

A BIBLIOMETRIC ANALYSIS OF THE JOURNAL OF KNOWLEDGE MANAGEMENT

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This paper aims to examine the *Journal of Knowledge Management (JKM)*, by conducting a bibliometric study, in order to identify the most popular form of contributions, publication pattern, highly cited articles and most prolific countries and institutions. The other important bibliometric indicators that were used are: citations per publication (CPP), number of citations up to 2016 (TC2016), number of citations in 2016 (C2016), number of articles with single, collaborative, first and corresponding authors. A total of 1214 authors from 57 countries and 584 institutions published 508 papers in the journal from 2009 to 2016. Contributions from USA&UK was found to be 126 (24.8%) publications collectively. The two leading contributing institutions, i.e., Lakehead University and McMaster University were both from Canada and the top two contributing authors were also from these two universities.

Keywords: Bibliometric Analysis; Citation; Journal of Knowledge Management; SSCI; TC2016.

INTRODUCTION

The *Journal of Knowledge Management (ISSN:1367-3270)*, a quarterly journal published since 1997, is a peer-reviewed journal committed to exchange up to date intellectual studies and useful information on all those areas of study which are mainly concerned with the management of organizational knowledge. The subject areas covered under this journal are Human Resource (HR), Learning & Organization Studies, and Information & Knowledge Management. The journal is being indexed in Web of Sciences (WoS), Social Science Citation Index (SSCI) since 2009 and listed among two subject categories of WoS, i.e., Information Science & Library Science and Management [1]. The impact factor (IF) of this journal as per Journal Citation Report (JCR of 2016) is 2.053 and 5-year Impact Factor (2016) is 3.293. Taking the aforesaid information's into consideration, an attempt has been made to decipher the primary qualities of the journal by examining its research output.

OBJECTIVE

The present study undertakes the analysis of the eight-year research publications of JKM using different bibliographic indicators. The study aims to identify the most popular form of contributions, publication pattern, highly cited articles and most prolific countries and institutions. The bibliometric examination of the data in terms of some publications, citations, and other interrelated indicators has been extensively used from time to time to disclose the development, purpose and performance of journals.

REVIEW OF LITERATURE

Several such types of bibliometric analyses of journals has been done in the recent

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past. For instance, a study to assess research output of *Journal of Product Innovation Management* (JPIM) in terms of Product innovation research has already been conducted [2]. This study assesses the citations in multiple frames. Some other similar bibliometric studies have been conducted to analyze their research productivity and domain of interest for example *American Journal of Roentgenology* [3], the *American Journal of Veterinary Research* [4], Intelligence [5], 11 major peer-reviewed journals of Knowledge Management and Intellectual Capital (KM/IC) [6], the *Malaysian Journal of Library and Information Science* (MJLIS) [7] and *Journal of Documentation* [8]. Likewise, Vijay and Raghavan in 2007 analysed 779 articles produced from 2000 to 2004 in the *Journal of Food Science and Technology* [9]. Chuang, Olaiya, & Holcarried out 12-year bibliometric analysis of the *Polish Journal of Environmental Studies from 2000 to 2011*. The study analyzed the research output by publications output, keyword distribution, and country, institution and author performance. The study further examined the research productivity by using five bibliometric indicators (total, single, collaborative, first author, and corresponding author publications) [10]. A scientometric analysis to explore the current research trends in Knowledge Management (KM) published in *Knowledge Management Research & Practice* (KMRP). The study analysed 506 articles in terms of Research Productivity, Research Themes and Methods, and Citation Analysis [11]. Swain, K. Swain, & Rautaray examined the intellectual output reflected in *Library Review* (LR) from 2007-2011. The study discovered that single-authored articles occupy the prominent position. The study also showed an average of 22 citations per article of LR from 2007 to 2011 [12].

The present study aims to investigate the number of research publications in terms of total number, document types, global distribution, authorship pattern, length, and citation pattern in the *JKM* during 2009 to 2016. In light of all the studies mentioned above, it could be deduced

that the bibliometric indicators are the essential factors in deciding the nature of research publication, and are essential factors that can be utilised to decide the nature of publication contained in journals.

