq cited books N = 2,688	% of books citations. N = 3,232
8	Olodumare: Gods in Yoruba belief	Idowu, E.B	1962	98	3.6	3.0
9	Transformational generative grammar: an introduction.	Yusuf, O	1959	96	3.5	3.0
10	Lectures on government binding	Chomsky, N	1981	95	3.5	2.9
11	Literary theory: an introduction	Eagleton, T	1983	93	3.5	2.9
12	Knowledge of language, its nature, origin and use.	Chomsky, N	1986	91	3.4	2.8
13	Contents and forms of Yoruba ijala	Babalola, A	1966	90	3.4	2.8
14	Igbo verbs: a semantic – syntactic analysis	Uwalaka, M.A	1988	88	3.3	2.7
15	Transformational grammar: a first course	Radford, A	1988	87	3.2	2.7
16	Linguistics	Crystal, D	1971	85	3.2	2.6
17	Yoruba theatre: introduction to African theatre	Beier, Ulli	1967	83	3.1	2.6
18	Towards an Igbo literary standard	Nwachukwu, P.A	1983	81	3.0	2.5
19	Phonology: theory and analysis	Hyman, L	1995	79	2.9	2.4
20	Sociolinguistics	Trudgill, P	1974	78	2.9	2.4
21	Features of Yoruba oral poetry	Olatunji, O.O	1984	75	2.8	2.3
22	Yoruba meta language	Awobuliyi, O	1989	74	2.8	2.3
23	Language	Bloomfield, L	1935	72	2.7	2.2
24	The language of Africa	Greenberg, J.	1963	71	2.6	2.2
25	Dictionary of modern Yoruba	Abraham, R.C	1958	70	2.6	2.2
26	Multilingualism, minority languages and language policy in Nigeria.	Emenajo, E.N	1990	69	2.6	2.1
27	Introduction to Yoruba oral literature	Ogundeji, P.A	1991	68	2.5	2.1
28	The handbook of phonological theory	Goldsmith, J	1995	67	2.5	2.1
29	Traditional Yoruba poetry	Olukoju, E.O	1992	66	2.5	2.0
30	The development of Yoruba novels	Ogunsina, J.A	1992	65	2.4	2.0
31	A short Yoruba grammar	Bamgbose, A	1967	64	2.3	1.9
TOTAL				2,688	100	82.9*
Percent						

*Percentage citations of the list of frequently cited books

A rank list of the most frequently cited books is presented in table 8. A total of 31 books that produced 2,688 citations, which represent 82.9% of the overall book citations make up the most frequently cited books. Noam Chomsky's book *Aspect of the theory of syntax* published in 1965 ranked first followed by *Yoruba oral tradition* by W Abimbola. Igbo-English dictionary and Oral literature in Africa written by K. Williamson and Ruth Finnegan respectively ranked 3rd and 4th. A close observation of the Table indicates that most of the books in the ranked list were published between 1960 and 1980. The oldest book in the list is L. Bloomfield's book *"Language"* published in 1935, while the newest books are L. Hyman's *Phonology: theory and analysis* and *"The handbook of phonological theory"* written by J. Goldsmith and all published in 1995.

Discussion

The findings from this study provide useful knowledge of the citation behaviour and authorship patterns in language research. It is evident from the study that books and monographs are critical research literature for scholarly communication in the field. Though journals, conference/seminar papers, theses and dissertations made remarkable contributions to the cited sources, books and monographs dominated the citations with over sixty percent. This finding gives credence to the earlier studies by Heinzkill (1980), Georga and Cullars (2005) and Gasparotto (2014) who equally found more citations to books and monographs in their separate studies. However, Georgas and Culler recorded lower percentage of books (about 50%) and monographs than the present study. Similarly, the findings accentuate the position of Thompson that the core materials for humanities research are books and monographs. These findings may not be surprising because journal publication in the humanities was a later development. This has been buttressed by Wiberly and Jones (1989) that the humanities scholars prefer books and monographs to journals as research literature.

An interesting finding from this study is an increase in citations to theses and dissertations at 8% as against earlier studies such as Georgas and Culler who reported only 3.6% and Sharada's five percent. In some other citation studies, theses and dissertations were not even reported as they were often lumped with other sources. The reason for this increase among Nigerian linguists may not be clear. Observations from most African countries indicate that research materials are generally scarce because many of the libraries with few exceptions are not well equipped. Consequently, researchers resort to literature sources that are available and theses and dissertations belong to fairly available literature sources. In addition to this, theses and dissertation provide extensive literature review and exemplary design of study which are very useful to graduate students. These have been established by Barry (1997) and Kiondo (2004).

Electronic resources contributed 781 (15.4%) of the total citations. Evidently, there has been improvement of citations to e-resources when compared with earlier studies of Harter (1996), Zhang, (1998), Herring (2002) and Jang (2009). However, it is lower than Singh's (2013) finding. Two reasons may account for increased citations to electronic resources. The first reason is the installation of ICT facilities in the university. The second is the acquisition of electronic databases which host many journals in the university library. The citation of more electronic journals than books could be a result of more full text journals on the Internet than full text e-books.

