

## SINGLE JOURNAL BIBLIOMETRIC STUDY OF JOURNAL OF TAMIL PERAIVU

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### Abstract

Journal publications become an essential part of knowledge ecosystem especially towards non-Romanised language and literature studies. Thus, Tamil language journals identified as an unexplored area of research in the field of bibliometric analysis. Therefore, this study establishes the first baseline on bibliometric analysis for the *Journal of Tamil Peraivu* published between 2015 to 2020. The data was analyzed to build and visualize trends in the field of study's research. Implicitly, they provide evidence for the impact of an individual or field of study's research, and reveal the main development paths of the field, new and emerging areas of research and potential research collaborators. Total of 150 articles were written by 120 authors, primarily in Tamil, and in the Tamil studies used for this study. Findings shows that dynamics of the knowledge ecosystem is emerging and a number of promising areas of studies were explored by handful researchers from local and abroad, enticing new perspectives in the field of journal publication as far as Tamil is concerned, so far.

### Keywords

Bibliometrics, Authorship pattern, Collaboration coefficient, Publication productivity, Journal of Tamil Peraivu

### ஆய்வுச் சுருக்கம்

சமகால மொழி, இலக்கிய ஆய்வுகளுக்கு அறிவார்த்தமான இயக்கவியலை சாத்தியப்படுத்துவதில் ஆய்விதழ்கள் இன்றியமையாத பங்கு வகிக்கின்றன. தமிழ் ஆய்விதழ்கள் கணிசமான அளவு வெளிவரும் நிலையில் அவை நூலியல் ஆய்வுத் துறையில் கவனம் செலுத்தப்படாத ஆய்வுப் பகுதியாக இதுவரையிலும் இருந்து வந்துள்ளது. எனவே, இந்த ஆய்வு 2015 முதல் 2020 வரை வெளியிடப்பட்ட தமிழ்ப் பேராய்வு ஆய்விதழ்க்கான நூலியல் பகுப்பாய்வின் முதல் அடிப்படையை நிறுவுகிறது. தமிழ்ப் பேராய்வு ஆய்விதழ் கவனம் செலுத்தும் ஆய்வுத் துறையில் உள்ள போக்குகளை அடையாளம் காணவும் காட்சிப்படுத்தவும் பகுப்பாய்வு செய்யவும் தனிநபர் அல்லது குறிப்பிடத்தக்க கல்விக்கூடத்தின் தாக்கத்திற்கான ஆதாரங்களை வழங்கவும் இந்த ஆய்வு மேற்கொள்ளப்பட்டுள்ளது. இவ்விதழில் முக்கியத்துவம் பெறும் ஆய்வுப் துறைகள்; அவற்றின் முக்கிய வளர்ச்சிப் பாதைகள்; புதிய மற்றும் வளர்ந்து வரும் துறைகள்; மற்றும் சாத்தியமான ஆராய்ச்சி கூட்டுப்பணியாளர்களை தெளிவான புள்ளிவிபரங்களுடன் இவ்வாய்வு வெளிப்படுத்தியுள்ளது. மொத்தம் 150 ஆய்வுக்கட்டுரைகள் 120 ஆய்வாளர்களைக் கொண்டு தமிழியல் துறை சார்ந்து, முதன்மை ஊடக மொழியாக தமிழில் இவ்விதழின் ஆய்வுக்கட்டுரைகள் அமைந்துள்ளன.. தமிழ்ப் பேராய்வு ஆய்விதழில் பிரசுரம் கண்ட கட்டுரைகளின் அறிவு இயக்கவியல் பற்றிய புரிதலை ஏற்படுத்த முனைந்துள்ளதுடன் தமிழ் மொழியைக் கடந்து, அதற்குரிய நிலப்பரப்பைத் தாண்டி பரந்த அணுகல் மற்றும் அறிவைப் பரப்புவதற்கு சாத்தியமான தளங்களை இவ்வாய்வு தனது கண்டடைவாக முன்வைத்துள்ளது.

## கருச்சொற்கள்

நூலியல் ஆய்வு, ஆய்வாளர் வகைமாதிரி, கூட்டாய்வுத் திறம், பதிப்பு உற்பத்தி திறன், தமிழ்ப் பேராய்வு ஆய்விதழ்

## Introduction

With the current fixation over 'big data,' delving into the overpowering quantity of data to precisely interpret, analyze and using it for data discovery, improvement, and intelligence is highly strenuous, requiring a great deal of effort. In contrast, data analysis as a kind of quantitative research method which is basically involves data collection, data interpretation and data validation cannot be performed easily without statistical knowledge. Acknowledging the field of study heavily related to Library and Information Science, Ranganathan (1960), coined the term 'Librametry', turn out to be the first and proper to streamline the services of librarianship (Dutta, 2014).

The terms such as 'statistical data analysis' and 'statistical bibliography' are commonly used to refer to the bibliographic data of documents and related studies (Cole & Eales, 1917; Hulme, 1923; Gross & Gross, 1927; Broadford, 1934). A pioneer example in statistical analysis of the literature is a comparative anatomy from 1543 to 1860 by classifying and counting the total number of titles, inclusion of books and journal articles, and ordering them according to the countries of origin within periods. The word 'statistics' signify as a branch of mathematics dealing with the collection, analysis, interpretation, and presentation of masses of numerical data (Statistics, n.d.). While, 'bibliography' indicates a list often with descriptive or critical notes of writings relating to a particular subject, period, or author (Bibliography, n.d.). These terminologies collectively form the keyword 'statistical bibliography' that widely implies application of quantitative methods in library science. Meanwhile, 'Bibliometrics' as a formal terminology used in statistics and contemporary quantitative analysis to describe publication pattern is just homologous to Ranganathan's Librametrics'. Frequently, coining of the term bibliometrics is credited to Pritchard (1969), but Fonseca (1973) and Wilson (1995) indicates French equivalent of the term 'bibliometrie' by Otlet (1934) appear in his work entitled '*Le Livre et la Mesure. Bibliometrie.*'

Bibliometric as a mathematical and statistical methods employed in the analysis of scientific communication tools reveal the change, development and characteristic features of a field (Diodato, 1994). The bibliometric law preceded by Lotka (1926) of scientific productivity, Broadford's law (Broadford, 1934) and Zips law on frequency of words (Zipf, 1949) are pillar of Bibliometrics, Scientometrics and Informetrics. However, bibliometric study became unique and common to all the subjects after sixties (Laxmi Sankari & Rani, 2016). Price's Law (1965) which support the idea that, 'a few people generate half the results and Pareto's Law of 80/20 are other two variants in bibliometric analysis serve to determine the productivity of the publications and the field (Çiftçi, Danişman, Yalçın, Tosuntaş, Ay, Sölpük & Karadag, 2016). Recent studies indicate empirical flaws of fit in Lotka, Broadford and Zip's laws and pointing the underlying needs of modifications which will not only affect Bibliometrics and Scientometrics, but also the generality of the fractal model, apply to economy, demography, and even natural sciences in general (Bailón, Jurado, Ruiz & Courtial, 2005).