METHODOLOGY

The data was collected from “*Journal of Knowledge Management*” (JKM) using Social Science Citation Index (SSCI) database of the Web of Science database (Clarivate Analytics earlier known as Thomson Reuters) (accessed on 12th December, 2017). A total of 508 publications from 2009 to 2016 were identified and downloaded in plain text format then imported to MS-Excel for further analysis. The study was conducted on various indicators, such as Document type, bibliometric characteristics, citation indicators [citation per publication (CPP), total citation publication of paper to till 2016 (TC2016), Citation in 2016 (C2016), citation of papers in publication year (C0)], quantity related indicators (TP, SP, CP, FP and RP) [13]. Articles originating from England, Scotland, Northern Ireland and Wales were clubbed together under UK [14].

DATA ANALYSIS AND RESULTS

Document Types

Total numbers of papers published in the *Journal of Knowledge Management* from 2009 to 2016 were 508 including 5 document types (Table-1). Articles (478) were the leading document type comprising 94.09% and got CPP=11.34. It implies that, on an average, one article in JKM receives approximately 11 citations. Second-leading document types were Editorial Materials and Reviews contributing 1.97% each. Lowest document type was ‘Correction’ whose contribution in terms of percentage was 0.20 with zero TC2016 and CPP. Further analysis is covering year wise publication outputs, contributions of countries/territories and institutions and citation life cycles of the most cited articles.

Table 1: Document Types of the JKM

Document Type	TP	P	TC2016	CPP
Article	478	94.09	5420	11.34
Editorial Material	10	1.97	69	0.14
Review	10	1.97	179	0.37
Proceedings Paper Article	9	1.77	109	0.23
Correction	1	0.20	0	0
Grand Total	508	100	5777	12.08

TP Total Publications; P Percentage; TC2016 Total Citation Till 2016; CPP Citation Per Publication

Table 2 shows the yearly distribution of a number of publications, authors, references, pages, citation (till 2016) and citation per publication. It shows that the yearly publications decreased by 4% from 74 to 71 in all the years under study. Whereas, the number of authors, references and pages for each publication shows an increasing trend from 2.18, 40.22, and 14.23 in 2009 to 2.61, 73.69, and 19.72 in 2016, respectively. It is evident from the table that on an average each publication consisted of 2 authors, 62 references, 17 pages and 10 citation approximately

Table 2: Journal Characteristics (2009 to 2016)

Year	TP	P	AU	AU/TP	NR	NR/TP	PG	PG/TP	TC2016	CPP
2009	74	14.57	161	2.18	2976	40.22	1054	14.24	1573	21.26
2010	58	11.42	128	2.21	2957	50.98	922	15.9	1110	15
2011	58	11.42	139	2.4	3488	60.14	1035	17.84	1056	14.27
2012	57	11.22	137	2.4	3577	62.75	955	16.75	898	12.14
2013	56	11.02	129	2.3	3968	70.86	973	17.38	697	9.42
2014	65	12.8	164	2.52	4153	63.89	1225	18.85	266	3.59
2015	69	13.58	171	2.48	5049	73.17	1347	19.52	164	2.22
2016	71	13.98	185	2.61	5232	73.69	1400	19.72	13	0.18
Total	508	100	1214		31400		8911		5777	78.07
Average				2.3875		61.9625		17.525		9.76

TP Total Publications; AU Number of Authors; NR Cited Reference Counts; PG Page Counts; AU/TP; Number of Authors Per Publication; NR/TP; Cited Reference Counts Per Publication, PG/TP; Page Counts Per Paper; TC2016; Total Citation Till 2016; CPP; Citation Per Publication

