

MAPPING THE RESEARCH OUTPUT OF UNIVERSITY OF KASHMIR

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Abstract Purpose: The study maps the research output from University of Kashmir, one of the premier higher education institutes of Jammu & Kashmir state, India.

Methodology: Elsevier's SciVerse Scopus one of the leading indexing abstracting services was queried for a period of 1963- February 2015 using the "affiliation search feature" for University of Kashmir. The works of the authors affiliated with University of Kashmir have been analysed. Statistical analysis of the retrieved data was performed.

Findings: The publication output from University of Kashmir has shown a promising growth expect for some years in 1990's which can be attributed to the political instability in the state. The highest contributing authors are from Science disciplines with authors from Chemistry, Botany, Electronics, Biochemistry, and Centre of Research for Development departments having a higher rate of h-Index. Majority of papers are published in Indian sources followed by the sources from US, Germany and China. Majority of the authors are affiliated with University of Kashmir followed by Indian Institute of Integrative Medicine (Earlier Regional Research Laboratory, Sanat Nagar); Sher-i-Kashmir Institute of Medical Sciences (SKIMS) and Aligarh Muslim University. Articles have remained a prime document type for publishing by the authors from University of Kashmir followed by conference proceedings and review articles. Agricultural and Biological Sciences outscore other disciplines followed by Biochemistry, Genetics & Molecular Biology and Medicine. Future emphasis on joint research, international collaboration, and publishing in indexed journals is needed.

Keywords: Research Output, Scientific Output, Research Trends, Bibliometrics, Scientometrics, University of Kashmir

INTRODUCTION

Research output is a measure of the quantity of research works and publications produced by academics during a set period (Seyyed, Al-Haji & Al-Hajji, 2004). Research output is considered as an important aspect in evaluating an institution in terms of its academic excellence. Scientific research is an essential component in guiding improvements (Ranasinghe, Jayawardena, & Katulanda, 2012). Publications fuel innovation because they are the main output of scientific research (as cited in Bezzaouchaa, Atifa, Bouamraa, Kebbouba & Benzergaa, 2014) and mapping the research activities of academic and research institutions is a trend that is used for assessing the academic performances of

institutions. Measuring the research output is an investment for future of academic institutions as it tries to highlight the strong and weak points associated with the research and academics of an institution.

So, the current study is an endeavour to highlight the research output of University of Kashmir which will provide additional insights into the current hotspots and future projections of its research output.

REVIEW OF LITERATURE

There is a large body of research which focus on research production and activities of researchers. Bindon (1981)

has attempted to describe and analyze the scientific output of a cooperative industrial research institute (Pulp and Paper Research Institute of Canada, PAPRICAN). Simeon, Momčilović, Kralj and Grgas (1986) have conducted a multivariate statistical analysis of the bibliographic output from a research institution, in relation to the measures of scientific policy. Zachos (1991) has evaluated the research output of two University Departments in Greece with the use of bibliometric indicators. Davis and Royle (1996) have also made a comparison of Australian university output using journal impact factors. Jeevan and Gupta (2002) have done a scientometric analysis of research output from Indian Institute of Technology, Kharagpur. They have researched the performance and impact of research produced in each department, and the comparison of the impact of research in various departments. Pillai Sudhier and Priyalakshmi (2013) studied the research publication trend among the scientists of central tuber crops research institute (CTCRI), Thiruvananthapuram. Publication productivity of University of Kerala has also been researched by Gopikuttan and Aswathy (2014). A recent study by Gautam and Mishra (2015) focus on scholarly research trend of Banaras Hindu University during 2004-2013.

OBJECTIVES

The main objective of the study is to evaluate the research output of University of Kashmir by means of several bibliometric indices.

METHODOLOGY

Based on the “*affiliation search*” feature of Elsevier’s *SciVerse Scopus* during the period of 1963-February 2015, the present study takes in to consideration the works published by 840 authors affiliated with University of Kashmir. All the records were downloaded for an in depth evaluation. A total of 1557 documents were retrieved.