## Need for the Bibliometric Study

Russel and Rousseau (2010) acclaim that research evaluation and research excellence are by words in today's academic clime. Traditionally, assessment of scientific research has been limited to peer review during the grant-making and grant-seeking process or during evaluating for promotions or tenure. Today, bibliometric techniques are increasingly used as an intrinsic component of a wide range of evaluation exercise. Researchers widely use bibliometric analysis method to generate recognition (for researchers, departments and institutions) and intends to capture the evaluation of a field of study or to ascertain influences and the relationships of several distinct fields. Furthermore, bibliometric analysis is also a popular and rigorous method to track down the state of the literature for a particular field (Dereli, Baykasoglu, Altun, Durmusoglu, & Türksen, 2011). This method is capable of utilizing quantitative analysis and statistics to explicate and describe the volume and growth pattern of performance of a

literature within a given period or body of literature. Here, as compared to various printed and online form of resources, Thanuskodi (2011) explained that periodicals are the indicators of literature growth in any field of knowledge. They emerge as the main channel for transmitting knowledge. For this reason, journals became of the utmost important instrument for academicians and researchers to publish their work officially. In concern to this point, no studies have been carried out in term of bibliometric analysis relevant to social sciences in Tamil language journals mainly. Therefore, the current study will establish the first baseline on bibliometric analysis for the *Journal of Tamil Peraivu* in which is analyzed to (1) build and visualize the trends in the field of study's research, (2) provide evidence for the impact of an individual or field of study's research, and (3) reveal the main development paths of the field, new and emerging areas of research and potential research collaborators.

### **A Brief History of Journal of Tamil Peraivu**

Prior to the publication of the *Journal of Tamil Peraivu*, Tamil Language Society under the supervision of Indian Studies Department, University of Malaya has published Tamil Oli since 1959 as its official academic journal ardent to the Tamil Studies in classical and contemporary perspective. Message from the first Prime Minister of Malaysia declare this publication initiative as the logical sequel to the establishment of a chair of Tamil Studies in the University (Tunku Abdul Rahman Putra, 1959). This journal has provided a platform for researchers to disseminate their research observations and findings in relation to classical and contemporary in multidisciplinary dimensions; increase cooperation between scholars of Tamil studies. Scholarly publications, especially in an academic journal, Tamil Oli published eighteen annual issues so fa. The publication is now stopped since 1997.

The *Journal of Tamil Peraivu* is one of two official journals published by the department. The other is Journal of India Studies. Its first publication was issued in 1983. This journal spring up, emerged progressively and provided more avenues for researchers in the field of Tamil Studies. Scholars from Department of Indian Studies, University of Malaya began their scholarly publication through this academic journal in aim to provide a channel for the publication of research works carried out by the teaching staff within the department. Publication of this journal is financed by a grant from All-Malaya Nāṭṭukkōṭṭai Ceṭṭiyār Endowment Fund. As of now, 14 issues have been published with articles covering various topics on Indian languages, Linguistics and Indian literature. Articles from other disciplines were also published to determine the internationalization status.

From its inception in 2015 to the present, *Journal of Tamil Peraivu* (ISSN 2286-8379) owes much to the leadership of established scholars and researchers within this field. The three editorial directors was Prof. Dr. M.Rajantharan (2015-2022), Kizhambur S.Sankara Subramanian (2015-2017), Prof. Dr. K. Srinivasan (2017); followed by a appointment of Assistant Professor Dr. Sillalee S.Kandasamy as a chief executive editor in 2016. Altogether 29 international advisory editors in various publication issues to sit in the editorial board. They were distinguished scholars in Tamil Studies in which were five from Malaysia, two from Mauritius, seven from India, three from Singapore and one from Sri Lanka, America, Australia, England, German and Pennsylvania respectively. Since 2016 *Journal of Tamil Peraivu* started to appoint journal's Web Design and Technical Support Team in which two from Malaysia and three from India; followed by Associate-Editing & Ideating Team in which all the three members are from Malaysia.

*Journal of Tamil Peraivu*, a peer-reviewed international journal is designed to provide diverse research paradigms, theoretical orientations and practical applications in the area of Tamil studies. The journal publishes basic, applied, and methodologically oriented research in the area of, but not limited to, Tamil language, literature, Indian history and culture, media, Malaysian Indians and sociology and its related fields across various populations and global locations. Based on this scope, *Journal of Tamil Peraivu* has been identified as one of the top most periodicals in Malaysia which provides an important source of research materials for Tamil based academicians and researchers. Serves as a bi-annual interdisciplinary periodical, *Journal of Tamil Peraivu* is an open forum for sharing innovative research that considers a broad range of topics. Published works encompassing research based original academic articles and facilitating exchange of views relevant to the scope fully available in printed and online

version. The language of communication in this journal is Tamil and English precisely. The journal indexed in MyCite and available in open access platform namely MyJurnal developed by Citation and Infometrics Division (CID) under Ministry of Higher Education, Malaysia.

### Methodology

This bibliometric study was performed with entire publications of *Journal of Tamil Peraivu* (ISSN 2286-8379) from its commencement in 2015-2020. This study was grounded on the results attained from the MyJurnal database, the principal database of full text, abstracts and bibliographic references of peer-reviewed literature, encompasses more than 114,551 titles from 1,397 publications. Numerous journals have been evaluated by using data available in MyJurnal, including among others, *Jurnal Syariah* (Raihanah & Asmak, 2009), *Kekal Abadi* (2008), *Malaysian Journal of Library and Information Science* (Tiew, Abrizah & Kiran, 2002; Bakeri, 2005; Bakri & Willett, 2008; Aryati & Willet, 2009), *Malaysian journal of distance education* (Faiz & Yanti, 2013).

On the whole, there were 150 articles, and a range of data was then extracted from each of the downloaded articles published in *Journal of Tamil Peraivu*: year, volume, issues, language, number of authors, author names and affiliations, address, keywords, number of pages; number, type and format of references. A note was also made as to whether the author had included any self-citations or journal self-citations. Finally, each article was inspected to ascertain its type and subject category. Some bibliometric indicator considered for the study including publication and citation frequencies, highly cited and most influential authors, subject matter and keyword co-occurrences and co-authorship networks. Analysis included descriptive statistics and correlation. The analyzed parameters inclusion of publication performance through distribution and length of publication, type of articles, scientific collaboration which encompass author production, publication patterns, productive authors, institutions and their geographical and affiliations, number of articles published per year, distribution of subject areas and keyword clustering, references patterns, most prolific contributors, journal self-citation articles and so on.

### Findings and Discussion

#### (1) Publication performance analyses

There were 150 articles published by the *Journal of Tamil Peraivu* during 2015-2020. Table 1 shows that there has been little variation over the years in the level of publication by researchers. The observed period indicates two stages of growth: foundation period, from 2015-2017 with 65 (43.3%) articles followed by stabilized growth from 2018-2020 with 85 (56.7%) articles. This shows an increase of 30.76 percent from one period to the other. The annual average article submission is 34.8 percent during the 6-year period. The yearly breakdown by issue of the 150 articles shows that although the first three years of publications seems to be varied, the total biannual publication has remained constant in the latter years. This shows that *Journal of Tamil Peraivu* has a stabilized growth trend evident from a constant supply of article submissions.