Characteristics of Countries and Institutions

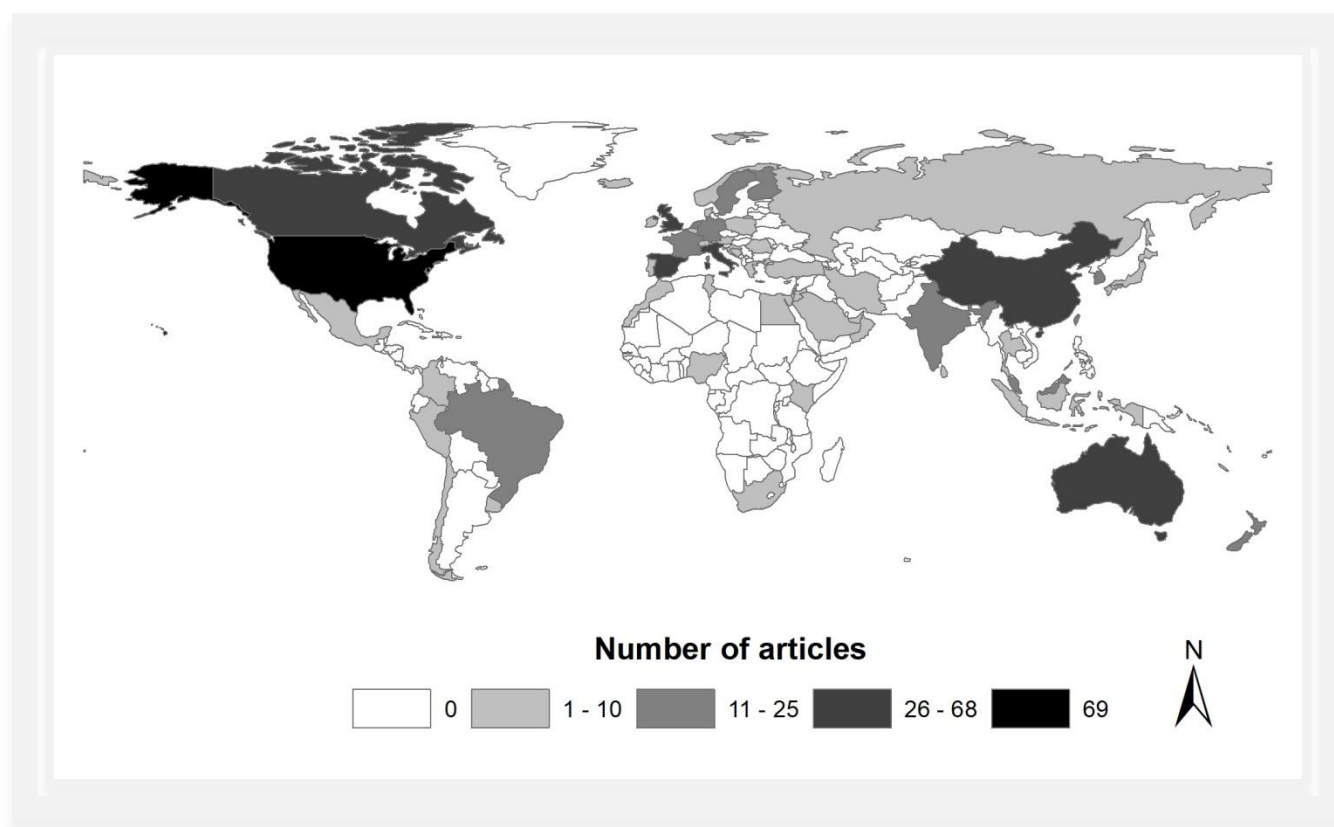
Contribution by various countries and institutions in the *Journal of Knowledge Management* is shown in Table 3 and 4 respectively. The study revealed that a total of 508 articles were contributed from 57 countries during the period under study. Out of the total, 401 publications are single author articles from 48 countries and 107 are collaborative articles contributed from 49 countries. 385 (75.79%) publications were contributed by top ten countries

shown in table 3. Among them, the USA and the UK got 1st and 2ndrank in five indicators. Australia was ranked 3rd in TP and CP, while it got 4th rank in SP and RP. Although India was ranked 9thin terms of TP, but its SP% is highest among all the top 10 countries. Figure 1 shows the worldwide distribution of articles published in the *JKM* by authors' affiliation. The maximum number of publications came from the western countries.

