

## Bibliometric analysis of Physical Education journals in DOAJ

**Dr. Muthuraja S,**

Librarian, Government First Grade College, Bukkapatna

Email: [infomuthuraj@gmail.com](mailto:infomuthuraj@gmail.com)

**Mr. Lakshmisha H**

Librarian, Government First Grade College Manki

E Mail: [lakshmish1983@gmail.com](mailto:lakshmish1983@gmail.com)

**Mr. Nagaraja H**

Librarian, Govt. First grade College for Women's, Pavagada.

E Mail: [naturenanda@gmail.com](mailto:naturenanda@gmail.com)

**Surendra C S**

Librarian (Sr. Scale), Govt. First grade College, Hanur

[suri.nenapirali@gmail.com](mailto:suri.nenapirali@gmail.com)

### Abstract

*The current paper, which examines the significance of DOAJ (Directory of Open Access Journals), discusses open access journals that are free to read in full and are subject- and language-inclusive. For readers of open access journals, DOAJ wants to be their one-stop shop. In the current study, open access journals in the field of "Physical Education" that are listed in the Directory of Open Access Journals (DOAJ) are analysed bibliometrically. The current bibliometric analysis includes all 110 physical education e-journals that are currently available in DOAJ. These journals are evaluated and tabulated in accordance with the study's goals.*

**Key words:** Bibliometrics, Directory of Open Access Journals (DOAJ), Physical Education journals.

### Introduction

Scientific journals have been the focus of bibliometric research, which primarily base their conclusions on metadata components as author, title, subject, citations, and others. This kind of study offers helpful markers for trends, scientific output, the emphasis of research in various domains, and publishing preferences among researchers. Bibliometrics typically provides an examination of macro communication and takes into account organisation, categorization, and quantitative assessment of publishing trends. Some of these analyses relating to open access journals published in the topic of "Physical Education" are provided by the study covered in this article.

Under the leadership of Lars Bjornshauge, Director of Libraries at Lund University, the Directory of Open Access Journals was established in 2003 as a result of the inaugural

Nordic Conference on Scholarly Communication held at Lund University in 2002. Over the next 10 years, Bjornshauge oversaw the Directory's expansion; in January 2013, he was named managing director. The Directory of Open Access Journals (DOAJ), which is supported by the Infrastructure Services for Open Access (ISOA), has a website (<http://www.doaj.org>) that enables access to the Directory as well as information about it. On its website, the DOAJ describes open access journals as academic and scientific publications that uphold high standards of excellence via the use of editorial or peer review, and that "use a funding model that does not charge readers or their institutions for access." For a journal to be listed in the Directory, users are also granted the ability to "read, download, copy, distribute, print, search, or link to the full texts of these articles," according to the Budapest Open Access Initiative's definition of open access.

### **Previous studies**

Previously made studies that may be useful supplementary analysis for the study presented here.

**Misra (2015)** tried to find out the open – access (OA) literature is digital, online, free of charge and free of most copyright and licensing restrictions; they found 27 Open Access Journals as freely available on websites in all subjects which is available free. In their 2018 study, **Veerabasavaiah and Muthuraja** examined 108 DOAJ political science journals. The most number of e-journals added in 2017 was 24 (22.22%), according to their analysis of journal additions year by year. 2015 had 21 (19.44%), 2016 had 20 (18.52%), 2010, had 10 (9.26%), and 2013, had 8 (7.41%). Out of 108 Journals, Spain and Brazil had the highest percentages (16 (14.81%) and 14 (12.96%), respectively, followed by Colombia, Poland, and Romania with 7 (6.48%) each. With 6, Indonesia (5.56%). Turkey, Mexico, and Germany each scored five with (4.63%). In his work *Impact of Open Access Journals in DOAJ: An Analysis*, **Hugar (2019)** investigated the worldwide trend and expansion of open access journals in the DOAJ portal from 2002 to 2018. Due to the large number of articles that are indexed in DOAJ, he employed a stratified sample technique and took about 5000 into consideration. 12 065 journals were indexed in DOAJ at the time of his study. He disclosed that few journals charge for articles and that English is the most widely used language for communication and writing. He learned that 97% of the journals underwent peer review. **Hugar (2019)**