Table 1: Distribution and lengths of article by issue and year

Year	Issues	Length in Pages	Articles Per Issue			Articles Per Year		
			No. of Article (Per Issue)	Percentage %	Average Pages per Article	No. of Article (Per Year)	Percentage %	Average Pages per Article
2015	Vol. 1 No. 1	120	14	9.3	9	25	16.7	9
	Vol. 2 No. 1	105	11	7.3	10			
2016	Vol. 3 No. 1	117	11	7.3	11	20	13.3	10
	Vol. 4 No. 1	90	9	6	10			

2017	Vol. 5 No. 1	119	11	7.3	11	20	13.3	11
	Vol. 6 No. 1	91	9	6	10			
2018	Vol. 7 No. 1	96	10	6.7	10	25	16.7	9
	Vol. 7 No. 2	127	15	10	8			
2019	Vol. 8 No. 1	146	15	10	10	30	20	10
	Vol. 8 No. 2	150	15	10	10			
2020	Vol. 9 No. 1	135	15	10	9	30	20	9
	Vol. 9 No. 2	139	15	10	9			
<i>Total</i>		<i>1435</i>	<i>150</i>	<i>100</i>	<i>10</i>	<i>150</i>	<i>100</i>	<i>10</i>

The highest number of articles is 15, and the lowest number is 9. On average 13 articles were published per issue and 25 per volume. The average length of the articles is 10 pages per article. Findings show that between year 2015 and 2017 the length of pages increased from 9 to 11 even though number of articles published show decrease. Vice versa, stabilization in article published since 2019 indicates length of pages decreases from 10 to 9 per article. A few studies (Ball, 2008; Mavros, Bardakas, Rafailidis, Sardi, Demetriou & Falagas, 2013) have assessed the impact of the article length on citations shows lengthier articles were cited more often in some journals. In contrast, another study by Lokker, McKibbin, McKinlay, Wilczynski & Haynes (2008) which assessed only original research articles reported a slightly negative correlation between the article length and the number of citations. The difference between these findings attributed to the difference in the type of articles assessed inclusion or exclusion of review articles and concept papers. Further in this study it is appropriate to look into the traces of various types of articles published and number of citations received by article within the observed period.

Table 2: Type of articles published each year

<i>Year</i>	<i>Concept Paper</i>		<i>Research Paper</i>		<i>Total</i>	
2015	5	3.3	20	13.3	25	16.7
2016	1	0.7	19	12.7	20	13.3
2017	2	1.3	18	12	20	13.3
2018	1	0.7	24	16	25	16.7
2019	4	2.7	26	17.3	30	20
2020	5	3.3	25	16.7	30	20
<i>Total</i>	<i>18</i>	<i>12</i>	<i>132</i>	<i>88</i>	<i>150</i>	<i>100</i>

It is seen from table 2 that two types of articles published in this journal. The articles published by journals are among the following types namely original research article, review article, short reports or letters, case studies, and methodologies (concepts). Findings show that the large number of manuscripts (132 articles with 88%) published in *Journal of Tamil Peraiyu* are original research paper in nature while only 18 articles (12%) are concept oriented articles. Substantial contributions from postgraduate studies (masters and doctoral) topped the publication production depicted in table 5 be seen its relevance to this findings.

## (2) Scientific Collaboration

### Author production

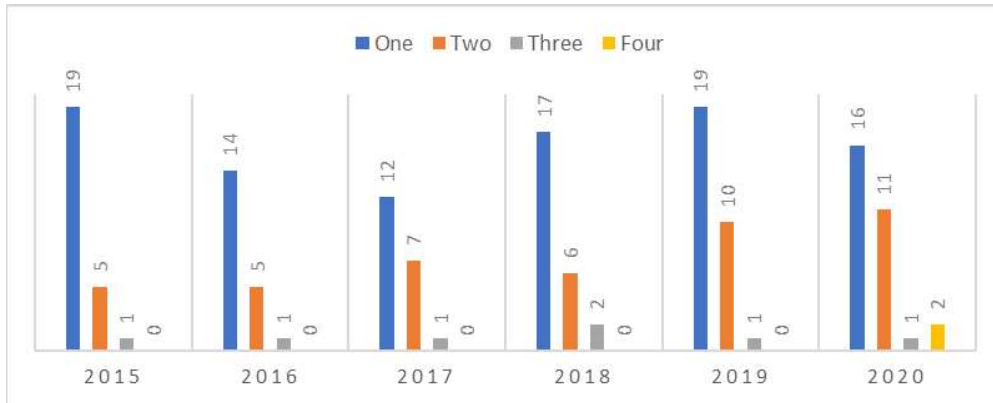


Figure 1: Authorship pattern

Presser (1980) in discussing the finding of the research about the effect of collaboration towards quality of research emphasize that authors who work with others are more likely to write higher quality papers, regardless of discipline. Figure 1 highlights the authorship pattern of the articles published during the period of study. It is seen from figure 1 that 97 (64.7%) articles were published by single authors and 53 (35.3%) were from multiple authors. Earlier before the year of 2020, more than three authors were non-existent and it was only then in which joint authorship with a maximum of 4 authors emerged in the production. There is a clear indication of large preponderance of working in solitude, and this shows slow increase towards double authored even though three and four authored articles not so popular within this journal publication. It is undeniable that the predominance of single author works is not a rare case scenario in the field of social science and humanities (Raihanah & Asmak, 2009).

### Distribution by Institutions

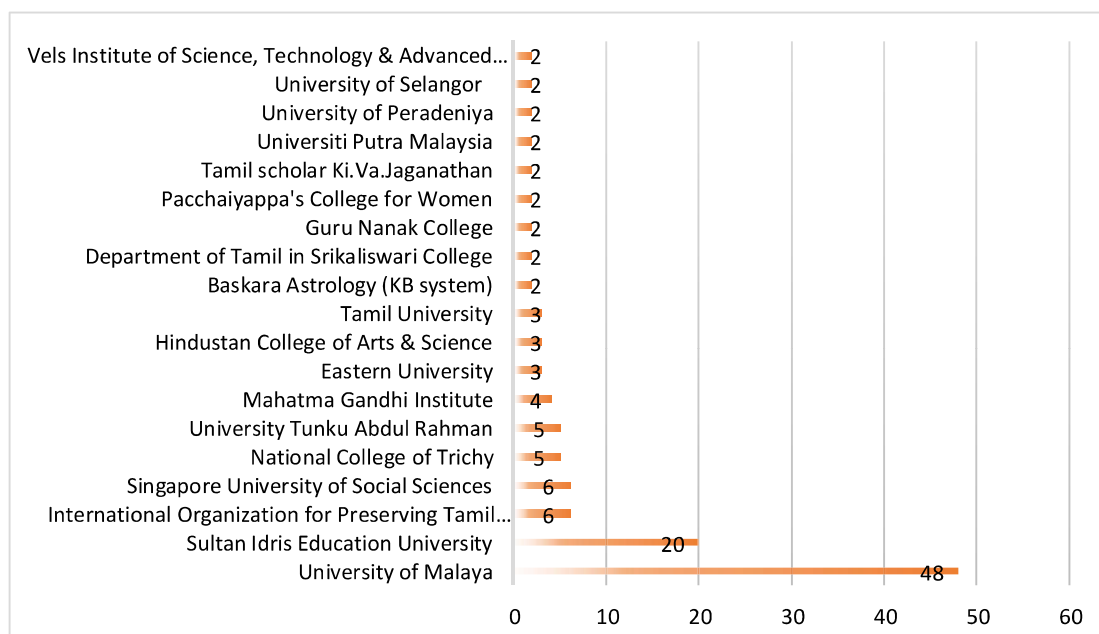


Figure 2: Institutions with >1 published articles in *Journal of Tamil Peraivu*

Figure 2 shows the frequency distribution of *Journal of Tamil Peraivu* published documents (with minimum of 2 publications) from various institutions. All together 150 articles have been published by 45 institutions (exclusion of 5 independent scholars) around the globe. Somehow, only 119 institutions published a minimum of 2 articles within the period. The single most productive institution with 48 articles (32%) was University of Malaya which based the editorial office of *Journal of Tamil Peraivu*. The second rank belonged to Sultan Idris Education University with 20 articles (13.3%), followed by International Organization for Preserving Tamil Heritage and Singapore University of Social Sciences with 6 articles (4%) each respectively. As illustrated in the table, National College of Trichy and University Tunku Abdul Rahman comes in fourth rank with five submissions (3.3%), while Eastern University, Hindustan College of Arts and Science and Tamil University carries 3 publications (2%) – is superseded by Mahatma Gandhi Institute with 4 publications (2.7%). Nine institutions produced (at least) 2 articles during the six-year period. The least reported number (1 article) of article submission is from the balance 26 institutions. The categorisation of the 45 institutions shows four types of institutions: academic (40), non-academic (4), government department (1) contributed to the journal publication.