Table 3: Top 10 Prolific Countries

Country	TP	TP R (P)	SP R (P)	CP R (P)	FP R (P)	RP R (P)	S P
USA	69	1 (13.58)	1 (10.22)	1 (26.17)	1 (10.24)	1 (10.63)	59.42
UK	57	2 (11.22)	2 (8.23)	2 (22.43)	2 (8.66)	2 (8.46)	57.89
Australia	47	3 (9.25)	4 (6.23)	3 (20.56)	5 (5.91)	4 (5.91)	53.19
Spain	40	4 (7.87)	3 (7.23)	6 (10.28)	3 (6.89)	3 (6.69)	72.5
Italy	38	5 (7.48)	5 (5.74)	4 (14.02)	4 (6.3)	4 (5.91)	60.53
Peoples R China	34	6 (6.69)	5 (5.74)	6 (10.28)	6 (5.51)	6 (5.51)	67.65
Canada	31	7 (6.1)	9 (3.99)	4 (14.02)	7 (4.92)	7 (4.92)	51.61
France	25	8 (4.92)	8 (4.24)	8 (7.48)	9 (4.13)	8 (4.33)	68
Finland	22	9 (4.33)	11 (3.74)	10 (6.54)	10 (3.35)	10 (3.35)	68.18
India	22	9 (4.33)	7 (5.24)	33 (0.93)	8 (4.33)	8 (4.33)	95.45

TP Total articles; *R* Rank; *P* Percentage; *SP* Single country articles; *CP* Collaborative articles; *FP* First author articles; *RP* Corresponding author articles; *S* Percentage of single country articles out of the total articles for each country

**Figure 1. The Worldwide Distribution of Articles Published in JKM**

A total of 584 institutions from 57 countries contributed 508 publications, 188 articles are single institutions articles and 320 are collaborative articles. Table 4 shows the top 10 institutions contributing 81 (15.94%) publications out of 508. Top two institutions in TP were from Canada; two were from Spain and one each from New Zealand, Singapore, Italy, Australia, Finland and Thailand. The Lakehead

University of Canada was ranked 1st in TP, CP, FP and RP but was ranked 15th in SP. The Nanyang Technology University of Singapore was ranked 1st in SP; 2nd in FP and RP. The McMaster University of Canada was ranked 2nd in TP with 9 publications and had no SP.

Table 4: Top Ten Prolific Institutions

Institution	Total	TP R (P)	SP R (P)	CP R (P)	FP R (P)	RP R (P)	S P
Lakehead University, Canada	12	1 (2.36)	15 (0.39)	1 (3.13)	1 (2.17)	1 (1.97)	16.67
McMaster University, Canada	9	2 (1.77)	N/A	2 (2.81)	84 (0.2)	15 (0.59)	0
University Waikato, New Zealand	9	2 (1.77)	3 (0.79)	5 (1.56)	7 (0.79)	3 (0.98)	44.44
Nanyang Technology University, Singapore	8	4 (1.57)	1 (0.98)	24 (0.94)	2 (1.38)	2 (1.38)	62.5
University Padua, Italy	8	4 (1.57)	3 (0.79)	10 (1.25)	3 (0.98)	3 (0.98)	50
University Castilla La Mancha, Spain	7	6 (1.38)	3 (0.79)	24 (0.94)	3 (0.98)	3 (0.98)	57.14
University Newcastle, Australia	7	6 (1.38)	8 (0.59)	10 (1.25)	15 (0.59)	15 (0.59)	42.86
Tampere University Technology, Finland	7	6 (1.38)	3 (0.79)	24 (0.94)	7 (0.79)	8 (0.79)	57.14
University Complutense Madrid, Spain	7	6 (1.38)	15 (0.39)	5 (1.56)	7 (0.79)	8 (0.79)	28.57
Bangkok University, Thailand	7	6 (1.38)	37 (0.2)	3 (1.88)	15 (0.59)	15 (0.59)	14.28

TP Total articles; R Rank; P Percentage; SP Single institution articles; CP Collaborative articles; FP First author articles; RP Corresponding author articles; S Percentage of the single institution articles out of the total articles of each institution