examined the global trend and growth of open access journals in the DOAJ portal from 2002 to 2018 in his study Impact of Open Access Journals in DOAJ: An Analysis. He used a stratified sample approach and considered roughly 5000 articles out of the many that are included in DOAJ's index. At the time of his analysis, 12 065 journals were indexed in DOAJ. He revealed that English is the most extensively utilised language for communication and writing and that few publications charge for articles. He discovered that peer review was conducted on 97% of the journals. A total of 146 sociology e-journals are covered in Muthuraja S and others analysis in 2021, which is available in DOAJ. These sociology journals are examined and tallied in accordance with the study's goals. Maximum 95 journals published in English, the highest 20 with (18.49%) added in 2018, and 62.33% of journals are in sociology and (37.67%) of journals are in sociology-related fields.

#### **Scope and limitations of the study**

The present study is limited to Physical Education journals available in the Directory of Open Access Journals (DOAJ). A total of 110 e-Journals were identified in the directory in the discipline of Physical Education will be undertaken for the further study.

#### **Objectives of the study**

The study objectives are drawn are as follows:

- To identify the number of Physical Education journals in DOAJ.
- To identify the year wise addition of the Journals.
- To identify the subject wise distribution
- To know the country of publication of the journals.
- To identify the Publication Format and
- To identify the language of the Journals

#### **Methodology**

Information about journals is being gathered via the DOAJ website at <https://doaj.org>. 110 journals in all have been found using the portal. MS Excel spreadsheets were used to assess the study's data in order to meet its goals. The journal's title, publishing format, topic discipline, year of addition, country of publication, and language of the journal were all put into Excel files.

**Data analysis and interpretation**

<b>Table-1: Year wise Growth of Open Access Journals</b>					
<b>Sl. No.</b>	<b>Year</b>	<b>No. of journals</b>	<b>Percentage</b>	<b>Cumulative Journ.</b>	<b>Cumulative %</b>
1	2006	1	0.90%	1	0.90%
2	2007	1	0.90%	2	1.80%
3	2008	2	1.90%	4	3.70%
4	2009	3	2.72%	7	6.42%
5	2010	7	6.36%	14	12.78%
6	2011	5	4.54%	19	17.32%
7	2012	4	3.63%	23	20.95%
8	2013	7	6.36%	30	27.31%
9	2014	5	4.54%	35	31.85%
10	2015	7	6.36%	42	38.21%
11	2016	7	6.36%	49	44.57%
12	2017	12	10.90%	61	55.47%
13	2018	18	16.36%	79	71.83%
14	2019	6	5.45%	85	77.28%
15	2020	18	16.36%	103	93.64%
16	2021	7	6.36%	110	100.00%
<b>Total</b>		<b>110</b>	<b>100.00%</b>		

**Table 1** shows the growth of open access journals by year. 18 journals at most (16.36%) saw increase between 2018 and 2020. The following years had less than six journals published: 2017 had 12 (10.90%), 2011, 2013, 2015, 2016, and 2021 had 7 (6.36%), 2019 had 6 (5.45%), and so on.

<b>Table- 2: Language wise distribution of Journals on DOAJ</b>			
<b>Sl. No</b>	<b>Language</b>	<b>No. of Journals</b>	<b>Rank</b>
1	<b>English</b>	86	1

2	Portuguese	24	2
3	Spanish	24	2
4	Indonesian	9	3
5	Russian	7	4
6	French	4	5
7	Ukrainian	4	5
8	Arabic	2	6
9	Polish	2	6
10	Turkish	2	6
11	<b>Czech</b>	1	7
12	Danish	1	7
13	Italian	1	7
14	Malay	1	7
15	Norwegian	1	7
16	<b>Persian</b>	1	7
17	Romanian	1	7
18	Serbian	1	7

**Table 2** details the distribution of journals in physical education by language. The data makes it evident that "English" is a popular and preferred language used for publishing the highest 86(1st Rank) publications. Spanish and Portuguese languages come in second place, each scoring 24 points. The number of language publications in Indonesian languages with 9 (3rd Rank) and others is comparatively quite low.