### Distribution of Institution by Geographical Location

Particulars	Country						Total
	India	Malaysia	Sri Lanka	Singapore	America	Mauritius	
Institution	31	11	3	2	1	1	49
Percentage %	63.3	22.5	6.1	4.1	2	2	100

Table 3: Geographical distribution of the institutions

Table 3 presents the distribution of institution by geographical location. It shows that most of the contributions are from foreign sources with 77.5 percent and the rest 22.5 percent only from Malaysia. In contrast to the frequency of published articles, India represents highest institutional participation which is here clearly reflecting its influential rank among the other five countries. India was the most prolific country with 31 (63.3%) institutional participation. Malaysia, Sri Lanka and Singapore ranked from second to fourth, while America and Mauritius ranked fifth, respectively. It is hardly unsurprisingly given the scope of Tamil Studies, the overwhelming academic institutions in India (Tamil Nadu) reflecting the inherent features of the contributions to this journal.

### Authorship Pattern of Articles

Table 4: Authors by geographical affiliation

Rank	Country of Affiliation	No. of Authors	Percentage %
1	Malaysia	57	47.5
2	India	51	42.5
3	Sri Lanka	6	5
4	Mauritius	3	2.5
5	Singapore	2	1.7
6	Germany	1	0.8
<i>Total</i>		<i>120</i>	<i>100</i>

Table 4 depicts the list of authors by geographical affiliation. Amongst 150 articles and 45 institutions, the majority of publication were contributed by Malaysian authors with 57 authorship (47.5%), string along with Indian authors with 51 authorship (42.5%) respectively, and Sri Lanka, Mauritius Singapore and Germany ranked from third to sixth, respectively. A very significant difference can be seen where the

first and second of the top ranked countries contributed 90 percent of the publishing authors to this journal. In addition to the facts (1) Malaysia as a publication house of this journal; and (2) India owns the large number of institutions to facilitate this scope of the study, the availability of research resources in online and printed format is an important aspect that contributes to this result. Meanwhile, Garner & Inger (2018) stated that various academic indexes, such as Google Scholar, Scopus Web of Science, JSTOR and the Directory of Open Access Journals (DOAJ), not only widen the potential author and reviewer pool, perhaps even increase the submission numbers, reputation, reach, and consequently impacts of the journal in a wider range. In concern to this, *Journal of Tamil Peraivu* is not being abstracted or even indexed in any form of recognized or generally accepted international indexing and abstracting services can be regarded as a contributing factor as it is not well-known by researchers and unable to attract submissions outside of Malaysia and India.

Table 5: Ranked list of authors by affiliation

<i>Rank</i>	<i>Affiliation</i>	<i>No. of Authors</i>	<i>Percentage %</i>
1	Postgraduate doctoral	21	17.5
2	Lecturer	16	13.3
3	Postgraduate masters	15	12.5
3	Assistant Professor	15	12.5
4	Associate Professor	13	10.9
5	Senior Lecturer	9	7.5
6	Director, Chairman, principle, Head of Dept., Inventors	6	5
7	Professor	5	4.2
7	Research Scholar	5	4.2
7	Independent Scholar	5	4.2
8	Bachelor Degree	4	3.3
9	Senior Teacher	1	0.8
9	Engineer	1	0.8
9	Research Associate	1	0.8
9	Intern	1	0.8
9	Architect	1	0.8
9	lawyer	1	0.8
<i>Total</i>		<i>120</i>	<i>100</i>

Publication and citation data was rigorously influenced by many factors such as a researcher's age, career stage or discipline in which the author frequently attributed to. The career perspectives of a researcher and the establishment of metrics to rank academicians' performance strongly affect the way they participate in the today's research world (Husemann, Rogers, Meyer & Habel, 2017). Table 5 elaborates on the total of 120 author's production over the period, the number of authors from postgraduate studies (masters and doctoral) and lecturing area in various level topped the list. Rank one to five indicates the majority authors (89 authors = 74.1%) reflecting their influence in the production and sustainability of the journal. As can be seen, still there is a significant number of authors within rank six to nine belonged to academic field.



**Highly productive authors and institutions**

Table 6: Ranked List of Most Prolific Contributor

No	Reference	Institution	Citation*
1	Kingston, P. T., & Sillalee, S. K. (2014). Muruga Perumanum Odinum:Oor Oppaivu. [Lord Murugan and Odin: A Comparative Study]. <i>Journal of Tamil Peraivu</i> , 4(1), 11-21.	Universiti Perguruan Sultan Idris	1
2	Kingston, P. T., & Karthiges, P. (2014). Bharathidasan Kavithaigalil Poruliyal Vaatham [Materialism in the poems of Bharatidasan]. <i>Journal of Tamil Peraivu</i> , 3(1), 76-82.	Universiti Perguruan Sultan Idris	1
3	Kingston, P. T., & Karthiges, P. (2015). Valluvar Kuurum Nadpin Marukaddamaithi [Reframing Valluvar's claim on Friendship]. <i>Journal of Tamil Peraivu</i> , 2(1), 7-13.	Universiti Perguruan Sultan Idris	1
4	Vasugi, T. (2015). Cuvāmi Vivēkaṇantar Makākavi Pāratiyar kūrūm peṅkaḷukkāṇa arivuraikaḷ (Pieces of advice to women by Swami Vivekananda and Mahakavi Bharathiyar). <i>Journal of Tamil Peraivu</i> , 2(1), 64-70.	Doraisamy Nadar Maragathavalli Ammal College for Women	1*
5	Rajeswary, A. (2018). 'Am'mā' kataiyil kaṇavaṇāl koṭumaip paṭuttappaṭṭa maṇaivi (Wife ill Treated by Husband in the Short Story 'Amma'). <i>Journal of Tamil Peraivu</i> , 7(1), 91-97.	Universiti Perguruan Sultan Idris	1
6	Samikkanu Jabamoney, I. S. (2018). The role of Tirunelveli Tamil Christians in the development of the Tamil education in the state of Perak. <i>Journal of Tamil Peraivu</i> . <i>Journal of Tamil Peraivu</i> , 7(2), 18-26.	Universiti Perguruan Sultan Idris	2*
7	Sillalee, S. K., & Rajantheran, M. (2019). Malākkā ceṭṭikaḷ malēciyat tamilarkaḷ-panṭikaikaḷum vaḷipāṭṭu muraikaḷum (Festivals and Religious Practices of Melaka Chetties among Malaysian Tamils). <i>Journal Of Tamil Peraivu</i> , 8(2), 152-159.	Universiti Malaya	1

