LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : POSTER

Judul Karya Ilmiah	:	Improving RA-index by Using the Weighting Mechanism Number of Citations to Filter "Spike" Signal of the Citation Data of Indonesian Authors		
Jumlah Penulis	:	2 Orang (**Adian Fatchur Rochim** and Riri Fitri Sari)		
Status Pengusul	:	Penulis ke-1		
Identitas Prosiding	:	a. Judul Prosiding	:	17th International Conference of the International Society for Scientometrics and Informetrics
		b. ISBN	:	978-883381118-5
		c. Thn Terbit, Tempat Pelaks.	:	2-5 September 2019, Rome, Italy
		d. Penerbit/Organiser	:	International Society for Scientometrics and Informetrics
		e. Alamat Repository/Web	:	https://www.issi-society.org/publications/issi-conference-proceedings/proceedings-of-issi-2017/
		Alamat Artikel	:	https://www.scopus.com/record/display.uri?eid=2-s2.0-85073879759&origin=resultslist
		f. Terindeks di (jika ada)	:	Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
[ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
a. Kelengkapan unsur isi prosiding (10%)	0,85	0,90	0,88
b. Ruang lingkup dan kedalaman pembahasan (30%)	2,70	2,50	2,60
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	2,65	2,50	2,58
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	2,85	2,70	2,78
Total = (100%)	**9,05**	**8,60**	**8,83**
Nilai Pengusul = (60% x 8,83) = 5,30			

Semarang, 10 Januari 2021

Reviewer 2

Dr. Iwan Setiawan, S.T., M.T.
NIP. 197309262000121001
Unit : Dept. Teknik Elektro FT UNDIP

Reviewer 1

Dr. Ir. R. Rizal Isnanto, S.T., M.M., M.T., IPM
NIP. 197007272000121001
Unit : Dept. Teknik Komputer FT UNDIP

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : POSTER

Judul Karya Ilmiah	:	Improving RA-index by Using the Weighting Mechanism Number of Citations to Filter "Spike" Signal of the Citation Data of Indonesian Authors		
Jumlah Penulis	:	2 Orang (**Adian Fatchur Rochim** and Riri Fitri Sari)		
Status Pengusul	:	Penulis ke-1		
Identitas Prosiding	:	a. Judul Prosiding	:	17th International Conference of the International Society for Scientometrics and Informetrics
		b. ISBN	:	978-883381118-5
		c. Thn Terbit, Tempat Pelaks.	:	2-5 September 2019, Rome, Italy
		d. Penerbit/Organiser	:	International Society for Scientometrics and Informetrics
		e. Alamat Repository/Web	:	https://www.issi-society.org/publications/issi-conference-proceedings/proceedings-of-issi-2017/
		Alamat Artikel	:	https://www.scopus.com/record/display.uri?eid=2-s2.0-85073879759&origin=resultslist
		f. Terindeks di (jika ada)	:	Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
[ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [10]	Nasional [ ]	
a. Kelengkapan unsur isi poster (10%)	1		0,85
b. Ruang lingkup dan kedalaman pembahasan (30%)	3		2,70
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	3		2,65
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	3		2,85
Total = (100%)	**10,00**		**9,05**
Nilai Pengusul = (60% x 9,05) = 5,43			

Catatan Penilaian Paper oleh Reviewer :

1. **Kesesuaian dan kelengkapan unsur isi poster:**
   Poster sebagai salah satu bentuk publikasi yang menyertai event seminar internasional. Isi dari poster sudah sesuai dengan tema conference dan bidang keilmuan penulis. Kelengkapan unsur isi poster sudah lengkap, meliputi Introduction, objectives, methodology, Discussion, Conclusion, dan References.
2. **Ruang lingkup dan kedalaman pembahasan:**
   Ruang lingkup poster adalah tentang perbaikan RA-index menggunakan "Weighting Mechanism Numver of Citations" sudah cukup mendalam ditinjau dari aspek pembahasannya, disertai grafik dan tabel.
3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**
   Data yang digunakan sebagai bahan analisis sudah mencukupi. Metodologi yang digunakan memenuhi aspek kebaruan pada bidang ilmu saintometrik.
4. **Kelengkapan unsur dan kualitas terbitan:**
   Unsur dan kualitas terbitan dari poster memenuhi kelengkapan dan kemudahan untuk dibaca.