RESULTS AND DISCUSSION

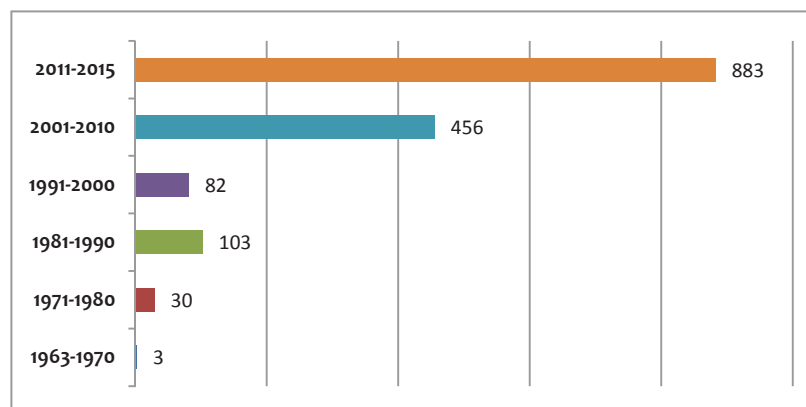
Publication output

As evident from Fig. 1, number of articles has increased from 3 (from 1963-1970) to 33 (1963-1980). However, a good amount of publications are also seen during a period of 1981-1990. Research output from University of Kashmir, though promising in the initial phase shows a slow growth for the years 1990-2000. This can be attributed to the onset of political disturbance in the year 1989 in the beautiful and peaceful valley of Kashmir. Though prior to 1989 there were some sparks of political instability but the onset of political instability and armed struggle from 1989 had a devastating effect on every segment of Kashmir especially the educational one. In 1990 Kashmir witnessed the highest number of curfew impositions which stimulated the educational instability to a greater extent. Since Kashmir is a witness to high political instability and any time undeclared and unprecedented curfews or strikes can overshadow Kashmir which affects the academic institutions to a greater extent resulting in decline in the research productivity to a greater extent.

With the onset of *off-campus* services (e.g. *ez-proxy*) authors have been ensured virtual access to various electronic resources offered by University of Kashmir. Even in the worst of the situations, researchers affiliated with University of Kashmir can access the electronic resources (e-books, e-journals, ETDs etc.) for their academic and research endeavors now which ensures a positive impact on the research output from the authors affiliated to various academic institutions.

However, number of articles started to increase from 2000 onwards and has rocketed till date which can be attributed to the political stability, increase in the number of subscribed and free electronic resources as well as *off-campus access* to the subscribed electronic resources.

Fig. 1: Documents by Year



Productive Authors and H-Index

The parameter for authors with the leading documents reflects Professor Zafar A Reshi (Dept. of Botany) in lead with a total of 75 documents followed by Late Professor Nisar Ahmad Shah (Dept. of Electronics) and Professor Akbar Masood (Dept. of Biochemistry) (Fig. 2).

h-Index, a qualitative and quantitative measure when evaluated via University of Kashmir authors reveals that Dr. Ajaz Ahmad Dar (Dept. of Chemistry) is in lead followed by Professor Zafar Ahmad Reshi (Dept. of Botany) and Late Professor Nisar Ahmad Shah (Dept. of Electronics). The results also reveal that Professor Akbar Masood has the highest number of co-authors followed by Professor Bashir Ahmad Ganai and Professor Zafar A Reshi (Table 1).

Since *h-index* is directly linked with the number of publications and also on the total citations received, authors should be familiar about, how to get their research articles noticed for maximum impact. Authors can be made aware of various social media tools for disseminating their works which will increase the visibility of the articles and in turn will enhance the impact for the authors. Authors need not be a part of every network but can get associated with one or two tools that suit them best.

There are also academic social networks with different functions from networking and online reference management like Research Gate Scientific Network; *Mendeley* (Online Citation and Reference Management tool); *CiteULike*; *Academia.edu* etc. to facilitate in collaboration which will help the authors from University of Kashmir to follow the mantra, “*get involved and get noticed*”.

Documents by Source and Country of Publication

Indian Journal of Pure and Applied Physics has remained a major source for the authors of University of Kashmir to publish their work followed by *JK Practitioner* and *Chemistry of Natural Compounds*. The number of papers published in international sources scores low in comparison to the international ones. Majority of papers are published in Indian sources followed by the sources from US, Germany and China (Fig. 3 & 4).

The debut of Internet technology in the University of Kashmir was a bit late, which deprived the researchers at the University from having an online access to international sources. The introduction of “*Infonet digital library*