Citation analysis has been used extensively to empirically investigate research contributions of articles, journals, institutions and individuals (Garfield, 1979). According to Kroc (1984), a citation is a sign to indicate the location of the source-author, institution, and journal. Nevertheless, citation analysis has been criticized for the authors self-citation, journal's self citation, 'hot topic' phenomenon and publication age (Brown & Gardner, 1985). As of now, *Journal of Tamil Peraivu* is not, as yet, included in the journals indexed on Web of Science and Scopus, hence, Google Scholar has been used for this study. Substantial pre-processing data were carried out mainly for two reasons. First, to eliminate duplicate records. Second,

the most worrying part, to eliminate the search results of Google Scholar which is also includes the full text and bibliography of the articles from *Journal of Tamil Peraivu* itself. As of now, a total number of 195 citations received for *Journal of Tamil Peraivu* within the period 2015-2020. However, through the elimination of duplicate citations and non-citing records reduced the number to 7 citations, or to 5 citations after exclude the author self-citation and journal self-citation. All the articles attracted a minimum of one citation are listed in Table 6. Overall, 143 (95.4%) articles were uncited. Of the 7 cited papers, Kingston Paul Thamburaj appeared to be the most influential author with single citation for three article. It is notable that Education University of Sultan Idris were selected as most productive Institution with a maximum of 5 (10.9%) citations. The expert in citation analysis, Lokman's (2007) claims may justify the reason for these two low figures. Based on his analysis, 90% of papers that have been published in social science and humanities journals are never cited, whereas, 50% of papers are never read by anyone other than their authors, referees and journal editors. Similar analysis suggested by Baker (2018) mentioning most of the subjects with the highest rates of uncited research over the period were in the arts and humanities, with major disciplines such as philosophy and history having more than half of research without a single citation several years later. Apparently Lokmans' (2007) greatest concern was also the fact that publishing a journal article as only the first step in disseminating one's work. In line with this study, the reality of publishing Tamil language articles in online/digitized journals needed special attention. In fact, physical existence of major publications in Tamil language could be another justifying point to the low figure in citation.

### Keyword clustering

Table 7 : Top 20 highly-frequent keywords of Journal of Tamil Peraivu

Rank	Keyword	Frequency	Rank	Keyword	Frequency
1	Sangam Literature	12	6	Short Stories	5
2	Tamil Language	10	6	Ritual	5
2	Tamil Literature	10	6	Malaysian Tamils	5
3	Tholkaapiyam	9	7	Puranaanooru	4
3	Barathidasan	9	7	Poetry	4
4	Periyapuram	7	7	Women	4
4	Barathi/Barathiar	7	7	Hinduism	4
5	Thirukkural	6	7	Tamil Kings	4
5	Malaysian Indian	6	7	Temple worship	4
5	Culture	6	7	Nature	4

The 20 highly-frequent keywords used in *Journal of Tamil Peraivu* articles are shown in Table 7. From its inception in 2015 until 2020, the journal has have the total number of 500 keywords and this reflects wide range of area within the subject matters comprehensively covered thorough the period. Each article contain a minimum of 3 or maximum of 22 keywords. The first to third ranks of frequently used keywords belonged to sangam literature (12), Tamil language (10) & Tamil literature (10), Tholkaapiyam (9) & Barathidasan (9), respectively. The categorization of keywords were included in 27 clusters. The first cluster named as 'literary theories and criticism' with 53 keywords, followed by 'historical figures/fictional characters' with 47 keywords and 'education-teaching and learning' with 47 keywords. Third to twenty-seventh clusters from high number of keywords to the least are, 'temples & belief system' (38), 'history' (26), 'hinduism & hindus' (22), 'sangam literature' (21), 'medicine, health and psychology' (21), 'Tamils/Indians' (20), 'authors' (19), 'politics, governments, policies, parties' (19), 'countries and states' (19), 'socio-culture' (18), 'siddha' (17), 'hindu gods and goddess' (16), 'religious literature' (14), 'modern literature' (12), 'literature-general' (12), 'feminism/women' (11), 'fine arts' (11),

'nature' (8), 'technology' (8), 'astrology' (7), 'epic literature' (6), 'literature by country affiliation' (6), 'press and publications' (3).

### Growth of Subject by Years

Studying the conceptual structures or subject is highly important to specify priority of journals and subject fields within discipline (Mokhtari, Barkhan, Haseli & Saberi, 2020). It is also be a useful tool for scholars, practitioners and academicians to recognize its intellectual structure and subject integration (Walker, Chandra, Zhang & Witteloostuijn, 2019; Casillas & Acedo, 2007; Locke & Perera, 2001). Therefore, a comprehensive subject based bibliometrics analysis acquired for *Journal of Tamil Peraivu* to visualize its precise trends and patterns to serve the Tamil studies community. Library of Congress Subject Heading and Subclasses were used to classify the subject matters of the articles. Table 8 shows highly captured subjects and their occurrence to a greater extent.

Table 8: Subject Wise Publications

Rank	Subject	2015	2016	2017	2018	2019	2020	Total
1	Religion – Hinduism, Christianity, Manusmriti, Temples, Gods and Goddesses, Upanishads		5	5	3	6	3	22
2	Authors- Subramania Bharati, Bharathidasan, Imayam, Mu. Varadarajan, Tamarai Selvi, Kannadasan, Sarasu		11	2	3	2	3	21
3	Tamil Poetry	4	7	2	3	3		19
4	Ethnicity – Tamils, Indians, Chinese, Malacca Chetty		1	1	6	6	2	16
4	Social conditions			2	3	6	5	16
5	Native literature (Tamil) – Malaysia, Singapore, Australia, Mauritius; Japanese (Japan), Malay (Malaysia)			2	2	4	6	14
5	Education - teaching and learning, innovation, technology	1	1	5	4	1	2	14
6	Language and languages	1	1	3		2	2	9
7	Itihasa – Ramayana, Mahabharata	4	2			2		8
7	Patinēṅkīlkkāṇakku – Nālatiyār, Tirukkural	2		1	1	4		8
8	Tamil Grammar - Tolkāppiyam	1			1	2	3	7
8	Tamil Short stories	1		1	2	1	2	7
8	Panniru tirumurai – Periyapuram, Thiruvisaippa	3		1			3	7
9	Theory - Integrated Theory, Theory of Kalaviyal, Appropriateness Theory, Semiotic Theory, Feminism	1	1		1	1	2	6

	Theory							
10	Motion picture		2	1	1	1		5
10	History				3		2	5
10	Tamil Novel	1			1		3	5
10	Epic – Silappatikaram, Manimekalai	2		1		2		5
10	Patīṇem̄rkaṇakku – Kalittokai, Narriṇai, Purananuru		1	1		1	2	5
11	Prominent figures- B. R. Ambedkar, Mahathir Mohamad, Swami Vivekananda, Mohd Yusof Hassan		1		1		2	4
11	Indian Medicine					1	3	4
11	Politics in literature	1				2	1	4
12	Astrology			1		2		3
12	Biography		1		2			3
13	Nationalism, Policy making	1	1					2
13	Newspaper			1	1			2
13	Character and characteristic		2					2
13	Siddha literature				1		1	2
14	Fine arts		1					1
14	Manuscript, Tamil				1			1
14	philosophy						1	1
14	Psychology		1					1
14	Nature in literature	1						1
14	Riddle				1			1
14	Children literature				1			1
14	Folk literature			1				1
14	Vaishnavism literature	1						1
<b>Total</b>		<b>25</b>	<b>39</b>	<b>32</b>	<b>43</b>	<b>49</b>	<b>48</b>	<b>236</b>

Findings indicate that subject on religion (22), authors (21) and Tamil poetry (19) widely occupy the publication. Sangam literature inclusion of Itihasa, Epic, Patīṇem̄rkaṇakku, Patīṇem̄rkaṇakku, Panniru tirumurai (33) were predominant subjects as compared to modern literature – short story, poetry and novel (31). The subjects covered within the period of this study shows 37 variants as though the *Journal of Tamil Peraivu* is a multidisciplinary journal dedicated in Tamil studies. However, considering some subjects may have overlap or more than one of these subject appear in a article, the fiction/literature

based subjects are standing on the shoulders of non-fiction subjects. This is rationale as influential number of authors in this journal reveals that they are in the same specialty in term of subject area.