Semarang, 10 Januari 2021

Reviewer 1

Dr. Ir. R. Rizal Isnanto, S.T., M.M., M.T., IPM
NIP. 197007272000121001
Unit : Dept. Teknik Komputer FT UNDIP

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : POSTER

Judul Karya Ilmiah	:	Improving RA-index by Using the Weighting Mechanism Number of Citations to Filter "Spike" Signal of the Citation Data of Indonesian Authors		
Jumlah Penulis	:	2 Orang (**Adian Fatchur Rochim** and Riri Fitri Sari)		
Status Pengusul	:	Penulis ke-1		
Identitas Prosiding	:	a. Judul Prosiding	:	17th International Conference of the International Society for Scientometrics and Informetrics
		b. ISBN	:	978-883381118-5
		c. Thn Terbit, Tempat Pelaks.	:	2-5 September 2019, Rome, Italy
		d. Penerbit/Organiser	:	International Society for Scientometrics and Informetrics
		e. Alamat Repository/Web	:	https://www.issi-society.org/publications/issi-conference-proceedings/proceedings-of-issi-2017/
		Alamat Artikel	:	https://www.scopus.com/record/display.uri?eid=2-s2.0-85073879759&origin=resultslist
		f. Terindeks di (jika ada)	:	Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
[ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [10]	Nasional [ ]	
a. Kelengkapan unsur isi prosiding (10%)	1		0,90
b. Ruang lingkup dan kedalaman pembahasan (30%)	3		2,50
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	3		2,50
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	3		2,70
Total = (100%)	**10,00**		**8,60**
Nilai Pengusul = (60% x 8,60) = 5,16			

Catatan Penilaian Paper oleh Reviewer :

1. **Kesesuaian dan kelengkapan unsur isi paper:**
   Poster dan fulltext telah disertakan, lengkap.
2. **Ruang lingkup dan kedalaman pembahasan:**
   Riset yang dilakukan adalah riset pendahuluan mengenai indikasi ditemukannya "spike" dari nilai dampak peneliti pada Google Scholar, dan ditengarai merupakan hasil sindikasi kartel sitasi. sumber data hanya mengambil dari beberapa sampel peneliti. Ruang lingkup penelitian masuk dalam bidang scientometrics, sesuai dg konferensi.
3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**
   Literatur cukup mutakhir. Riset sesuai dengan kondisi di Indonesia yang sedang menggalakkan publikasi ilmiah. Cukup menarik karena disajikan pada konferensi para peneliti scientometrics dunia.
4. **Kelengkapan unsur dan kualitas terbitan:**
   Unsur lengkap mulai dari abstrak pendahuluan, studi pustaka, metode, sumber data dan hasil, dalam format poster. Kualitas terbitan baik dan bereputasi karena diselenggarakan oleh asosiasi scientometrics dunia. Prosiding memiliki ISBN dan terindeks pada basis data Scopus.

Semarang, 10 Januari 2021

Reviewer 2

Dr. Iwan Setiawan, S.T., M.T.
NIP. 197309262000121001
Unit : Dept. Teknik Elektro FT UNDIP

Document details

17th International Conference on Scientometrics and Informetrics, ISSI 2019 - Proceedings
Volume 2, 2019, Pages 2608-2609
17th International Conference on Scientometrics and Informetrics, ISSI 2019; Sapienza University of RomeRome; Italy; 2 September 2019 through 5 September 2019; Code 152215

Improving RA-index by using the weighting mechanism number of citations to filter "spike" signal of the citation data of Indonesian Authors (Conference Paper)

Rochim, A.F.[a], Sari, R.F.[b]

[a]Departement of Computer Engineering, Diponegoro University, Semarang, 50275, Indonesia
[b]Department of Electrical Engineering, Faculty of Engineering, Universitas Indonesia, Depok, 16424, Indonesia

Abstract

View references (11)

[No abstract available]

SciVal Topic Prominence

Topic: Hirsch Index | Self-Citation | Journal Impact Factor

Prominence percentile: 99.016

ISBN: 978-883381118-5
Source Type: Conference Proceeding
Original language: English
Document Type: Conference Paper
Volume Editors: Catalano G.,Daraio C.,Gregori M.,Moed H.F.,Ruocco G.
Publisher: International Society for Scientometrics and Informetrics