Most Productive Authors

The study examines the authors of publications in this journal by using five bibliometric indicators Table-6. In total 508 publications were contributed by 1214 number of authors. Serenko Alexander and Bontis, Nick were the most prolific authors with 11 and 9 publications respectively; both these authors belonged to the top two institutions mentioned in table-4. The study revealed eight

collaborative publications between the top two authors. Their collaborative publication titled “Global ranking of knowledge management and intellectual capital academic journals” got TC2016=57 and is placed at 8th rank among highly cited publications Table-5. Kianto, A and Del Giudice M contributed 5 each and seven authors among the top 11 authors contributed 4 publications each. Serenko A. is the only author who is having 90% of his publications as FP and CP.

Table 2: Author with at least Four Publication

AU	TP	FP	SP	CP	RP
Serenko Alexander	11	10	1	10	9
Bontis, Nick	9	1	NA	9	3
Kianto, Aino	5	1	NA	5	2
Del GiudiceManlio	5	3	NA	5	3
Magnier-Watanabe Remy	4	2	NA	4	2
Dumay, John	4	NA	NA	4	NA
Schiuma Giovanni	4	1	1	3	2
Bolisani, Ettore	4	2	NA	4	NA
Scarso Enrico	4	1	NA	4	3
Lopez-Saez Pedro	4	1	NA	4	1
Chua Alton Y. K	4	2	1	3	3

TP Total number of articles; FP First author articles; SP Single authored articles; CP Collaborative articles RP corresponding authored articles; NA Not available

Most Frequently Cited Articles

Table 5 lists the 12 highly cited publications published during the period under study. Out of 12,

10 publications were an article, and two were reviews. The six publications had a TC2016>75 Figure 2. There are three publications which got more than 100

citations and all of them were published in the year 2009. Only two single-authored papers with TC2016=130 and TC2016=118 got 1st and 3rd ranks among the top cited articles in Table 5. An article titled “*Knowledge management and organisational performance: an exploratory analysis*” by Zack, McKeen, & Singh [15] ranked 1st in terms of citation in 2016, i.e., C2016=34. It was found that two reviews

titled as “*Knowledge management in SMEs: a literature review*” and “*Wikis as a knowledge management tool*” got 6th and 10th rank respectively in terms of TC2016. It was also revealed that out of the total of highly cited publications (Table 5) there are only six publications which got citation in the publication year.

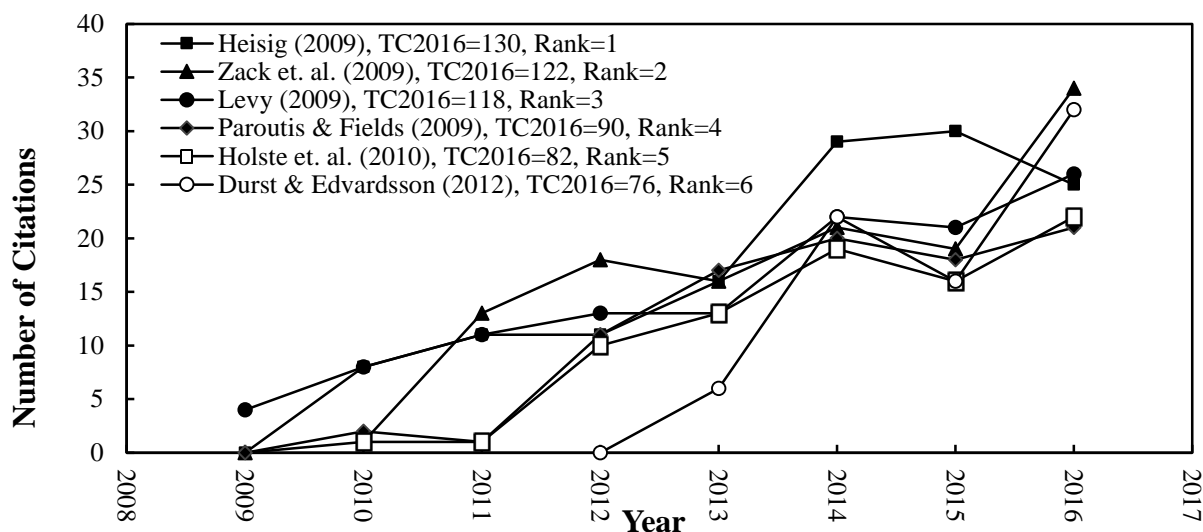


Figure 2: Top Six Publications are having TC2016 >75

Table 5: Highly Cited Publications having TC2016≥50 (2009 to 2016)