### Types of References Cited

Table 9: Type of references

Rank	Type of Reference	N	P
1	Book	1718	75
2	Journal Article	217	9.5
3	Magazine Article	142	6.2
4	Newspaper Article	77	3.4
5	Thesis	76	3.3
6	Personal Blogs	25	1.1
7	Unpublished Conference Paper	14	0.6
8	Published Conference Paper	8	0.3
9	Reports	7	0.3
9	Wikipedia	7	0.3
<i>Total</i>		<i>2291</i>	<i>100</i>

Table 9 shows highly cited references selected by the authors, their frequency use of references in *Journal of Tamil Peraivu*. Type of references cited by authors in articles consist of book, journal article, magazine article, newspaper article, thesis, personal blog, unpublished conference paper, published conference paper, reports and Wikipedia. These references are inclusion of electronic version such as eBook, eJournal, eMagazine, eNewspapers, eThesis and so on. Table 8 shows the most number referred reference is book (1718, 75%). In view of the fact that there have been only 217 journal articles (9.5%) and 142 magazine articles (6.2%) appear in the second and third rank in this table. It can be said that newspaper article (77, 3.4%) and thesis (76, 3.3%) were also contribute significant role as a reference source. Wikipedia as a tertiary source for information is being cited (7, 0.3%) as a direct source indicates the need for the journal editor to revisit the publication policy while ensure the credibility of the resources.

Table 10 : Source of References

Year	Printed		Online		Total	
	N	P	N	P	N	P
2015	300	13.1	7	0.3	307	13.4
2016	268	11.7	29	1.3	297	13
2017	397	17.3	25	1.1	422	18.4
2018	337	14.7	14	0.6	351	15.3
2019	451	19.7	35	1.5	486	21.2
2020	398	17.4	30	1.3	428	18.7
<i>Total</i>	<i>2151</i>	<i>93.9</i>	<i>140</i>	<i>6.1</i>	<i>2291</i>	<i>100</i>

Table 10 assesses the citation patterns whether researchers were more likely to limit the resources they cited to resources available online rather than those only in print. Finding shows researchers were less likely (140, 6.1%) to cite resources available online and more likely (2151, 93.9%) to cite journals only in print. Use of print resources significantly increased as the researchers continued to cite references available in personal or from the library's print collection, including older issues. This result is not in congruency with a popular assumption that the ready availability of online resources has ousted print

resources. Again here, lack of e-resources that encompasses digitized as well as ‘born digital’ materials in Tamil language, Tamil literature and its related subject area can also be seen enabling this phenomenon.

### Authors self-citation & Journal self-citation

Table 11 : Authors self-citation and journal self-citation

<i>Year</i>	<i>Author</i>	<i>Journal</i>
2015	1	0
2016	3	0
2017	9	15
2018	8	3
2019	20	0
2020	9	0
<i>Total</i>	<i>41</i>	<i>18</i>

The findings in table 11 indicate the presence of authors self-citation in this journal. The highest number of 41 (27.3%) articles shows self-citation as compared to 109 (72.7%) articles in which the authors did not cite themselves. Henceforward, the frequency distribution of journal self-citations reveals 18 journal self-citation are cited by researches from various affiliations. Further than a total of 41 author self-citation, 20 (48.8%) are self-citing themselves during 2019. While, influential number of 15 (83.3%) journal self-citation occurs during 2017. However, out of 41 references with author self-citation 18 (43.9%) referred as a local content (Malaysia and Singapore) which have been explored, researched by author themselves in previous works, with some published within this journal. On the whole, the authors tendency to cite themselves clearly indicated through the high percentage of self-citing authors.

Table 12 :Frequency of authors self-citation

<i>Rank</i>	<i>Author</i>	<i>Frequency</i>	<i>Cum total</i>
1	Silllalee, K.	10	10
2	Rajantharan Muniandy	9	19
3	Baskaran, Thilak K.	7	26
4	Manimaran Subramaniam	5	31
5	Sivapalan, G.	4	35
6	Alagesan Ambikapathy	3	38
7	Manikandan Manickam	3	41
8	Satyaraj, T.	3	44
9	Subashini Kanaga Kanagasundaram	3	47
10	Uma Allaghery	3	50
11	Geetha Sukumara	2	52
12	Krishanan Maniam	2	54
13	Parvathi Vellachami	2	56
14	Samikkanu Jabamoney Ishak Samuel	2	58
15	Balasubramanian, T.	1	59
16	Parameswari Krishnan	1	60
17	Shri Lakshmi, M.S.	1	61

Table 12 indicates the list in decreasing order of self-citations. K. Sillalee scored the highest (10) followed by Rajantheran Muniandy with 39 record of self-citing himself. In third place is Thilak K. Baskaran (7). At this point, it should be distinguished that Thilak K. Baskaran also held the record of self-citation as many as 7 times in a single article. Again, this findings reveals Journal of Tamil Peraivu lead to a soul-stirring focus on local contents with more academical focus rather than functioning as an another journal in the arena. Notwithstanding, both the principles of communication of knowledge and publishing ethics make it unacceptable as the research and scientific world assign value to citation in calculation of H-Index and impact factor.

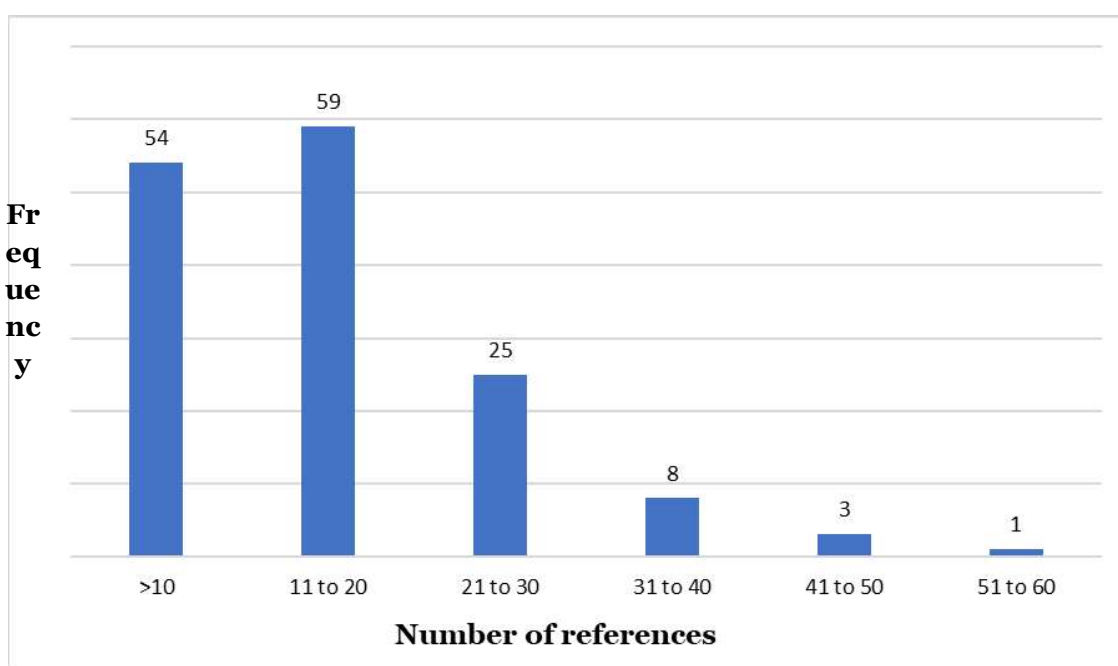


Figure 3: Number of references

The number of references depends on the topics and type of the paper. If the article consist of empirical research with literature review may acquire more reference in compare to the paper which is theoretical in its nature, than the larger number of references is needed. Figure 3 indicates that the greater number of the articles (59, 39.3%) published in *Journal of Tamil peraivu* had 11-20 references, 54 (36%) articles had 1-10 references while 25 (16.7%) articles had 30 references or below than that for every article. On the contrary, an article in *Journal of Tamil Peraivu*, volume 8, no. 2 of 2019 has 59 references whereas 8 (5.3%) articles has 31-40 and 3 (2%) articles has 41-50 references listed. Regarding number of references, the *Journal of Tamil Peraivu* does not have an editorial policy which set the maximum number. This allow the reasearcher not inquisitive about how many but how relevant, appropriate and applicable are the references to substantiate the research findings.