References (11)

View in search results format

1 Jin, B., Liang, L., Rousseau, R., Egghe, L.
The R- and AR-indices: Complementing the h-index (Open Access)

(2007) *Chinese Science Bulletin*, 52 (6), pp. 855-863. Cited 410 times.
doi: 10.1007/s11434-007-0145-9

View at Publisher

2 Egghe, L.
Theory and practise of the g-index (Open Access)

(2006) *Scientometrics*, 69 (1), pp. 131-152. Cited 1112 times.
http://www.springerlink.com/content/0138-9130
doi: 10.1007/s11192-006-0144-7

View at Publisher

3 Gagolewski, M., Grzegorzewski, P.
A geometric approach to the construction of scientific impact indices

(2009) *Scientometrics*, 81 (3), pp. 617-634. Cited 24 times.
http://www.springerlink.com/content/0138-9130
doi: 10.1007/s11192-008-2253-y

View at Publisher

4 Gamboa, C.
(2014) *SAGE Statement on Journal of Vibration and Control*
Retrieved February 6, 2019, from
https://uk.sagepub.com/en-gb/asi/press/sage-statement-on-journal-of-vibration-and-control

5 Glänzel, W., Thijs, B., Debackere, K.
Productivity, performance, efficiency, impact-What do we measure anyway? Some comments on the paper "A farewell to the MNCS and like size-independent indicators" by Abramo and D'Angelo.

(2016) *Journal of Informetrics*, 10 (2), pp. 658-660. Cited 14 times.
http://www.journals.elsevier.com/journal-of-informetrics/
doi: 10.1016/j.joi.2016.04.008

View at Publisher

6 Hirsch, J.E.
An index to quantify an individual's scientific research output (Open Access)

(2005) *Proceedings of the National Academy of Sciences of the United States of America*, 102 (46), pp. 16569-16572. Cited 5349 times.
doi: 10.1073/pnas.0507655102

View at Publisher

7 Mesiar, R., Gagolewski, M.
H-index and other sugeno integrals: Some defects and their compensation

(2016) *IEEE Transactions on Fuzzy Systems*, 24 (6), art. no. 7378290, pp. 1668-1672. Cited 14 times.
doi: 10.1109/TFUZZ.2016.2516579

View at Publisher

8 Rochim, A.F., Muis, A., Sari, R.F.
Discrimination measurement method on H-index and G-index using Jain's fairness index

(2017) *ISSI 2017 - 16th International Conference on Scientometrics and Informetrics, Conference Proceedings*, pp. 466-476. Cited 4 times.

9 Rochim, A.F., Muis, A., Sari, R.F.
Improving fairness of H-index: RA-index (Open Access)

(2018) *DESIDOC Journal of Library and Information Technology*, 38 (6), pp. 378-386. Cited 3 times.
http://publications.drdo.gov.in/ojs/index.php/djlit/article/download/12937/6416
doi: 10.14429/djlit.38.6.12937

View at Publisher

10 Kienc, W.
Should you care about your h-index, and if so, how to improve it?
(2015) *Open Science*
| Retrieved October 11, 2018, from
https://openscience.com/should-you-careabout-your-h-index-and-if-so-how-to-improve-it/

11 Zhu, X., Turney, P., Lemire, D., Vellino, A.
Measuring academic influence: Not all citations are equal (Open Access)

(2015) *Journal of the Association for Information Science and Technology*, 66 (2), pp. 408-427. Cited 90 times.
http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)2330-1643
doi: 10.1002/asi.23179

View at Publisher

ISSI 2019

SAPIENZA
UNIVERSITÀ DI ROMA

17th INTERNATIONAL CONFERENCE ON SCIENTOMETRICS & INFORMETRICS

ISSI2019

with a Special STI Indicators Conference Track

2-5 September 2019
Sapienza University of Rome, Italy

PROCEEDINGS

VOLUME II

EdizioniEfesto

PROCEEDINGS OF THE 17TH CONFERENCE OF THE INTERNATIONAL SOCIETY FOR SCIENTOMETRICS AND INFORMETRICS

© Edizioni Efesto - ISBN 978-88-3381-118-5 - August 2019
Printed in Italy

Editors: *Giuseppe Catalano, Cinzia Daraio, Martina Gregori, Henk F. Moed and Giancarlo Ruocco*