TC2016(R)	C2016(R)	C0(R)	Title	Authors	Type
130(1)	25(5)	0(85)	Harmonisation of knowledge management - comparing 160 KM frameworks around the globe	Heisig, 2009 [16]	Article
122(2)	34(1)	0(85)	Knowledge management and organizational performance: an exploratory analysis	Zack, McKeen, & Singh, 2009 [15]	Article
118(3)	26(4)	4(1)	WEB 2.0 implications on knowledge management	Levy, 2009 [17]	Article
90(4)	21(9)	0(85)	Determinants of knowledge sharing using Web 2.0 technologies	Paroutis & Al Saleh, 2009 [18]	Article
82(5)	22(8)	1(27)	Trust and tacit knowledge sharing and use	Holste & Fields, 2010 [19]	Article
76(6)	32(2)	0(85)	Knowledge management in SMEs: a literature review	Durst & Edvardsson, 2012 [20]	Review
64(7)	30(3)	0(85)	Does knowledge management really matter? Linking knowledge management practices, competitiveness and economic performance	Andreeva & Kianto, 2012 [21]	Article
57(8)	3(187)	1(27)	Global ranking of knowledge management and intellectual capital academic journals	Serenko & Bontis, 2009 [22]	Article
53(9)	14(18)	2(6)	Knowledge communication and translation - a knowledge transfer model	Liyanage, Elhag, Ballal, & Li, 2009 [23]	Article
52(10)	10(32)	0(85)	Wikis as a knowledge management tool	Grace, T P L. 2009 [24]	Review
52(10)	20(10)	2(6)	Organisational culture's influence on tacit knowledge-sharing behaviour	Suppiah & Singh Sandhu, 2011 [25]	Article
50(12)	9(39)	1(27)	Critical factors for knowledge management in project business	Ajmal, Helo, Kekäle, & Kekä, 2010 [26]	Article

TC2016 Total number of citations till 2016; R Rank; C2016 Number of citations in 2016; C0 Number of citations in publication year of the articles.

Keywords

Table 6 shows the keyword distribution in the publications of this journal. 1204 keywords were selected from 508 publications in *Journal of Knowledge Management*. The most regularly used keyword is “Knowledge Management” as it was used

in 307 publications, constituting almost 61% of the total publications. Second most frequently used keyword is “Knowledge Sharing” (TP = 110; 21.8%). Out of the total keywords, 939 keywords were used once. Figure 3, shows the top thirteen most frequently used keywords assigned by the author

Table 6: Keywords

Keywords (1204)	TP	R (P)	Keywords (1204)	TP	R (P)
Knowledge management	307	1 (60.9)	Organizations	14	10 (2.8)
Knowledge sharing	110	2 (21.8)	Social networks	13	14 (2.6)
Knowledge transfer	64	3 (12.7)	China	12	15 (2.4)
Innovation	49	4 (9.7)	Communities of practice	12	15 (2.4)
Knowledge creation	30	5 (6)	Trust	11	17 (2.2)
Organizational culture	19	6 (3.8)	Knowledge	11	17 (2.2)
Tacit knowledge	16	7 (3.2)	Information technology	11	17 (2.2)
Social capital	15	8 (3)	Organizational performance	10	20 (2)
Learning	15	8 (3)	Research	10	20 (2)
Knowledge management systems	14	10 (2.8)	Knowledge-based view	10	20 (2)
Communication technologies	14	10 (2.8)	Case studies	10	20 (2)
Intellectual capital	14	10 (2.8)	Multinational companies	10	20 (2)

TP Total articles; R Rank; P Percentage of the total articles.