### Conclusion and Recommendation

*Journal of Tamil Peraivu* was first published 7 years ago in 2015. Motivated by the gap appeared in bibliometric analysis on Tamil/Indian studies, this study presents the bibliometric analysis of publications in the *Journal of Tamil Peraivu* between 2015 and 2020. This study adopt two bibliometric methods: publication performance analysis and scientific collaboration. The journal has published one hundred and

fifty documents and widely covered various topics within the field of study. Kingston Paul Thamburaj appeared to be the most influential author and Education University of Sultan Idris were selected as most productive institution based on citation counts. The Indian studies Department at University of Malaya, located in Malaysia, has been the most productive affiliation over the past 7 years with 48 articles. Prolific authors, productive institution are predominantly from the Malaysian academic institutions signifying that *Journal of Tamil Peraivu* has the essence of a national relatively to an international journal. On the other hand, given the scope of studies, the overwhelming academic institutions in India (Tamil Nadu) has topped the list of geographical distribution. These findings emplyfy that the contributing authors, institutions and countries are not geographically distributed worldwide and not well-presented as expected. This is obvious from *Journal of Tamil Peraivu* co-authorship network where more contributing agents are from Malaysia and India (Tamil Nadu), reflecting limited international cooperation. It is clearly shows the need for various form of cooperations in the wake of development in scientific collaboration.

This journal consists of mainly original research paper in nature. Looking at the top most contributors by affiliation, we could recognize this journal becoming a very popular choice at least for postgraduate researchers and their supervisors as a platform to publish their current research works. Given the citation frequency for the concept papers, *Journal of Tamil Peraivu* might usefully encourage the submission of various type of articles in the future to enhance the diversity. Also, it is appropriate to embrace the best approaches for limiting excessive self-citation and journal self-citation as it may hinder attempts of the editorial board of *Journal of Tamil Peraivu* to increase the journal impact factor in near future. Apart from this, the language of articles in JIS mainly in the Tamil language and referred materials which is also within this language landscape is something to ponder upon. Like any other non-English and non-romanized script journals, *Journal of Tamil Peraivu* could attempt to internationalize the journal by encouraging submissions from international scholars.

Furthermore, there are some other aspects of the *Journal of Tamil Peraivu* should pay attention. For example, with the stabilized growth trend evident from a constant supply of paper submissions, the diversity of research directions and fields has increased. On the other hand, the total pages per article decreases from 10 to 9 per article since 2019 even though large number of manuscripts published in JIS are original research paper. The journal should look into this matter in order to maintain a quality/quantity balance and also emphasize on the depth and contribution of articles within the subject area. In addition to this, *Journal of Tamil Peraivu* can be further innovative by publishing special issues to create collections of papers on specific topics to enhance the impact of the journal. It is also advisable for the journal to take some measures to obtain international indexation status such as in Scopus, DOAJ, ISI and so on. International indexation status essential for a journal to ensure the journal achieve its main purpose of being accessible to a wider range of researchers. In turn it will improve the journal's reputation as a reliable source of high-quality information within the field. *Journal of Tamil Peraivu* also must consider more rapid publication without restraining the number of articles per issue, build a bridge between academia and industry, provide awards and recognition for various category of participation in order to attract international contributors and wide visibility. This research is also tend to fostering the use of both print and electronic resources beyond language landscape for wider access and dessimination of knowledge.

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## References

- Bailón-Moreno, R., Jurado-Alameda, E., Ruiz-Baños, R., & Courtial, J. P. (2005). Bibliometric laws: Empirical flaws of fit. *Scientometrics*, 63(2), 209-229. Retrieved Sep 2, 2021, from <https://akjournals.com/view/journals/11192/63/2/article-p209.xml>
- Baker, S. (2018). *Uncited Research*. Retrieved September 1, 2021, from <https://www.insidehighered.com/news/2018/04/19/study-examines-research-never-receives-citation>
- Bakeri, A. B. A. (2005). Library and Information Science journal as a tool for continuing professional development in Malaysia: A bibliometric study. *Malaysian Journal of Library and Information Science*, 10(1), 19-28. Retrieved September 1, 2021, from [https://www.researchgate.net/publication/286896733\\_Library\\_and\\_Information\\_Science\\_journal\\_as\\_a\\_tool\\_for\\_continuing\\_professional\\_development\\_in\\_Malaysia\\_A\\_bibliometric\\_study](https://www.researchgate.net/publication/286896733_Library_and_Information_Science_journal_as_a_tool_for_continuing_professional_development_in_Malaysia_A_bibliometric_study)
- Bakri, A., & Willett, P. (2008). The Malaysian Journal of Library And Information Science 2001-2006: a bibliometric study. *Malaysian Journal of Library & Information Science*, 13(1), 103-116. Retrieved from [https://www.researchgate.net/publication/33040077\\_The\\_Malaysian\\_Journal\\_Of\\_Library\\_And\\_Information\\_Science\\_2001-2006\\_a\\_bibliometric\\_study](https://www.researchgate.net/publication/33040077_The_Malaysian_Journal_Of_Library_And_Information_Science_2001-2006_a_bibliometric_study)
- Ball, P. (2008). A longer paper gathers more citations. *Nature*, 455, 274–275.
- Bradford, S. C. (1934). Sources of Information on specific subjects. *Engineering*, 137, 85-86.
- Brown, L. D., & Gardner, J. C. (1985). Using Citation Analysis to Assess the Impact of Journals and Articles on Contemporary Accounting Research (CAR). *Journal of Accounting Research*, 23(1), 84–109. <https://doi.org/10.2307/2490908>
- Casillas, J., & Acedo, F. (2007). Evolution of the intellectual structure of family business literature: a bibliometric study of fbr. *Family Business Review*, 20(2), 141-162.
- Çiftçi, S. K., Danişman, S., Yalçın, M., Tosuntaş, S. B., Ay, Y., Sölpük, N., Karadağ, E. (2016). Map of Scientific Publication in the field of Educational Sciences and Teacher Education in Turkey: A Bibliometric Study. *EDUCATIONAL SCIENCES: THEORY & PRACTICE*, 16(4), 1097-1123. Retrieved Sep 2, 2021, from <https://files.eric.ed.gov/fulltext/EJ1115017.pdf>
- Cole, F. J., & Eales, N. B. (1917). The History of comparative Anatomy: Part 1.A statistical analysis of Literature science. *Science Progress*, 11, 578-596.
- de Solla Price, D. J. (1965). Networks of Scientific Papers. *American Association for the Advancement of Science (AAAS)*, 149 (3683), 510–515. Retrieved Sep 2, 2021, from [10.1126/science.149.3683.510](https://doi.org/10.1126/science.149.3683.510). ISSN 0036-8075. PMID 14325149.
- Dereli, T., Baykasoglu, A., Altun, K., Durmusoglu, A., & Türksen, I. B. (2011). Industrial applications of type-2 fuzzy sets and systems: A concise review. *Computers in Industry*, 62(2), 125-137, Retrieved Sep 2, 2021, from <https://doi.org/10.1016/j.compind.2010.10.006>.
- Diodato, V. P. (1994). *Dictionary of bibliometrics*. New York, NY: The Hawthorne Press.

