



# Research Productivity of Islamiah College (Autonomous), Vaniyambadi, Tamilnadu: A study

Dr.N.Abdul Latheef

Librarian

Islamiah College (Autonomous)

Vaniyambadi-635752 Tirupattur District, Tamil Nadu

**Abstract:** The Primary purpose of this study discuss about the research publications/Productivity of science departments of Islamiah College (Autonomous), Vaniyambadi, Tamil Nadu. Objective: of the study is to identify the growth rate of publications viz. Journal articles, Proceedings, Books, and research reports of the science departments after Autonomy period of the college, to know the UGC-CARE List Publications, to find out the articles published in reputed indexed journals, and overall publications of the research departments. Methodology: A systematic questionnaire prepared and distributed to five research departments for data collections. The collected data have been compared with VIDWAN-IRINS Portal also. Data analysis: After collection of all the data put in to the computer excel for analysis. Simple random technique adopted for data analysis. Findings: of the study reveals that Biotechnology and Chemistry departments are leading in all publications, Physics department published in reputed indexed journals and mathematics department have published more number of books suggestion were given partial financial support will be given to the faculty members of the institution to encourage them for publication of articles in reputed indexed journals in order to increase research criteria of their institutions. Originality: This study purely conducted in science departments of Islamiah college (Autonomous), Vaniyambadi, Tamil Nadu.

**Keywords:** Research publications; Islamiah College; Scopus; UGC-CARE List; Indexed Journals

## I. Introduction:

Research and Publications are two eyes of every institution. Research and Publications is the cycle for growth and development in all aspects of the institutions. When the research increase then the publications automatically will be increased, if the publications increase the impact and the ranking of the institutions got a good recognition from NAAC, NBA, NIRF, ISO etc., Then the institution familiarize among the intuitions, It will help the students Placements in reputed organizations, Government and public sectors. The growth rate of intake of students will be automatically increased. Ministry of Education, Government of India highly concentrate on research and publications of higher educational institutions. At the same time NAAC, NBA, ISO, NIRF ranking/ assessing organizations are inducing bodies for growth and development of colleges and universities in regular intervals. It will increase the quality and quantity of the institutions. According to the assessment faculty members in higher educational institutions are Producing research scholars, research publications, pursuing minor/major research projects for their personal and institutional goals.

As per UGC regulations 2016 it is mandatory that each research scholar has to publish minimum two articles related to his research area and it should be attached with the Dissertations/Theses at the time of submission after scrutinized by the Doctoral Committee. The publication policy varies to each university whether it is one research article or two relevant to their study. Some of the university strictly adhere the Scopus, Proquest, WoS and other reputed indexed Journal articles from their research scholars.

## II. Islamiah College (Autonomous):

Islamiah College(Autonomous) was established in 1919 by the benevolent Vaniyambadi Muslim Educational Society. It has crossed several milestones and now sitting prettily among the very few premier institutions in the state. The College is situated in the prosperous leather town called Vaniyambadi which is 65 km away from Vellore and the college has been reaccredited with 'A++' grade by NAAC in 3<sup>rd</sup> Cycle. This epitomizes the high standard of education and top quality of Research attached to this campus. It has ten research departments of arts, science and humanities. It includes Government Aided and self financial courses. The college got autonomy status from 2010-2011 onwards

## III. Objectives:

- To identify the total Publications after autonomy status
- To analyzed category wise publications
- To inspect the type of authors ie Faculty and Research scholars
- To investigate the highest publications in Particular department
- To findout the highest faculty publication
- To findout total number of research scholars produced after Autonomy each department
- To create awareness among the higher educational & research institutions in order to increase the publications
- To create healthy competition among the research departments
- To induce institutions to increase more research publications
- To maintain sustainable development of every higher educational research institutions

## IV. Review of Literature:

Gupta,K Shitij and Verma (2011) discussed in their study that the research output in the field of computer science in India during 1999-2008. The parameters studied include total research output, its growth, rank and global publications share, citation impact, international collaborative papers, collaborative countries and pattern of research communication in most productive journals. Further they give insights into to the important features of the most productive institutions, authors and highly cited papers. A comparison between the publications output of India and China, South korea, Taiwan and brazil sere also made.

Zahid Asharf Wani (2013) in his article to measure the research contributions of India's leading health care institute AIIMS. Paper drugs deep into decadal growth, subject-wise contribution and national and international collaborations by AIIMS medcos, besides it also made an attempt to ascertain the citation impact of their research output. The findings shows that subject category medicine contribute 64.5% of overall output. Likewise, decade 1999-2008 is leading with 43.86% publications, while as decade 1959-1968 contributed least 0.48% . The most cited subject area is Biochemistry, Genetics & Molecular Biology with 1679 citations. Institutions has 973 international and 2450 national collaborations.