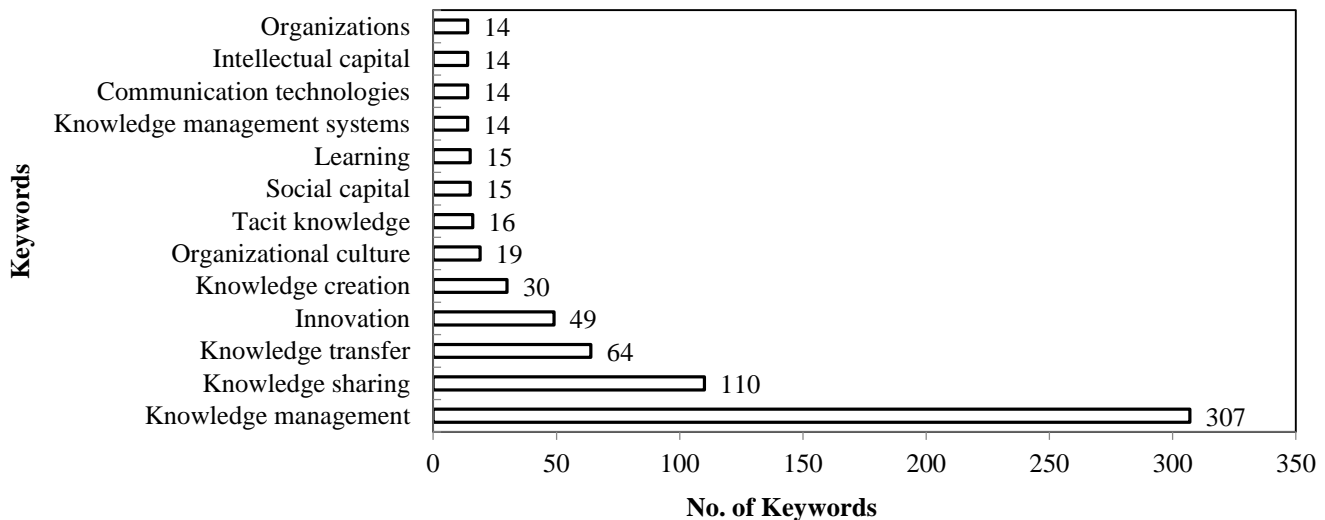


Figure 2: The top 13 Most Frequently Used Author keywords

CONCLUSION

The advancement and utilization of bibliometric indicators give rise to a discussion among members of the common research field, under study, by quality, scope, and operationalization [27]. Creation of information by bibliometric studies could be used to assess the research performance in a

particular field or journal and its allied research to regulate policies both in terms of allocation of funds and scientific research area.

Thus, the reason for our investigation was to explore the research productivity reflected in the JKM in order to mark out those features that play an essential role in creating better impact, visibility and citation.

A total of 508 publications published during 2009 to 2016 in JKM, were categorized into 5 document types. Articles formed the most dominant type of document with the highest CPP of 11.34. A yearly decrease in publications by 4% was noticed during the period understudy, whereas, the number of authors per publication, references per publication, and pages per publications shows an increasing trend. On an average, there are approximately 2.4 authors per publications with NR/TP=62, PG/TP=17.5 and CCP=9.76.

The Publications were contributed by 584 institutions from 57 countries, of which USA and UK ranked first and second respectively. The most prolific institution was found to be Lakehead University, Canada with 12 publications. In particular, among the top 12 publications having TC2016>50, two are reviews and ten are journal articles. There are only two single-authored publications with TC2016>100 and are ranked 1st and 3rd among the top cited articles from JKM.

1214 number of authors authored the 508 publications. Among them, the two most prolific authors were Serenko Alexander and Bontis, Nick with 11 and 9 publications respectively and both of them are from Canada. However, Canada was placed at 7th position with 31 publications in terms of country wise contribution.

JKM has shown significant progress during the period, but more efforts are required to increase its horizons for attracting authors from other countries as well. It will undoubtedly help improve its ranking and citations in the publications world.

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