- Dutta, B. (2014). *The journey from librametry to altmetrics: a look back*. Paper presented at the Golden Jubilee Celebration of Department of Library and Information Science, Jadavpur University Jadavpur University, Kolkata, India. Retrieved September 1, 2021, from <http://eprints.rclis.org/23665/2/B-Dutta-JU-Golden-Jubilee-Paper.pdf>
- Faiz, H., & Yanti, M. (2013). Eleven Years (1999–2009) of The Malaysian Journal of Distance Education: A Bibliometric Study. *Malaysian Journal of Distance Education*, 15(1), 1–12. Retrieved on 22<sup>nd</sup> October, 2021 [https://www.researchgate.net/publication/264547420\\_Eleven\\_Years\\_1999-2009\\_of\\_The\\_Malaysian\\_Journal\\_of\\_Distance\\_Education\\_A\\_Bibliometric\\_Study](https://www.researchgate.net/publication/264547420_Eleven_Years_1999-2009_of_The_Malaysian_Journal_of_Distance_Education_A_Bibliometric_Study)
- Fonseca, E. N. Da. (1973), Bibliografia Estatística e Bibliometria: Uma Reivindicacao de Prioridades. [Statistical bibliography and bibliometrics: a revindication of priorities], *Ciencia da Informacao*, 2(1), 5–7.
- Gardner, T., & Inger, S. (2018). *How Readers Discover Content in Scholarly Publications*. Retrieved on 22<sup>nd</sup> October, 2021 from <https://renewconsultants.com/wp-content/uploads/2018/08/How-Readers-Discover-Content-2018-Published-180903.pdf>
- Garfield, E. (1979). *Citation Indexing: Its Theory and Application in Science, Technology, and Humanities*. New York: Wiley.
- Gross P. L. K., & Gross, F. M. (1927). College Libraries and Chemical Education. *Science*, 66, 386-389.
- Hulme, E. W. (1923). *Statistical Bibliography in Relation to the Growth of Modern Civilization*. London: Grafton.
- Husemann, M., Rogers, R., Meyer, S., & Habel, J. C. (2017). “Publicationism” and scientists’ satisfaction depend on gender, career stage and the wider academic system. *Palgrave Commun*, 3, 17032. Retrieved 22<sup>nd</sup> October, 2021 from <https://doi.org/10.1057/palcomms.2017.32>,
- Kroc, R. J. (1984). Using Citation Analysis to Assess Scholarly Productivity. *Educational Researcher*, 13(6), 17–22. Retrieved 22<sup>nd</sup> October, 2021 <https://doi.org/10.2307/1175555>
- Lakshmi Sankari, R., & Rani, P. (2016). Pattern of Collaborative Research on IEEE Transaction on Software Engineering (2000-2005): A Bibliometric Study. *International Research Journal of Multidisciplinary Science & Technology*, 1(6), 364-372. Retrieved Sep 2, 2021, from <http://nebula.wsimg.com/52636d6f253018d672dc86d75d773826?AccessKeyId=94ED799FB69CB80A1EB7&disposition=0&alloworigin=1>
- Locke, J., & Perera, H. (2001), The intellectual structure of international accounting in the early 1990s. *The International Journal of Accounting*, 36(2), 223-249.
- Lokker C, McKibbon KA, McKinlay RJ, Wilczynski NL, Haynes RB (2008) Prediction of citation counts for clinical articles at two years using data available within three weeks of publication: retrospective cohort study. *BMJ*, 336, 655–657.
- Lokman, M. I. (2007). *The rise and rise of citation analysis*. Retrieved on 22<sup>nd</sup> October, 2021 from <http://eprints.rclis.org/8738/>
- Lotka, A. J. (1926). The frequency distribution of scientific productivity. *Journal of the Washington Academy of Science*, 16(12), 317–323.

- Mavros M, Bardakas V, Rafailidis P, Sardi T, Demetriou E, Falagas, M. (2013) Comparison of number of citations to full original articles versus brief reports. *Scientometrics* 94(1): 203–206.
- Merriam-Webster. (n.d.). Bibliography. In *Merriam-Webster.com dictionary*. Retrieved September 1, 2021, from <https://www.merriam-webster.com/dictionary/bibliography>
- Merriam-Webster. (n.d.). Statistics. In *Merriam-Webster.com dictionary*. Retrieved September 1, 2021, from <https://www.merriam-webster.com/dictionary/statistics>
- Mokhtari, H., Barkhan, S., Haseli, D., & Saberi, M. K. (2020). A bibliometric analysis and visualization of the Journal of Documentation: 1945–2018. *Journal of Documentation*, 77(1), 69-92.
- Otlet, P. (1934). *Traite de Documentation. Le Livre sur le Livre. Theorie et Pratique. [Treatise on documentation. The book on the book. Theory and practice]*. Brussels: Van Keerberghen.
- Ozen, H. (2018). Subject based bibliometric analysis: A review of information science discipline. Paper presented in 2018 International Conference on Information Management and Processing (ICIMP). Doi: 10.1109/ICIMP1.2018.8325844.
- Presser, S. (1980). Collaboration and the Quality of Research. *Social Studies of Science*, 10(1), 95–101. Retrieved September 1, 2021, from <http://www.jstor.org/stable/284727>
- Pritchard, A. (1969). Statistical bibliography: An interim bibliography. *Journal of Documentation*, 24(4), 69.
- Raihanah, A., & Asmak, R. (2009). Fifteen years of Jurnal Syariah (1993-2007): a bibliometric study. *Malaysian Journal of Library & Information Science*, 14(3), 59-76.
- Ranganathan, S. R. (1969). Library and its Scope. DRTC Annual Seminar, 702, 285-301.
- Russell, J. M., & Rousseau, R. (2010). Bibliometrics and institutional evaluation. *Encyclopedia of life support systems (EOLSS). Part 19*, 42-64. Retrieved September 1, 2021, from <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.493.3507&rep=rep1&type=pdf>
- Thanuskodi, S. (2011). Bibliometric Analysis of the Indian Journal of Chemistry. *Library Philosophy and Practice (e-journal)*, 7, 8p. Retrieved September 1, 2021, from <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1662&context=libphilprac>
- Tiew, W. S., Abrizah, A., & Kiran, K. (2002). Malaysian journal of library and information science 1996-2000: a bibliometric study. *Malaysian Journal of Library and Information Science*, 6(2), 43–56. Retrieved September 1, 2021, from <http://eprints.rclis.org/5914/1/pdf.pdf>
- Travis Nicholls, P. (December, 1988). Price's square root law: Empirical validity and relation to Lotka's law. *Information Processing & Management*, 24(4), 469–477. Retrieved Sep 2, 2021, from 10.1016/0306-4573(88)90049-0.
- Tunku Abdul Rahman Putra. (1959). Message. *Tamil Oli*, 1, 2. Singapore: University of Malaya Tamil Language Society.
- Walker, R. M., Chandra, Y., Zhang, J. and van Witteloostuijn, A. (2019), Topic modeling the research practice gap in public administration. *Public Administration Review*, 79(6), 931-937.

Wilson, C. S. (1995). *The formation of subject literature collections for bibliometric analysis: the case of the topic of Bradford's Law of Scattering* (Unpublished doctoral dissertation). The University of New South Wales, Sydney, Australia.

Zipf, G. K. (1949). *Human behaviour and the principle of least effort: An introduction to human ecology*. Cambridge: Addison-Wesley Press.