Fig. 2: Documents by Author

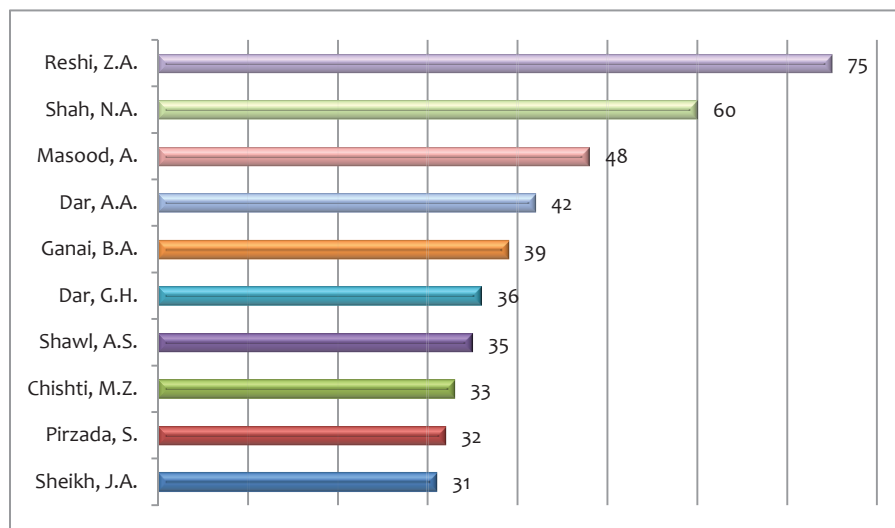


Table 1: h-index of Authors

Author	Department	h-Index	Co-authors
Dr. Ajaz Ahmad Dar	Chemistry	15	46
Prof. Zafar A. Reshi	Botany	9	103
Prof. Nisar Ahmad Shah	Electronics	9	29
Prof. Akbar Masood	Biochemistry	7	130
Prof. Bashir Ahmad Ganai	Centre of Research for Development	6	106

Fig. 3: Documents per year by Source

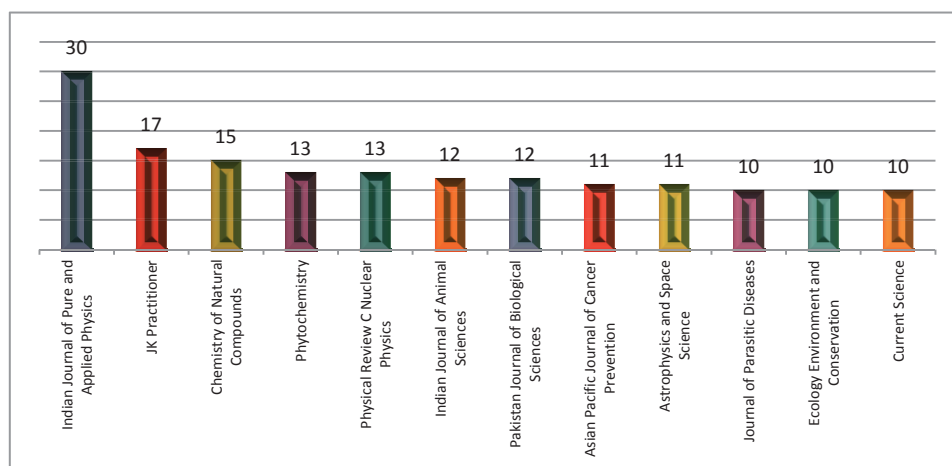
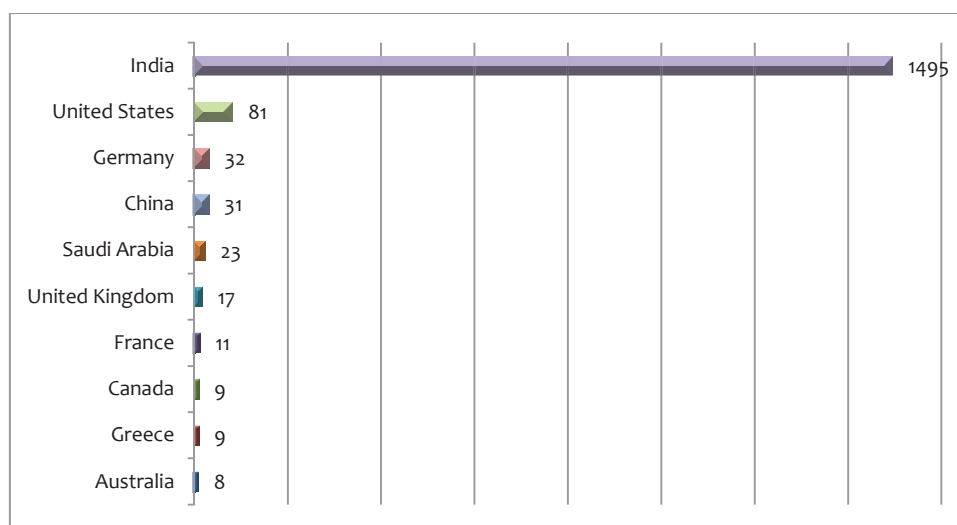


Fig. 4: Documents by Country/Territory (Top 10)