<b>Sl. No</b>	<b>Language pattern</b>	<b>No of journals</b>	<b>Percentage</b>	<b>Cumulative Journals</b>	<b>Cumulative percentage</b>
1	One	65	59.10%	65	59.10%
2	Two	32	29.10%	97	88.20%
3	Three	10	9.09%	107	97.29%
4	Four	2	1.81%	109	99.10%

5	Five	1	0.90%	110	100.00%
<b>Total</b>		<b>110</b>	<b>100.00%</b>		

The linguistic patterns for journals in physical education are explained in **Table 3**. The data clearly shows that 65(59.10%) journals have been published in One language pattern. 32(29.74.10%) journals were published, with two linguistic patterns. Three linguistic patterns are reported with a score of 10 (9.09%). Publishing four language patterns with 2(1.81%) One (0.90%) journal has been published, using five language patterns.

<b>Table-4: Country wise Growth of Open Access Journals</b>				
<b>Sl. No</b>	<b>Rank</b>	<b>Name of the country</b>	<b>No of Journal</b>	<b>Percentage</b>
1	1	Brazil,	19	17.29%
2	2	Spain	14	12.72%
3	3	Indonesia	12	10.90%
4	4	Poland	10	9.10%
5	4	Romania	10	9.10%
6	4	Ukraine	10	9.10%
7	5	Cuba	4	3.70%
8	5	Czechia	4	3.70%
9	6	Colombia	3	2.72%
10	6	Serbia	3	2.72%
11	6	Turkey	3	2.72%
12	7	Iraq	2	1.81%
13	7	Montenegro	2	1.81%
14	7	United States	2	1.81%
15	8	Argentina	1	0.90%
16	8	Canada	1	0.90%
17	8	Iran, Islamic Republic of	1	0.90%
18	8	Malaysia	1	0.90%

19	8	Norway	1	0.90%
20	8	Portugal	1	0.90%
21	8	Russian Federation	1	0.90%
22	8	Slovakia	1	0.90%
23	8	South Africa	1	0.90%
24	8	Switzerland	1	0.90%
25	8	United Kingdom	1	0.90%
26	8	Uruguay	1	0.90%
Total			110	100.00%

**Table 4** lists the nations by which e-journals have been published. Brazil is the leader with 19 journals out of 110 (17.29%). Spain was followed by 14 (12.72%). Poland, Romania, and Ukraine each had 10 people with 9.10%, followed by Indonesia with 12 (10.90%). Less than 4 journals are published in the remaining nations.

Sl. NO	Subject	No of journals N= 110	Percentage% N= 100	Rank
1	Geography Anthropology : Sports	56	50.90%	1
2	Education : Sports	31	28.20%	2
3	Medicine: Sports medicine	20	18.20%	3
4	Science & Human anatomy	1	0.90%	4
5	Science & Physiology	1	0.90%	4
6	Science & Chemistry	1	0.90%	4
<b>Total</b>		<b>110</b>	<b>100.00%</b>	

The subject-wise distribution of e journals is seen in **Table 5**. In the fields of geography, education, sports, and their related disciplines, 87 periodicals have been found. The

majority of journals (79.10%) dealt with physical education; the remaining journals (20.90%) were included from other fields. Language Sciences and Medical field

<b>Table-6 Publication Mode of Journals</b>			
<b>Sl. No.</b>	<b>Mode</b>	<b>No of journal</b>	<b>Percentage</b>
1	Print and Online version	63	57.27%
2	Online version	37	33.63%
3	Print version	10	9.10%
<b>Total</b>		<b>110</b>	<b>100.00%</b>

Table 6 describes Publication Format of e- Journals. It is found that both Print and Online format with 63 (57.27%). An On-line format with 37 (33.63%) and print format with 10 (9.10%).

### **Findings**

The following findings are identified from the study:

In Table1 it found that, there are 110 journals are available in Physical Education and its allied discipline. From the analysis Table-1 it is found that the highest (16.36%) journals were Growth in 2018 and 2020. Table-2 indicates and found that more than 86 of journals are published in English and remaining journals are published other than English language. Table 4 presents country wise Publication of journals. It is observed that Brazil, Spain and Indonesia, Federation are top in the list for journal growth. In table 5 it is found that, nearly (79.10%) journals are available in Physical Education, the remaining (20.90%) of journals are found in allied areas of Physical Education. In table-6 it is observed that there are 57.27% of journals are available with both Print and Online Mode Followed by (33.63%) with Available online Mode. Followed by (9.10%) with Available Print Mode are available.

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