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MAPPING OF ICONFERENCE PROCEEDING 2016 OF ISCHOOL: A BIBLIOMETRIC STUDY

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Abstract

iConference proceeding 2016 has been published as Illinois Digital Environment for Access to Learning and Scholarship (IDEALS) 2016 by iSchool organisation which is the consortium of more than 60 iSchools around the globe. The ischool stresses on the innovative ideas related to various facets of information science and from 2005 onwords it organizes iConference each and every year all around the globe with new innovative theme. In this respect the paper tries to analyze bibliometrically iConference Proceeding, 2016 which has been published by iSchool organization. The paper examines the authorship pattern of the contribution of the conference proceeding and discusses the page wise distribution of contribution per papers and also presents author's productivity count of the contribution on the basis of international level and also observed the degree of collaboration. At the time of data mining of the aforesaid iConference Proceeding 2016, 161 papers were studied from it. On the basis of these 161 papers, it is found that 95 posters are one of the major contributions of the iConference Proceeding and researchers from the different countries around the world have contributed their articles to this iconference Proceeding in 2016.

Keywords: *iSchool, iConference, Bibliometrics, IDEALS, and Conference Proceeding.*

Introduction

iSchool is a consortium of more than sixty iSchools all around the world and it is a professional organisation which popularizes the field of Information Science all over the world. The aforementioned organisation organizes iConference each and every year on innovative theme since 2005. The paper aims to study the IDEALS—iConference Proceeding 2016 bibliometrically. The statistics may be first applied to study the any topic of literature but the first recorded study on Bibliometrics was done by Coles and Eales[1] (1917) with the

title "*Statistical analysis of literature of history of comparative anatomy*". Alan Pritchard[2]in 1969 first coined the term 'Bibliometrics' to "*the application of mathematics and statistical methods to books and other media of communications*". The term signifies a new discipline in which quantitative methods were employed to probe scientific communication process by measuring and analyzing various aspects of written documents. Bibliometrics is an emerging thrust area of research from different branches of human knowledge. As a result of which library professional must be acquainted with it. In addition to this, bibliometric study is used as a method of collection building policy for the managers to take the right decision at the right time in the right way as to what documents they may retain and what documents they can weed as per policy of their respective libraries. The present study tries to measure the publication traits of iConference Proceeding 2016[3].

Objective of the study

The essential objective of the study of iConference Proceeding 2016 are elucidated as follows:

(i)	To observe the type of paper wise distribution of contribution as per author ;
(ii)	To examine the authorship pattern obtained from IDEALS—iConference proceeding;
(iii)	To study the contributors of iConference Proceeding in different countries around the globe.

Related Works

Roy in 1983[4] defined the term bibliometrics as "*a study of the process of information use by analyzing the characteristics of documents and their distribution by statistical methods*". In 1996 Mete and Deshmukh[5] stated an analysis on 202 articles of ALIS. The aforementioned research paper explored that research journals are popularly cited channel of information communication among the library professionals. Tiew, et. al.[6] in 2002 studied on Malaysian Journal Of

library and Information Science covering different periods of time. Shokeen and Kaushik[7] in 2004 worked on Indian Journal of Plant Physiology. They found that journal articles are mainly with 81% of total citations. The results also emphasize that 398 citations are 10 years old. On the other hand 358 citations are below 20 years but more than 10 years old. Kumar and Kumar[8] in 2005 studied on 8093 citations of Journal of Oil Seed and Research published during 1993-2004 and showed that more or less 70% of citations were given under main articles and rest of them are under short communications and other write-ups. Jena[9] (2007) in his study on Indian Journal of Fibre and Textile Research from 1996 to 2004 recorded the trend of publications of this journal in detail. Chakrabarti and Pramanik[10] (2014) in his scientometric analysis of ALIS from 2009 to 2016 found that the highest numbers of contributors hailed from India. In 2007 Biswas, Roy and Sen[11]conducted a bibliometric study on Economic Botany starting from 1994 to 2003 and revealed that 59% citations are taken from books and 41% citations are taken from journals. They showed that the highest numbers of contributions were hailed from the universities. Turk[12] in 2008 opined about methodology of citation counts to LIS articles. In 2008, Willet[13]found that many of the most cited papers in the Journal of Chemical Information and Modeling described software packages which play a key role in this arena of research. Zainab, Ani and Anur[14] (2009) conducted their bibliometric study on Malaysian Journal of Computer Science. They evaluated the productivity of article of the journal from 1985 to 2007 using Lotka's Law. The study further revealed authorship, co-authorship pattern by degree of authors' collaboration that ranged from 0.25 to 0.95.