Scholarly communication among Nigerian language researchers is mainly in English. The findings indicate that citation to English language sources contributed over ninety percent of the total citations. Giving the multi-linguistic nature of the country, one would have expected a good percentage of the citations to Nigeria indigenous languages particularly the three major Nigerian languages. However, English dominated the language of the cited sources because it is the official language of the country and equally the language of instruction in the institutions of higher learning. The implication of this is that a greater percentage of research communication in the country is done in English language. Evidently, the finding is not different from that of Riahinia (2010) who found over ninety percent citations to English language sources in a study conducted in the field of Library and Information Science in an Iranian university. One Nigerian language that has fair contribution in the cited sources is Igbo (one of the major Nigerian languages). This contribution is quite obvious because that is the indigenous language used in the location of the university.

Information emanating from the findings indicates that the time of publication of the cited sources ranges from pre 20th century to 21st century. The older materials were mainly publications of well known authors and archives originating from colonial masters that were found very useful in humanities research as has been observed by Wiberly and Jones (1989). Archives are primary information resources which have been found to be very authoritative in substantiating evidence in humanities and social science research.

A close observation of Table 6 reveals that the 1970s and 1980s produced the highest publications cited in the study. One could safely say that 1980s is the golden period of publications in Nigeria. After the 1980s citations continued to decrease until the period of 2010s. It can be argued that the pattern of citations over the period is a reflection of Nigerian's political and socio economic development within the period. Economically that was the period of oil boom when government was paying attention to education generally and publishing in particular. The period provided an enabling environment for academic activities. Politically, Nigeria had been a civilian democracy just before then (1979 – 1984) and this encouraged academic activities of which publications was

a very critical component. Shortly after, there was military intervention which was not education friendly, resulting in a drop in publications. It is obvious that materials become more accessible to researchers after few years of their publications when libraries would have acquired and advertised them, using the current awareness mechanisms available to them. In addition to this, the theses studied were produced between 2005 and 2014 which implies that most works published in 2014 were not likely to be cited.

Scholarly communication process in the language is dominated by solo researchers as can be observed from the findings. Single authored publications constitute over sixty percent of the cited sources. This is in line with other studies in the humanities and languages. For instance, Wiberly and Jones reports that the humanities researchers are more likely to work alone and do more extensive literature review than the scientists. On the contrary, other citation studies in the sciences contradict the present finding since more multiple authorship were recorded by Ezema and Asogwa (2012), Kumar and Kumar (2011), Pradhan, Panda and Chandrakar (2011). The finding shows that collaborative coefficient is low. The collaborative coefficient is 0.32 as against 0.75 reported earlier by Vimala and Reddy (1996). This is not surprising as more single authorship suggests low collaboration coefficient.

The rank list of most frequently cited books with their authors was developed since large proportion of the citations was to books and monographs. It could be deceiving if a rank list of journals is developed considering the percentage of citations to the journals. Chomsky's "*Aspect of the theory of syntax*" ranked first. Published since 1965, the book appears to be a classic in language research all over the world. Surprisingly, all the books regarded as the most frequently cited are over twenty years; and over half of the more than forty years. This lays credence to the assertion of scholars that age does not affect the quality of research literature in languages (see Georgas & Cullars 2005). Similarly, a close observation of the ranked list of frequently cited books indicates that all are single authored books which corroborate earlier studies which found greater proportion of single authored sources in language research (See Thompson, 2002).

The Implications of the Findings

This study has examined the scholarly communication patterns of the language researchers in Nigeria. The literature review conducted reveals that much has not been done to determine citation behaviour of language researchers particularly in Nigeria even though language research is very critical to the overall national development. This study has shown that Nigerian researchers in the languages rely heavily on books and monographs. This has very serious implication for libraries when building their collections. Emphasis should be placed on acquisition of relevant books and monographs

that would adequately support research in the area. Though, citations to non linguistics books which assist in providing context to their research may be found, a careful collection of linguistics books and research monographs would improve review of theories in linguistics research.

Authorship pattern in linguistics is dominated by single authors. In the present information and knowledge economy emphasis on research is shifting from solo to collaborative research. Though evidences from literature have always shown that language research is dominated by single authorship, the researchers could also consider collaboration, for Katz & Martin and Cummings & Kiesler (2005) have argued that funding agencies appear to be more interested in funding collaborative research than solo research. If this is the case, language researchers would have greater opportunities in attracting research grants if they key into collaborative research. Observations from the work have also shown that collaborative research reduces cost (since the cost of the research is usually shared among colleagues), time and produces more reliable research outputs.

Conclusion and Recommendations

Scholarly communication in the languages is essential through books and monographs. Language researchers also find journals as very good channel for scholarly communication. It is also clear from the findings that single authorship patterns dominate most of the sources cited, however, multiple authorships are increasingly being reported in language and linguistics. Like other humanities field age of materials does not really affect their citations and that is why over seventy percent of the cited sources over twenty years old. Based on these findings, this paper recommends that:

- The University libraries in Nigeria should devote sizeable proportion of the vote to the purchase of relevant books and monographs to encourage and sustain research in language and linguistics.

- Nigerian universities should develop their internet infrastructure to assist researchers in accessing electronic resources. In addition to these university libraries should subscribe to online data bases including e-books with rich contents in language and linguistics.

- Researchers in language and linguistics should improve their communication, collaboration and contact to promote multiple authorships across disciplines and geographic areas.

- The librarians who work with graduate students require more opportunities for professional development to assist them in guiding the students.

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