ANALYSIS

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Discovery

Scientometric analysis of the performing arts and arts community research productivity

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ABSTRACT

The aim of the current study is to investigate the impact of performing arts and arts community on the world's research output from various countries of the world. The present study assessed benchmarking of research output for the period between 1999 and 2013 (April) 12408 records were downloaded from the database of web of Science and evaluated using HistCite software. Most publications came from Western countries such as the US, UK or Germany. 77.1 percent of publications are come out in the source of journal article.

Keywords: Performing arts, Arts community, h index, citation scores, collaborative index, authorship pattern.

1. INTRODUCTION

Performing arts are art forms in which artists use their body or voice to convey artistic expression as opposed to visual arts, in which artists use paint/canvas or various materials to create physical art objects – Wikipedia. Since the beginning of the 1980s, Performance Art has increasingly incorporated technological media into pieces - mainly because we have acquired exponential amounts of new technology (Garfield, 1955; Krishna et al. 2005; Prtichard, 1969). Where Performance Art goes from here is only a matter of combining technology and imagination. In other words, there are no foreseeable boundaries for Performance Art (Amsaveni et al. 2013; Manimekalai et al. 2012; Arunachalam, 1998). Music and dance are probably the most elemental art forms, spontaneously expressing the entire garment of human emotions and experiences (Subramanian, 1983). There are tribal belts throughout India, and although each tribe has its own distinctive music and dances, they all share a similar form, with men and women forming separate rows with linked arms and executing intricate leg movements in a gradually increasing tempo that builds up to a crescendo of vigour.

2. CHARACTERISTICS OF PERFORMANCE ART

- Performance Art is live.
- Performance Art has no rules or guidelines. It is art because the artist says it is art. It is experimental.
- Performance Art is not for sale. It may, however, sell admission tickets and film rights.
- Performance Art may be comprised of painting or sculpture (or both), dialogue, poetry, music, dance, opera, film footage, turned on television sets, laser lights, live animals and fire. Or all of the above. There are as many variables as there are artists.
- Performance Art is a legitimate artistic movement. It has longevity (some performance artists, in fact, have rather large bodies of work) and is a degreed course of study in many post-secondary institutions.
- Dada, Futurism, the Bauhaus and the Black Mountain College all inspired and helped pave the way for Performance Art.
- Performance Art is closely related to Conceptual Art. Both Fluxus and Body Art are types of Performance Art.
- Performance Art may be entertaining, amusing, shocking or horrifying. No matter which adjective applies, it is meant to be *memorable*.

(Source: Rosalee Goldberg: 'Performance Art: Developments from the 1960s', The Grove Dictionary of Art Online, (Oxford University Press, Accessed 01/17/04) http://www.groveart.com)

3. DATA SOURCE

The database used for the analysis was the Web of Science database from the Thomson Institute for Scientific Information (ISI) including Science Citation Index (SCI).

4. SEARCH STRATEGIES

For the searches, the term "performing arts" and "arts community" was used. This is needed for finding all the articles, which are related to performing arts and arts community. The present study was designed to assess the overall number of publications related to performing arts.

5. TIME SPAN

The initially analyzed time span included the period from 1999 to 2013 (April) (15 years). To some extent the time span was limited to the years which contained at least 350 articles, in order to be able to perform statistics like the average citation per item.

6. OBJECTIVES

Table 1 Year wise publications and growth rate of performing arts and arts community productivity

Year	No. of articles	No. of authors	AAPP	No. of citations	No. of times cited	H index	ACPP
1999	415 (3.3)	1226	10.46	8951	12830	55	30.92
2000	425 (3.4)	2047	6.79	10668	13889	52	32.68
2001	425 (3.4)	1639	7.64	9433	12526	52	29.47
2002	429 (3.5)	1212	11.51	9808	13945	51	32.51
2003	487 (3.9)	1562	9.61	10163	15014	55	30.83
2004	573 (4.6)	1940	9.40	11935	18227	58	31.81
2005	715 (5.8)	2598	10.22	14773	26546	64	37.13
2006	740 (6.0)	2760	9.52	14450	26285	65	35.52
2007	861 (6.9)	3413	10.21	13916	34852	60	40.48
2008	1037(8.4)	4024	10.04	12827	40409	52	38.97
2009	1184 (9.5)	4698	9.96	12354	46775	54	39.51
2010	1345 (10.8)	5501	10.31	9389	56712	42	42.17
2011	1593 (12.8)	6809	9.93	4973	67617	26	42.45
2012	1785 (14.4)	8070	9.84	1483	79434	12	44.50
2013	384 (3.1)	1714	10.80	42	18518	3	48.22
Total	**12398**	**49213**	**9.83**	**145165**	**483579**	**701**	**39.0**
Average per year	**826.53**	**3280.86**		**9677.66**	**32238.6**	**46.73**	