Asha and Anil[15] (2010) did a bibliometric study of 4798 citations from five volumes of the Indian Journal of Pure and Applied Mathematics and showed that the almost all the cited documents are the articles from research journals and the Indian authors have contributed less inrespect to foreign author. Deshmukh[16] (2011) made a citation analysis of articles published from 1997 to 2010 in ALIS. Swain[17] (2011) in his scientometric analysis of Library Philosophy and Practice from 2004to 2009 found that the degree of collaboration in LPP

ranged from 0.222 to 0.52 and the highest numbers of contributors hailed from Nigeria, followed by USA, India, and Iran. Swain and Panda[18] (2012) conducted a bibliometric study on Journal of Intellectual Property Rights and they stated that 33% and above of the total publications received citations whereas more than half of the cited articles may have just one citation and in this way they want to establish citation count. Jena, Swain and Sahu[19] (2012) in their bibliometric study of The Electronic Library from 2003 to 2009 stated some significant bibliometrics traits of this journal. Rattan and Gupta[20] in 2012 in their study observed that 27% articles were contributed by single authors and 73% publications hailed from double author. Most of the contributions in this journal are from Malaysia.

Thamaraiselvi and Manthiramoorthi[21] in his study in 2016 in IRJLIS, reveals the bibliometric study of the 13th UGC sponsored National Conference Proceedings. They analyze 53 papers published in National Conference Proceedings according to topic, category, author, institution related papers. Doraswami[22] and Janakirmaiah studied bibliometrically NACLIN conference and stressed on the information use pattern of Library and Information Science professionals. Cash Philip[23] and others worked on a bibliometric analysis of the design 2012 conference. They identified more than 2700 citations in order to describe the trend of citation. Lov kumar[24] and others tried to analyze the Asia Pacific Software Engineering Conference from various perspectives like conferece organizer, sponsor, topic, etc. Chapman[25] and others studied National conference Proceedings organized by Kuvempu University College Librarians' Association, Shivamogge and they studied the contributions of 76 papers on the basis of topic, category, author, and institution.

iConference under study

iConference proceeding 2016 has been selected as the source conference for the present study. It is one of the leading conferences in Information Science. It is a conference proceeding published by iSchool organisation. The conference held from 20th of March to 23rd of March, 2016 , hosted by College of Computing &

Informatics, Drexel University at Loews Philadelphia Hotel, Philadelphia, USA. The theme of the conference is partnership with society. The name of the official proceedings is IDEALS. Total 467 participants were present in the iConference around the globe. In this proceeding different types of paper has been published. It publishes completed 42 research papers, 18 preliminary results research papers, 95 posters, and 6 workshop papers, 16 sessions for interaction and engagement, 21 doctoral colloquium participants in various facets of Information Science. The scope of the study is to analyze the 161 contributions in iConference 2016.

Methodology

The data pertaining to each of the 161 contributions in iConference proceedings in terms of authorship, number of pages in each paper are noted. All the data are side by side extracted, observed, analyzed, and then made tabulation for making minute observations. Before the analysis, the data was standardized to avoid misinterpretation of facts. Articles published in iConference proceeding 2016 were studied and the relevant information, as per the objectives of the study was taken for minute analysis.