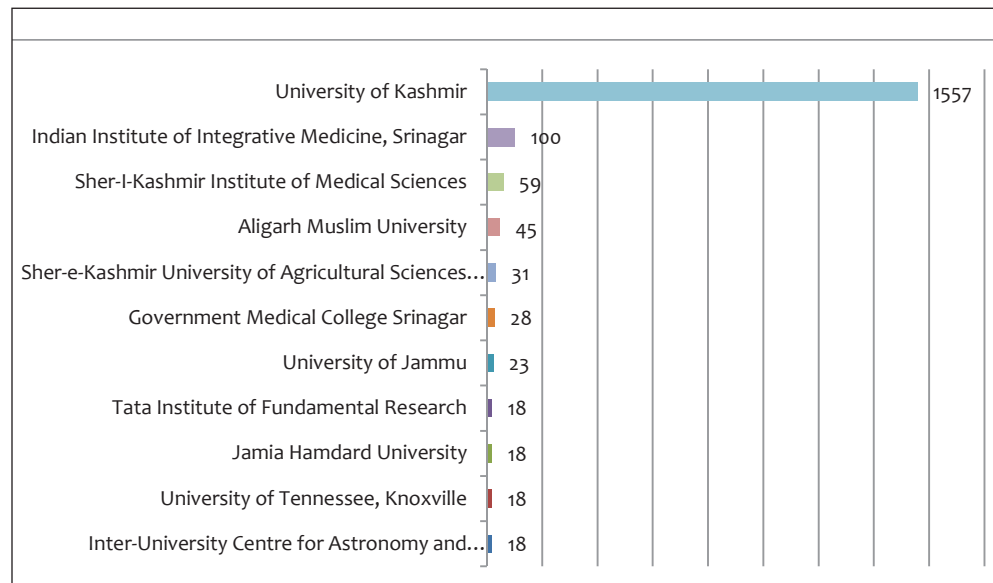
consortium” (an initiative of UGC INFLIBNET) at the University in December 2003 sensitized the majority of the researchers but the familiarity with the international sources improved after 2003 which is evident from the increasing number of international sources as the authoring choice from University of Kashmir.

Documents by Affiliation (18 or more than 18 documents)

Majority of the authors are affiliated with University of Kashmir followed by Indian Institute of Integrative Medicine (Earlier Regional Research Laboratory, Sanat Nagar); Sher-i-Kashmir Institute of Medical Sciences (SKIMS) and Aligarh Muslim University (Fig. 5).

One thing worth to mention here is that among the affiliated institutes having number of papers more than or equaling 18, only one institute is from the international domain (University of Tennessee, Knoxville). So, the authors from University of Kashmir need to collaborate with the international academic actors to gain international recognition. Authors from University of Kashmir need to be sensitized about various academic networks which promote international research cooperation (Research Gate; Emerald Literati Network; Research Connections (Emerald); LinkedIn; etc).

Furthermore, to cope in the international academic market, authors also need to be sensitized about various platforms which provide training to the novice and emerging authors. e.g.; Emerald Research & Publishing Pathway (RPP) offers comprehensive, constructive advice and training on

Fig. 5: Documents by Affiliation

pertinent aspects of academic research. Emerald also enlists Editor Interviews section which shares the experiences of the editors from renowned journals for increasing the chances of getting one's papers published. Emerald also has some author friendly services like, Editing Service; Guide to Getting Published; "How to..." guides etc. meant to ensure author satisfaction. Wiley, a leading publisher also provides a complete "author service" package

Since for majority of the submissions, rejections are because of poor language and syntax, authors need to be made aware of the online language editing services which ensure the chances of getting a submitted manuscript accepted. Elsevier author WebShop services offer language editing and quality services which ensure that your manuscript is free of grammatical and spelling errors within five business days. Illustration services offer the authors world-class artistic support for your professional research and images. One can easily upload his or her drafted illustrations, sketches, or just an idea, and WebShop will send a free time and cost proposal within 24 business hours. Following acceptance and payment, the illustration will be delivered within a couple of days. Oxford Language Editing is also a service of the same sort.

An important section in Elsevier, Early career resources area helps authors to choose any topic related to funding, writing, reviewing and publishing. University of Kashmir need to promote these types of services especially for the new authors affiliated to it.