Table 2 Document wise Distribution of Publications

S.No	Document type	Records	Percent	TLCS	TGCS
1	Article	9563	77.1	2263	98971
2	Article; Proceedings Paper	1177	9.5	249	12844
3	Review	1078	8.7	266	29181
4	Book Review	200	1.6	4	8
5	Editorial Material	161	1.3	29	1033
6	News Item	68	0.5	1	2
7	Meeting Abstract	34	0.3	0	1
8	Letter	25	0.2	0	143
9	Correction	20	0.2	0	30
10	Biographical-Item	16	0.1	0	19
11	Article; Book Chapter	8	0.1	0	35

12	Review; Book Chapter	8	0.1	1	73
13	Record Review	7	0.1	0	0
14	Reprint	7	0.1	0	5
15	Bibliography	5	0.0	1	2
16	Art Exhibit Review	4	0.0	0	0
17	Dance Performance Review	4	0.0	0	0
18	Database Review	4	0.0	0	0
19	Film Review	3	0.0	0	0
20	Software Review	3	0.0	0	3
21	Script	2	0.0	0	1
22	Theater Review	1	0.0	0	0

Table 3 Showing authorship pattern and author productivity (n - value)

Year	Single Article	Author	Collaborative Authors	Collaborative Articles	Collaborative Index	Degrees of Collaborative
1999	151	151	1075	264	2.95	0.88
2000	120	120	1927	305	4.82	0.94
2001	145	145	1494	280	3.86	0.91
2002	164	164	1048	265	2.83	0.86
2003	160	160	1402	327	3.21	0.90
2004	152	152	1788	421	3.39	0.92
2005	171	171	2427	544	3.63	0.93
2006	163	163	2597	577	3.73	0.94
2007	188	188	3225	673	3.96	0.94
2008	235	235	3789	802	3.88	0.94
2009	236	236	4462	948	3.97	0.95
2010	252	252	5249	1093	4.09	0.95
2011	266	266	6543	1327	4.27	0.96
2012	273	273	7797	1512	4.52	0.97
2013	30	30	1684	354	4.46	0.98
Total	**2706**	**2706**	**46507**	**9692**	**3.83**	**0.95**

The major objectives of the present study, covering the contributions of world performing arts and arts community research for the period of 15 years (1999 – April 2013) are:

- to measure the productivity and publication share of contributing countries' scientists in the world with growth rate,
- to examine the authorship patterns and the nature of collaborative research,
- to identify the prolific contributors and measuring their productivity (quantity of contributions),
- to examine the authorship pattern and prolific contributors and
- Number of articles with their citation scores

7. DATA ANALYSIS

Table 1 depicts that the data of relative growth rate for total research output on performing arts and arts community global level. From this analysis, the researcher has found the highest output (1785, 14.4 percent) year is 2012 as well as highest contributors (8070, 16.39 %) also highest with first rank position among the fifteen years. Followed by the year of 2011 highest productivity of contributions (12.8) percent, highest contributors 6809 and followed by the year of 2010 third highest productivity of contributions (10.8) percent, highest contributors 5501. The year group of 2008 to 2012 has highest contributors of performing arts and arts community research. The year of 2005 and 2006 highest citation score and the h-index is highest in the year of 2006. Average citation per paper (48.22 %) is highest in the year of 2012.