Graphic cover design: *Francesco Manzo* | *graframan.com*
Cover photo: ©*Fayee - stock.adobe.com*

INDEX OF PAPERS (FULL PAPERS AND RESEARCH IN PROGRESS)

INDEX OF POSTERS

Improving RA-index by Using the Weighting Mechanism Number of Citations to Filter "Spike" Signal of the Citation Data of Indonesian Authors

Adian Fatchur Rochim[1] and Riri Fitri Sari[2]

[1] *adian@undip.ac.id*
Departement of Computer Engineering, Diponegoro University, Semarang, 50275 (Indonesia)

[2] *riri@ui.ac.id*
Department of Electrical Engineering, Faculty of Engineering, Universitas Indonesia, Depok 16424 (Indonesia)

Introduction

Number of citations and the number of papers were combines as H-index (Hirsch, 2005). H-index is an index to figure the profile of the authors. H-index is a well-known index that is used by the database indexers such as Clarivate Analytics, Scopus and Google Scholar. From the literature we found some weaknesses of H-index, including 1) the productive and perfectionist researcher were not accommodated by the H-index (Mesiar, et.al, 2016), 2) self-citation was calculated, 3) the citation weight of the main researcher is considered equal to other researchers, and the frequency of citation in a paper has not been considered (Bai et al., 2018) (Mesiar, et.al, 2016) (Gagolewski, et.al, 2009) (Zhu, et.al, 2015). Many H-index improvement proposals have been made. This includes the proposal of Egghe in 2006, which accommodates the impact value of perfectionist researchers (Egghe, 2006). Improvement and new indicator to measure the impact of researchers was needed for a better evaluation. Rochim, et.al. in 2018, proposed the RA-index as an alternative indicator of fairer-based bibliometrics to measure the impact of researchers (Rochim, et.al., 2018). Glanzel in 2016, stated that it is important to consider some methods and models to accommodate the needs (Glänzel, et.al, 2016).

This poster proposed an initial work to weighting mechanism and to filter the "spike" of citation. Subsequently, the filter is applied, and the result of citation data is calculated by the RA-index. RA-index is a more fairness-concerned variant of H-index (Rochim et al., 2018) (Rochim, et.al, 2017).

This work to measure and to differentiate of two authors with the same H-index value using the weighting citations and RA-index method. We investigate the phenomenon of the "spike" of the number of citation, and the initial solution to prevent/filter impact of the cartels/citation circle. The "spike" of citation phenomenon is the raise of the number of sudden citations within a short period of time, which is obtained from co-authors of multiple papers. Cartels/citation circle can be defined as follows: 1) The activity of an author that act as also a reviewer for multiple papers at the same time and a joint-work among friends in a peer review ring to increase the record of papers and citation numbers (Gamboa, 2014), and 2) The activity of an author cite his/her friend's papers, and at the same time these friends also cite the author's papers (Witold Kienc, 2015). Tscharntke in 2007 classified the weighting for each author in a publication text into four weighting methods groups. The four groups are: 1) Sequence-determining-credit (SDC), 2) Equal Contribution (EQ), 3) First-author-emphasis (FLAE) and 4) Percent-contributed-percentage (PCI) (Tscharntke, 2007). In 2018, we have identified that a small number of Indonesian researchers conducted some activities of "*citation circles*" to increase their H-index values. "*citation circle*" is an activity in which someone cites the work of his friends, and will get a citation for the same way (Witold Kienc, 2015). This is a part of the "black hat" technique. The technique is not accepted or illegal for academics.

Methodology

In order to prevent the activity of "creating citation circle", we recommend the weighting mechanism for the citation data. The citation data is weighted before it will be calculated by the RA-index method. This weighting mechanism is proposed to give an appreciate the first author and the corresponding authors. The corresponding author is normally the supervisor of the author. The proposed method accommodates the regulations of the Indonesian Government in granting credits for scientific publications. The method of the weighting mechanism is based on the combination of PCI and EC methods. For example, one paper has ten citations, and written by four authors i.e. main author (1), corresponding author (1) and other authors (2). The citation calculation obtained by each author is different and based on the following proportions as follows. The main author and correspondent get the maximum publication index value of 100% of the publication index value.

$$\textit{author's publication index value} = ma \times 100\ \% \quad (1)$$

ma value = the number of total citations of a paper.