Documents by Type

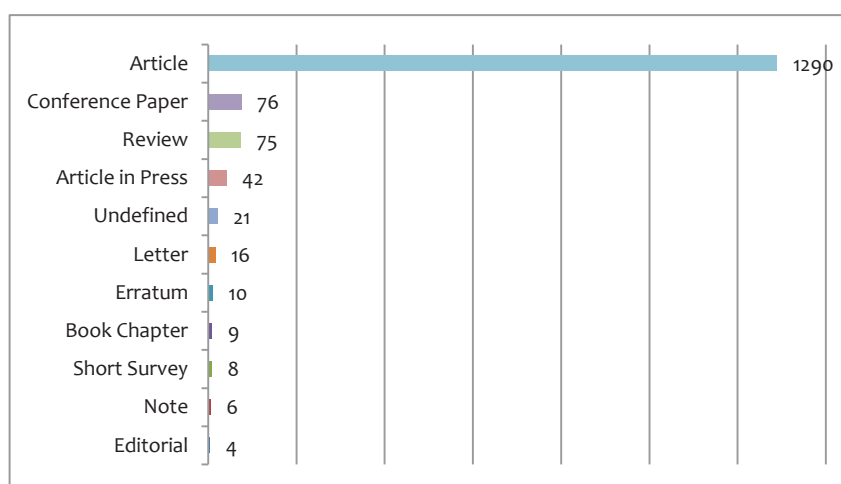
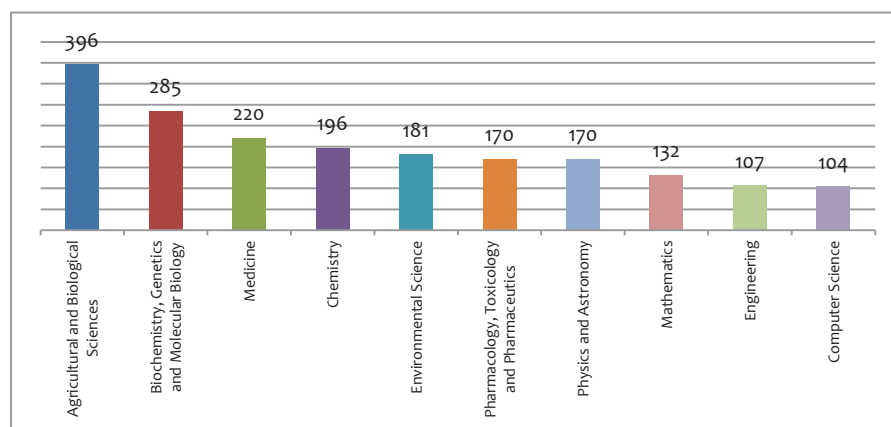
Articles have remained a prime document type for publishing by the authors from University of Kashmir followed by

conference proceedings. A huge difference is seen across the articles and proceedings as evident from Fig. 6. This may be due to the fact that authors from University of Kashmir though publish promisingly in the journals or books but they have remained underestimated in the conference proceedings score. Reviews, letters, erratum, notes or even editorials generally provide little information to assess the quality of the study (Bezzaouchaa, Atifa, Bouamraa, Kebbouba & Benzergaa, 2014) and have remained on a less prioritised mode by the authors from University of Kashmir. Authors from University of Kashmir need to be made aware about the academic databases that sponsor the academic events through their websites which can be communicated to the authors. e.g. Elsevier's Global Event List provides alerts for specific disciplines or choices can be customised.

Emerald's Conference Central - selected events from around the globe is a comprehensive collection of links to international conferences and events in management, library and information science, and engineering.

Documents by Subject Area (Top 10)

Agricultural and Biological Sciences outscore other disciplines followed by Biochemistry, Genetics & Molecular Biology and Medicine. It is a worrying fact that we can't see Social Sciences among the top 10 disciplines (Fig. 7). Various training courses and workshops regarding the publishing processes with top journals for Social Science authors need to be conducted. Even they can be sensitized about the sources where they can match their works for publishing. They can also be made aware about the sources indexed by well renowned indexing and abstracting services like Sciverse (Elsevier) and Web of Science (Thomson Reuter).

Fig. 6: Documents by Type**Fig. 7: Documents by Subject Area (Top 10)**

CONCLUSION

The study examines the University of Kashmir's performance based on its publication output during 1968-February 2015. In the light of the obtained findings, though the research productivity in University of Kashmir has improved over years yet it lags behind when compared to University of Jammu. A worrying fact for the authorities is the productivity level from Arts & Humanities and Social Sciences which need to be given a serious thought both in terms of quality as well as quantity. Heavy investment is required in terms of R&D investment from the government to upgrade University of Kashmir and increase the research output. The government should come out with special schemes to promote R&D in University of Kashmir. Furthermore, in order to upgrade quality in research, increase in international collaboration and wider participation in international conferences/seminars may be encouraged for those who have involved in R&D

work.

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