Data analysis

On the basis of above mentioned objectives the following tables have been designed for better interpretation and understanding of IDEALS—iConference Proceeding 2016. The relevant data regarding the aforementioned conference were taken from the website of iConference concerned and the data has been analyzed keeping in the mind of aforementioned objectives. The tables are given below:

Table – 01: Contributions by Types of Paper

Type of Papers	Number of Papers
Completed Research Papers	42
Preliminary Results Research Papers	18
Posters	95
Workshops	06
Total	**161**

The above table-01 presents the contributions of authors according to the type of paper. It is found from the above that out of 161 papers, 42 are completed research papers, 95 are posters, 18 are preliminary results research papers and 8 are only workshops. It is inferred from the above table that poster type of papers are the highest in number followed by completed research papers.

Table-02 : Growth in Number of Authors

Type of Papers	Number of Authors according to types of Paper	Total Number of Authors
Completed Research Papers	42	107
Preliminary Results Research Papers	18	43
Posters	95	248
Workshops	06	26
Total	**161**	**424**

The above table-02 presents the growth in number of authors according to the type of paper. It is found from the above that number of authors depends on the number of contributions. When the number of papers increases, number of authors increases side by side. A notable attribute of the study is posters show the maximum number of contributions. On the other hand in the conference

proceedings it is observed that workshop has the very minimum number of contributions.

Table-03 : Author's Productivity

Type of Papers	Number of Papers	Total Number of Authors	AAPP	Productivity Per Author
Completed research papers	42	107	2.54762	.39252
Preliminary result research papers	18	43	2.38889	.4186
Posters	95	248	2.61053	.38306
Workshops	06	26	4.33333	.23077

Average authors per paper==Number of Authors/ Number of papers

Productivity Per Author == Number of papers/ number of Authors

The above table presents that out of 161 contributions, 19.21 percent of them are contributed in iConference proceedings out of 467 papers. It is noted that the level of percentage of distribution has increased for posters. But in the workshop papers it has been decreased. It is found from the above table and figure that AAPP is the highest for workshop papers followed by posters and the lowest AAPP is found for Preliminary Result Research Papers. On the other hand the productivity per author is the highest for preliminary result research papers, but the lowest productivity per author is found for workshop type of papers.

Table-04 : Authorship pattern of contributions and Degree of Collaboration

Types of Paper	Single author	%	Double author	%	Triple Author	%	More than three	%	Total
Completed Research Papers	09	21.43	13	30.95	11	26.19	09	21.43	42
Preliminary Result Research Papers	04	22.22	07	38.89	04	22.22	03	16.67	18
Posters	34	35.79	35	36.84	18	18.95	08	08.42	95
Workshops	00	00	01	16.67	02	33.33	03	50.00	06
Total	**47**	****	**56**	****	**35**	****	**23**	****	**161**

The above table -04 explicates the authorship pattern of contributions according to types of paper. The table 04 shows that the papers record the highest percentage regarding contributions by double authors followed by contributions by single author and then followed by triple author. Regarding contributions by more than three authors, all types of papers show the minimum percentage. It is clear from the above analysis that the percentage of multi-authored papers is more than that of single authored papers. To determine the extent of collaboration in quantitative terms, the formula given by K. Subramanyam[26]is used--

The formula is as follows-

C=Nm/Nm+Ns (i.e. 114/47)

Where C=Degree of Collaboration

Nm=Number of Multi Authored Contributions

Ns=Number of Single Authored Contributions

Thus the degree of collaboration in the conference proceeding is 2.42.

However the value got after calculation for the degree of collaboration in this study indicates that the conference proceeding has accommodated more numbers of multi authored contributions than single one.