Article-level matching of Web of Science to a local database in a comparative context

Linda Sīle[1] and Raf Guns[1]

[1]*linda.sile@uantwerpen.be, raf.guns@uantwerpen.be*
University of Antwerp, Faculty of Social Sciences, Centre for R&D Monitoring (ECOOM), Middelheimlaan 1, 2020 Antwerp (Belgium)

Introduction

The low coverage of social sciences and humanities (SSH) journals in Web of Science (WoS) is well known (Kulczycki et al., 2018; Ossenblok, Engels, & Sivertsen, 2012). Over years the coverage, however, has been increasing and more journals are indexed. At the same time, these developments highlight the need for a continued monitoring of coverage.

To monitor coverage, one requires comprehensive bibliographic data on research output as reference data and a sound technique to identify which articles in this reference dataset are indexed in Web of Science. The challenge is to find an approach where one would have reasonable balance between accuracy and the time required for article matching. Here we describe an article-level approach.

Context

The search for an approach suitable for the use in a comparative context emerged in the context of bibliometric analyses based on data from two different national bibliographic databases (VABB-SHW in Flanders, Belgium and Cristin in Norway). That study, although not focused on WoS coverage, required information on WoS indexation (for further details see Sīle et al. 2019).

Our goal is to identify which articles can be matched to a record in data retrieved from WoS. In this matching we strive for maximum accuracy and speed, and minimum number of metadata categories. The latter is especially crucial when working in a comparative context, where different sources do not always have the same metadata.

Article-level approach to be used in comparative settings

Data

The proposed matching procedure is applied to two datasets derived from two national bibliographic databases (VABB-SHW in Flanders, Belgium and Cristin in Norway). The datasets are limited to journal articles (2006-2015) in social sciences and humanities (SSH) by authors affiliated to universities ($n_{Flanders}$ = 31,550; n_{Norway} = 26,007). These datasets are referred to as the reference datasets.

For WoS, we use datasets retrieved from the ECOOM-Leuven in-house WoS database. We delineate the data by country (Belgium or Norway), year (2006-2015) and indices (SCIE, SSCI, and AHCI). These datasets henceforth are referred to as the WoS datasets.

Our approach combines algorithmic and manual steps. In brief, we match bibliographic data from VABB-SHW and Cristin with the WoS-datasets. This matching is done in three steps: we identify records automatically, first, with identical metadata, and, second, with approximately identical metadata. Finally, we identify matching records (semi-) manually. For the overview of results see Table 1.

Table 1. Results from article-level identification of indexation in Web of Science

	Flanders		Norway	
	#	%	#	%
Step 1	8533	63	7476	79
Step 2	3904	29	1577	17
Step 3	1111	8	400	4
Total	13548	100	9453	100

Step 1. Identical matches

First, we identify matching records using the following rule: (1) identical title of the article (punctuation removed, case ignored), AND (2) identical page numbers, AND (3) identical ISSN, AND (4) identical publication year.

Step 2. Approximate matches: LSH

Occasionally identical records are not identified due to discrepancies in bibliographic control practices or simply due to inaccuracies in records. For instance, titles, especially if reported by authors themselves, sometimes do not exactly match the title as it appears on the published version. The same applies for ISSNs, page numbers, titles of journals, etc. While approximate string matching by e.g. edit distance can theoretically offer a solution, the number of comparisons quickly grows too large to be feasible in practice. Following Abdulhayoglu and Thijs (2018), we use a solution based on Locality Sensitive

Research on the Development Trend of Ships Diesel Engine Based on Patentometrics

Rongying Zhao [1], Danyang Li [2] and Xinlai Li [3]

[1] *zhaorongying@126.com*
Research Center for Chinese Science Evaluation, Wuhan University, Wuhan 430072 (China)

[2] *whusimldy@163.com*
School of Information Management, Wuhan University, Wuhan 430072 (China)

[3] *lixinlai_whu@163.com*
School of Information Management, Wuhan University, Wuhan 430072 (China)

Introduction

This paper demonstrates the development trend from the perspectives of technology development life cycle and direction of research and development based on the research about the patents of ships diesel engine, and the direction of research and development is illustrated from three aspects including technology concentration, industry concentration and regional diffusion. We use the methodologies and tools of social network clustering, technology life cycle S curve, visual analysis and so on.