This study (Table 2) reveals that the types of documents for related subject publications covered by web of science on performing arts and arts community research. Twenty two types of resources, such that articles, proceeding papers, review, book review, editorial material, Letter, Correction, Bibliographical item, in journal articles (77.1%) with 2263 TLCS and 98971 TGCS scaled, while conference proceedings with (9.5%) with 249 TLCS and 12844 TGCS and reviews (8.7%) with 266 TLCS and 29181 TGCS scaled. The remaining types of sources (Book review, Editorial material, news item, meeting abstracts, Letter, correction, Biographical item, Article book chapter, review book chapter, record review, reprint, bibliography, art exhibit review, dance performance review, database review, film review, software review, script and theater review) were having below 1.6 percent and lowest citation scores values were measured.

Table 3 indicates that the authorship pattern of contributing level. Totally 49213 authors were contributed 12398 articles in the subject of performing arts and arts community. Among 49213 authors, 2706 (5.5 %) authors were contributing in solo type and 46507 (94.5 %) authors were contributing 9692 articles at collaborative pattern. 3.83 collaborative index values has measurable. Degree of collaboration values is 0.95, i.e., 95 percent of authors were involved the productivity of performing arts and arts community. Year of 2012 having highest single author's contribution (273, 10.08 %), followed by 2011 and 2010 have highest single authors contribution, 2013 is having very low contribution by single authorship pattern (Fig.1). As the same case the collaborative authors and articles output (7797, 16.76%) in the year of 2012. The highest collaborative index value is (4.52%) in the year of 2012 and the degrees of collaborative (0.98%) highest in the year of 2013. The year group of 2007 to 2012 gradually developed authorship productivity. Table 4 shows that World publication share & rank India holds 18th rank among the top 20 productive countries of the world in performing arts and arts community, with its global publications share of (1.5%), as computed from cumulative world publications output data for 1999–2013. India has shown rise in its global publications share, rising from (14.67%) to (67.93%) from the year 1999 to the year 2013 (Fig.2). The United States tops the list with its global publication share of 28.9%, and followed far behind are, United Kingdom, Germany and Italy (their global publication share ranging (7.2% to 11.2%). The countries that rank between 6th and 20th positions are France, Canada, Spain, China, Australia, Netherlands, Switzerland, Belgium, Japan, South Africa, Sweden, Brazil, India, South Korea, and Austria with their global publication share varying from (1.4% to 5.9%).

Table 4 Research output and world share of top 20 most productive countries

S.No	Countries	Total Papers			% share of Papers			Total	TCS
		99 -04	05-08	09 - 13	99 -04	05-08	09 - 13		
1	USA	629	1102	1856	17.53	30.72	51.74	3587 (28.9)	56393
2	Unknown	630	464	300	45.19	33.28	21.52	1394 (11.2)	7895
3	UK	216	317	686	17.71	26.0	56.27	1219 (9.8)	20298

4	Germany	215	244	573	20.83	23.64	55.52	1032(8.3)	15071
5	Italy	151	243	503	16.83	27.09	56.07	897(7.2)	11778
6	France	117	192	425	15.94	26.15	57.66	734 (5.9)	11900
7	Canada	109	169	350	17.35	26.91	55.73	628 (5.1)	7687
8	Spain	84	154	361	14.02	25.70	60.26	599 (4.8)	7097
9	China	31	106	432	5.44	18.62	75.92	569 (4.6)	3765
10	Australia	74	109	264	16.55	24.38	56.06	447 (3.6)	5537
11	Netherlands	65	99	274	14.84	22.60	62.55	438 (3.5)	7964
12	Switzerland	61	68	201	18.48	20.60	60.90	330 (2.7)	6082
13	Belgium	44	89	196	13.37	27.05	59.57	329 (2.7)	4860
14	Japan	54	88	150	18.49	30.13	51.36	292 (2.4)	4079
15	South Africa	10	50	175	4.25	21.27	74.46	235 (1.9)	3922
16	Sweden	51	52	122	22.66	23.11	54.22	225 (1.8)	3536
17	Brazil	19	53	128	9.5	26.5	64.0	200 (1.6)	1741
18	India	27	32	125	14.67	17.39	67.93	184 (1.5)	1862
19	South Korea	33	40	105	18.53	22.47	58.98	178 (1.4)	1329
20	Austria	41	46	86	23.69	26.58	49.71	173 (1.4)	2939
	World output	**2754**	**3353**	**6291**	**22.21**	**27.04**	**50.74**	**12398**	**145165**