Table-05 : Contributors (Institution wise)

Type of Papers	University	%	Colleges	%	Others	%	Total Number of Authors
Completed Research Papers	98	91.59	02	01.87	07	06.54	107
Preliminary Results Research Papers	41	95.34	01	02.32	01	02.32	43
Posters	228	91.93	06	2.42	14	05.64	248
Workshops	26	100.00	00	00.00	00	00.00	26

Table 05 depicts the contributors' institution wise distribution at the international level. It is inferred from the above table that the contributors from the university level are the maximum followed by colleges and others. It is surprising to note that the University level contributors showed their interest much in iConference than other colleges or institute as many universities is the members of iSchool organization. The point to be remembered is that iConference is open to all, not restricted to ischool members.

Table-06 : Average Pages per Volume and per Contributions

Type of Papers	Number of Papers	Total Number of Pages	Average pages Per paper
Completed Research Papers	42	427	10.17

Preliminary Results Research Papers	18	109	06.05
Posters	95	561	05.90
Workshop Papers	08	15	01.87

The above table-06 shows that 42 completed research papers are covered within 427 pages. 18 preliminary result research papers are covered within 109 pages. It is noted that 95 posters are covered within 561 pages in Posters whereas 08 workshop papers are covered only within 15 pages. The notable attribute of the study is that the Completed Research papers have the highest average in number and the posters are the lowest average in number.

Table-05 : Contributors (Country wise)

Name of the Country	Completed Research Papers	Preliminary Results Research Papers	Posters	Workshops	Total
Australia	00	00	00	01	01
Canada	03	00	02	04	09
China	06	06	09	00	21
Denmark	00	00	01	00	01
Finland	03	00	00	00	03
Germany	01	00	01	01	03
Israel	00	00	02	00	02
Japan	05	00	02	00	07
Norway	00	00	02	00	02
Poland	01	00	00	00	01

South Korea	04	05	00	00	09
Sweden	05	00	00	03	08
UAE	00	00	01	00	01
UK	02	04	13	07	26
USA	77	28	215	10	330
Total	**107**	**43**	**248**	**26**	**424**

The above table shows that maximum number of contributions is coming from USA, followed by UK and China. The contributions of states like South Korea, Sweden, Japan and Canada are noteworthy. Moreover it is inferred that out of the 15 countries USA is the highest contributors in all types of papers.

Major Findings

(i)	Majority of the contributions in the conference proceedings are made by double author.
(ii)	Regarding the single author contributions the maximum contributions are made by university teachers, research scholars and the members of the staff.
(iii)	Among the contribution the maximum number of contributors is from the various universities at international level especially from the USA.
(iv)	Most of the contributions in this conference proceeding are hailed from Pennsylvania State university, Syracuse university, Pittsburg university and Drexel University.
(v)	This study shows the growth in contributions is the highest for posters and the average number of pages per paper is 10.17 for Completed Research Papers.
(vi)	Most of the contributions hailed from the United States.

Limitations

The above study is based on the data collected from iconference proceedings 2016. The results may vary sometimes and show some fluctuations in individual studies of its different aspects of LIS and its concept like bibliometrics. Sometimes author's affiliations of institutions changes which may show slight variation from actual results. The validity of the result depends upon the sample size and as it is based on iConference proceedings**.** As a result of which it does not show the actual result but it gives a trend about what is happening in the publication arena of information science.

Conclusion

In a nutshell it is said that several bibliometric studies have been undertaken by various researchers in and around the globe to comprehend the trend of publication and pattern of authorship of a particular conference proceeding. Most of these studies are undertaken for popular conference proceedings in a particular discipline in and around the world. The publishing trend totally depends on the author's productivity and the quality of information they provide. It provides a great opportunity to the researchers to publish their articles with new strategies, innovations, new methods, and new ideas. A notable attribute of this study is that this conference proceeding really is an example of fruitful research for the researcher. Today it is observed that the research is done in almost all the branches of knowledge of Information Science. The present study also increases quality of research articles in information science discipline.

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