

**RESEARCH PRODUCTIVITY IN MADURAI KAMARAJ UNIVERSITY:
A SCIENTOMETRIC APPROACH**

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Abstract

The present study attempts to measure the research performance of Scientists Madurai Kamaraj University based on sample from the Web of Science database. Further this study corresponds to an assessment of Bibliometric analysis of the pattern of publication, authorship, growth rate of publication and journals coverage of the scientists in Madurai Kamaraj University.

Keywords: *Bibliometric analysis, Web of Science database, research output, authorship patterns, research concentration, research development*

Objectives

The major objectives are framed with the exclusive notion of the present study as mentioned below:

- To recognize the source wise and year wise distribution of Madurai Kamaraj University research outputs.
- To examine the growth rate, doubling time and exponential growth rate of Madurai Kamaraj University research output during period of 1979 to Nov 2013.
- To compare and to measure the analysis of associated continent and country wise of Madurai Kamaraj University research output performance.
- To identify the most productive journals and Journal distribution of Madurai Kamaraj University research output.
- To apprehend the applicability of *Bradford's* law of scattering in the field of Madurai Kamaraj University research output.
- To classify the most productive authors and authorship patterns and author productivity.
- To identify the nature of collaboration and co-authorship pattern and determine the degree of collaboration in Madurai Kamaraj University research.
- To test the applicability of *Lotka's* law of author productivity (find n - value) of Madurai Kamaraj University research.
- To evaluate the institution-wise research concentration on Madurai Kamaraj University research output.
- To identify the word occurrences in sample data by Zipf's law.
- To suggest a strategy for research development in Madurai Kamaraj University on the basis of analysis and findings of the study.

Hypotheses

- The format of journal source publications of Madurai Kamaraj University research output occupies the predominant place in comparison with other sources of publications.
- The relative growth rate of total scientific publications shows a declining trend and the doubling time for publications reflects an increasing trend.
- There is extensive level of increase in the growth of Madurai Kamaraj University research output, indicating the progressive of research performance.
- Among the six continents, European continent leads to contributing more research output associated with Madurai Kamaraj University.
- The distribution of Madurai Kamaraj University research output journals and articles confirms the implications of Bradford's law.
- There is a significant variation in the growth and deliberation of research output on Madurai Kamaraj University research among the selected continents and countries T
- The scientific productivity of authors in the discipline of Madurai Kamaraj University research conforms to Lotka's (n - value) inverse square law of scientific productivity
- There is a considerable level of associated institution variation in the research output performance of Madurai Kamaraj University research.
- The total citation score values show the importance of specified articles, authors, journals and frequent words occurrence.

Methodology

The present study efforts to investigate the research output performance of Madurai Kamaraj University research. It aims to identify the distribution of research output on the basis of research papers contributed by Scientists in Madurai Kamaraj University. The study explores to examine the growth rate and relative growth level during the study period. The author productivity and degree of collaboration and collaborative index on Madurai Kamaraj University research output are also brought under the purview of the study.

Data Collection

There are various sources contributing to the research output of Madurai Kamaraj University research by overall scientists. For this study has taken the secondary sources from online database. The necessary data was collected from the database of Science Citation Index (SCI) and Social Science Citation Index (SSCI) and Arts & Humanities Citation Index (AHCI) which is available via the Web of Science (WoS).

The study period 1979 to Nov 2013 is selected the available database. A total of 3416 records were downloaded. The researcher has used the search string "Madurai Kamaraj University" is used for the data from the database of SCI, SSCI and ACHI at the year's from 1979 to 2013(34 Years).

Findings and Conclusion

This research analysis found the following results were concluded; it is inference that the research productivity on Madurai Kamaraj University exhibits a gradual growth in the years of 2011, 2012 and 2013. It is found that the mean growth rate is 0.19 and the mean doubling time for the research output on MKU research are 11.28 years.

The Asian and European continents stood first and second rank for contributing articles associated with Madurai Kamaraj University. 2983 research papers scattered over 792 journals. The journal of "ACTA Crystallographica Section E-Structure Reports Online" acted as most productive journal. Among the 11554 authors, 1913 (59.24 %) of authors were contributed only once from MKU research publications. the authors of "Natarajan S", "Perumal S", "Muthusubramanian S", "Srinivasan C", "Ramakrishnan V" and "Pitchumani K" were identified the most productive authors from MKU research output. 789 institutions were contributed around 3416 research articles. "Thiayagarajar College" showed the resulted is more number of publications associated with MKU. Single author productivity is very less compare to multi - author's productivity.

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