8. CONCLUSION

India's publication output as reflected in the Web of science database, India published 184 research papers during 1999 to 2013 in performing arts and arts community, with an average output of 12 papers per year. The total publications in performing arts and arts community from Web of science databases, 9563 (77.1%) appeared as articles, 1177 (9.5%) as proceeding papers, 1078 (8.7%) as Reviews, 161(1.3%) as editorials, 68 (0.5%), others 151 (1.2%) etc. It also shows India less active than all over the world. It also shows India less active than all over the world. Growth rate is decreasing gradually and doubling time is increasing. So it is recommended to encourage the scientists to do more and more research and publish the results in the form of articles. The authorship pattern shows majority of joint authorship contributions with 95% and high collaboration coefficient (0.95) which reveals that team research is predominant. This type of investigation may be useful for understanding the importance of research and development activities, measuring the productivity of countries, performance of scientists. It helps in making research and development policies for improving the productivity of scientists in various fields.

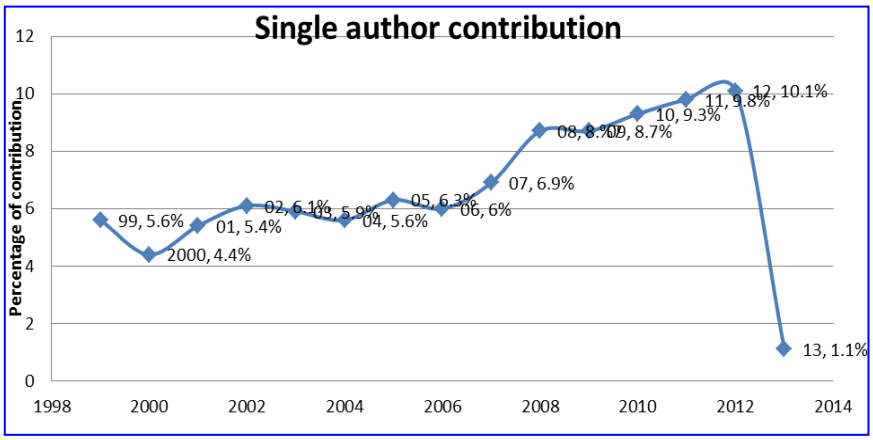

Figure 1

Single authored contributions of performing arts and arts community

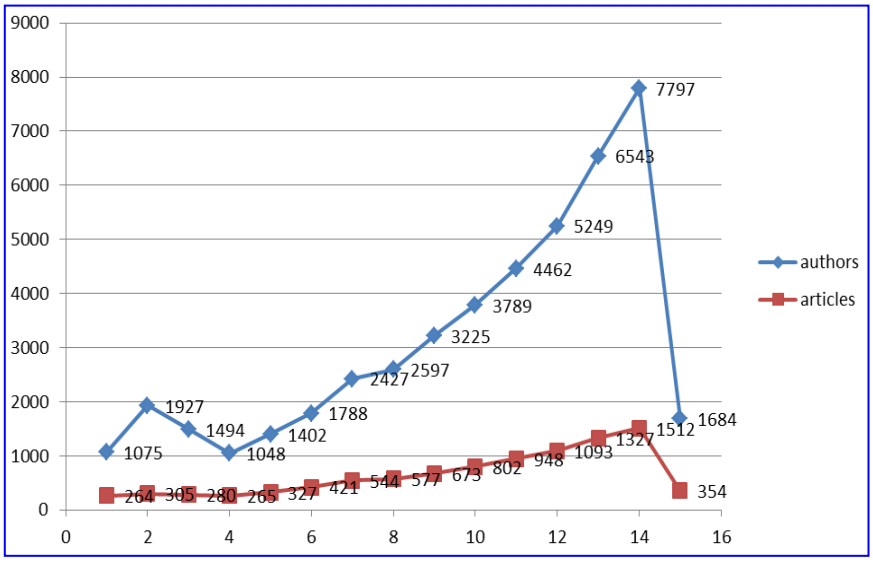

Figure 2

Multi authors and multiauthored articles of performing arts and arts community

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