It is found that the technology of ships diesel engine is more competitive and the technology tends to be saturated. The coverage is quite complete from the hull and the ships diesel propulsion system design to the internal combustion engine design. Germany, Japan and South Korea have strong competitiveness in this field and established technological advantages in this field.

Data and Methods

The research object of this paper needs to obtain patent data of many countries around the world, especially in the leading countries of shipbuilding industry (the United States, Japan, South Korea, etc.). So we choose to use Derwent Innovations Index (DII) to search.

In this paper, an exhaustive search strategy is adopted to improve the comprehensiveness of the search results based on the English search keywords related to the topic, and the search characteristics of the database are adjusted. As of April 12, 2018, a total of 386 records had been retrieved, and the result after removing the duplication was 313.

Although the exhaustive strategy was adopted to ensure the completion rate of retrieval, the accuracy rate was not improved. In this regard, we select all DC classification Numbers to formulate co-occurrence matrix, conducts aggregation subgroup analysis, and obtains classification number clustering related to the topic, as shown in figure 1.

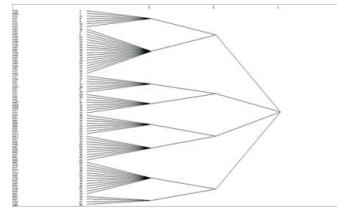

Figure 1. Aggregation Subgroup Analysis of Patent DC Classification Number of Ships Diesel Engine.

61 DC classification Numbers were divided into 8 clusters based on the co-occurrence matrix of DC classification Numbers. DC classification Numbers with frequency greater than 50 were selected for further analysis, mostly concentrated in three regions. We think that the classification Numbers of these three regions are related to the research topic of this paper, with a total of 32 DC classification Numbers. In order to improve the pertinently of patent technical analysis, the deduplication data were screened according to the above classification number. Finally, 276 records with strong correlation classification number were obtained.

Results and Discussion

Life cycle analysis of patent technology development of ships diesel engine

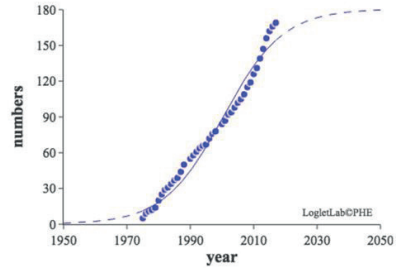

Figure 2. Fitting Diagram of Technology Development Life Cycle

Public Administration and Social Media: An analysis of the journal literature

Alessandra Ordinelli[1], Barbara Colonna[1] and Carla De Iuliis[1]

[1]a.ordinelli@izs.it
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "Giuseppe Caporale" (IZSAM), 64100, Teramo, Italy.

[1]b.colonna@izs.it
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "Giuseppe Caporale" (IZSAM), 64100, Teramo, Italy.

[1]c.deiuliis@izs.it
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "Giuseppe Caporale" (IZSAM), 64100, Teramo, Italy.

Introduction

The recent years have been characterized by an increase in Social Media applications in Public Administrations (PA), giving rise to a new form of Institutional Communication.
This new type of communication, incorporates traditional communication channels (one-to-many) (e.g. Newspaper, Radio, Television), with Social Media communication (many-to-many) (e.g., Facebook, LinkedIn, wikis, YouTube).
Governments are adopting Social Media to provide complementary information dissemination, communication, and participation channels whereby citizens can access government and government officials and therefore make informed decisions (Song, Ch. & Lee, J. 2015).
The aim of this study is to present an overview of the scientific production (publications) concerning the relation between PA and Social Media by using a scientometric analysis.

Materials and methods

The data set was obtained from Advanced Search Function of Web of Science Database (WoS) (Reuters, T. 2014), that uses field tags, Boolean operators, and query sets to create specific queries. Then we analysed the data using Biblioshiny, a shiny app providing a web-interface of the Bibliometrix R-package.
Bibliometrix R-package is a tool for quantitative research in scientometrics and bibliometrics. It provides various routines for importing bibliographic data from Scopus, Web of Science, PubMed and Cochrane databases, performing bibliometric analysis and building data matrices for co-citation, coupling, scientific collaboration analysis and co-word analysis (Aria, M. & Cuccurullo, C. 2017).

Results

We have obtained that 1469 authors have written a total number of 611 documents (as Article, Book, Review, Proceedings Paper), of which 272 articles from 2000 to 2018 years. The number of publications shows that researches have grown exponentially since 2007 and that the trend has continued at relatively stable rates with a peak in 2015 (Fig. 1.).

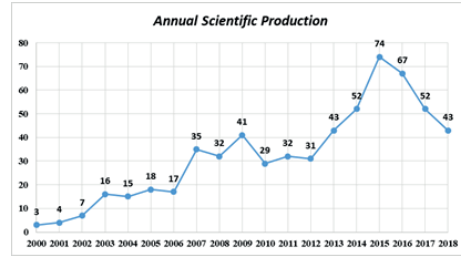

Figure 1. The WoS publication from 2000 to 2018

In addition, to the study on publication growth, we carried out an analysis about the Word Dynamic Graph (Fig. 2.) which helps to understand the keyword dynamics over time.
The results of Figure 2. show the five keyword dynamics: the two keywords “e-government" (61 occurrences) and “management” (44) are the most dynamic between 2014 and 2018.
In particular, “e-government” represents the digital administration that uses information and communication technologies (ICT) (including social media) to ensure PA efficiency, improving the quality of services for citizens and decreasing costs for the community.

Developing a rule-based method for identifying researchers on Twitter: The case of vaccine discussions

Björn Ekström[1]

[1] *bjorn.ekstrom@hb.se*
University of Borås, The Swedish School of Library and Information Science, Allégatan 1, 503 32, Borås, (Sweden)

Introduction

This study seeks to develop a method for identifying the occurrences and proportions of researchers, media and other professionals active in Twitter discussions. As a case example, a dataset from Twitter vaccine discussions is used. The study proposes a method of using keywords as strings within lists to identify classes from user biographies. This provides a way to apply multiple classification principles to a set of Twitter biographies using semantic rules through the Python programming language.

Theory

The theoretical outline is based on rule-based text classification. As described by Glushko (2013, 374), a rule-based system can serve to separate words in terms of tokenization, where textual components are divided using spaces, and stemming, where terms are derived to their word stems. While the rule-based process provides domain-based classification, issues may occur with regards to how punctuation complicates tokenization and how semantic ambivalence can occur from incorrect stemming.

Method

9 647 plain text biographies from Twitter profiles engaged in discussions related to vaccines are studied as a prominent case example. The case dataset is provided through the research project Data for Impact. The method includes a qualitative content rule-based analysis process using the Python programming language and data wrangling software OpenRefine where patterns within the biographies are set to correspond to predefined classes. A set of keywords as strings within lists are represented by variables. Each variable is then matched against the biographies as plain text and returns one of the predefined classes if any of the strings are present.

Strings used to identify biographies are influenced by and partially reused from previous studies (Côté and Darling 2018; Vainio and Holmberg 2017), although amended in order to suit the nature of the biographies used as a dataset in this study. As discussed by Patton (2015), the identification process is performed by working back and forth between the classes and the data in order to verify accuracy. Eleven types of classes are used, as described in Table 1, corresponding with a set of keywords. The class *General public* is used when the biographies does not match any class. Twitter profiles lacking biographies are classed as *Unknown*. Users can also belong to more than one class. Spelling variations are used where needed.

Table 1. Classes, keywords and biography extracts.

Class	Keyword example	Biography extract example
Science student	student, phd student, phd candidate	[City] University [discipline] Student
Graduated	MS, MA, graduate	[…] Engineering graduate. […]
University faculty	lectur, prof., professor	Professor of [discipline], teaches [subjects].
Other scientist or science-associated group	technician, lab manager, ologist	[…] biologist […]
Education and outreach professionals	curator, teacher, librarian	Language teacher [subject]
Applied science organization	nonprofit, policy officer	[…], nonprofit board member […]
Other professional	recruiter, entrepreneur, manager	Entrepreneur, marketer […]
Media professional	journalis, corresponden, publisher	correspondent for [media outlet]
Policy/decision maker	congressman, senator, parliament	District […] Congressman [year span]
General public		
Unknown		-