Ferguson,Sarah L etc.,( 2023) discussed in this paper to clarify the academic writing process and stages of publication for novice scholars. With doctoral student mentorship being highly dependent on relationships with faculty mentors, the quality and type of mentorship received varies widely. They designedpaper to provide a shared starting point for new scholars trying to navigate the writing and publication process. They utilize their experiences as three newly tenured faculty members to provide some guidance for students. Additionally, this article adds to the existing body of knowledge on the academic writing process by bringing some hidden curriculum and norms to the forefront and making the information available to all students. Article highlights include four areas of focus of academic publishing: (a) the presentation to publication process; (b) journal choice and preparing for journal submission; (c) revision as a communal process; and (d) the journal response. Within this paper, they recommended several places where new scholars can make decisions ranging from where to submit papers, who and how to ask for help, and ways that they can respond to reviewers.

## V. Methodology:

This study covers five science research departments of Islamiah College (Autonomous), Vaniyambadi that is department of mathematics, physics, chemistry, biochemistry, and biotechnology. A systematic questionnaire prepared and distributed to all the faculty members of the science departments. For each department 10 questionnaires were distributed. Totally 50 questionnaires were distributed among them 90% (45) were received back and taken into account for data analysis. All the data were fed into the computer excel sheet for analysis.

## VI. Limitations of the study:

Islamiah College (Autonomous), Vaniyambadi have 10 research departments among this, the researcher have covered only five Science research departments and the data collected from academic year 2010-2011 after Autonomy period till the year 2021-2022 (12 years).

## VII. Data Analysis:

After collection of data sorted out, verified and fed into the computer excel for analysis. The following tables and figures shows the actual status of the research output of every science department during the Autonomy period from 2011-2012 to 2021-2022.

**Tabl.1 Demographic data**

S.No	Department	Year of Affiliation Research department	No of years After conversion as Research department	Total No of Teaching Faculty (Aided+SF)	Research Scholars		Total research scholars
					M.Phil	Ph.D	
1	Mathematics	1988	34	11	264	26	290
2	Physics	2009	13	8	118	13	131
3	Chemistry	2000	22	11	106	37	143
4	Biochemistry	2009	13	7	32	2	34
5	Biotechnology	2013	9	8	7	4	11
Total Research scholars					527	82	609

The above table shows that Mathematics department have produced 264 M.Phil., scholars during 34 years after establishment, Next to this Physics department 118 M.Phil.scholars produced. On the other hand chemistry department produced 37 Ph.D scholars after their establishment, next to this Mathematics department that is 26 Ph.Dscholars. Further the table shows that overall 609 research scholars were produced after assumed as research departments.

**Table.2. Publications Articles during the Autonomy Period 2010 – 2022**

Academic year	Research Departments										Total Publications	
	Mathematics 17		Physics 12		Chemistry 17		Biochemistry 6		Biotechnology 8			
	A	B/P	A	B/P	A	B/P	A	B/P	A	B/P	A	B/P
2010-2011 to 2021-2022	77	47	104	35	175	26	104	36	160	48	620	192
											812	

A –Articles B/P – Books & Proceedings

It is observed from the above table chemistry department published highest articles 165 during the 10 years of period, next to this Biotechnology department 150 articles were published. In case of books and proceedings Biotechnology department published 38, on the other part Mathematics department 37 were published. According to this found from the observation after assumed as research department chemistry department published more articles, compared with other departments.

Table.3 Publication of Articles in Journals

S.No	Departments	National	International	Scopus	UGC-CARE Listed	WOS	others
1	Mathematics	28	49	24	16	8	34
2	Physics	37	67	17	19	11	62
3	Chemistry	65	110	42	24	5	104
4	Biochemistry	49	55	25	11	10	58
5	Biotechnology	40	<b>120</b>	<b>45</b>	20	11	74
Total Publications category wise		219 (35.3%)	401 (64.7%)	153 (24.6%)	90 (14.5%)	45 (7.25%)	332 (53.5%)
		<b>620</b>		<b>620</b>			

The above table depicts that the chemistry department has published 49 articles in National journals on the other hand mathematics department published only 28 National journals. Next to this Biotechnology department scored 120 articles in publication of International Journals compared with other departments.

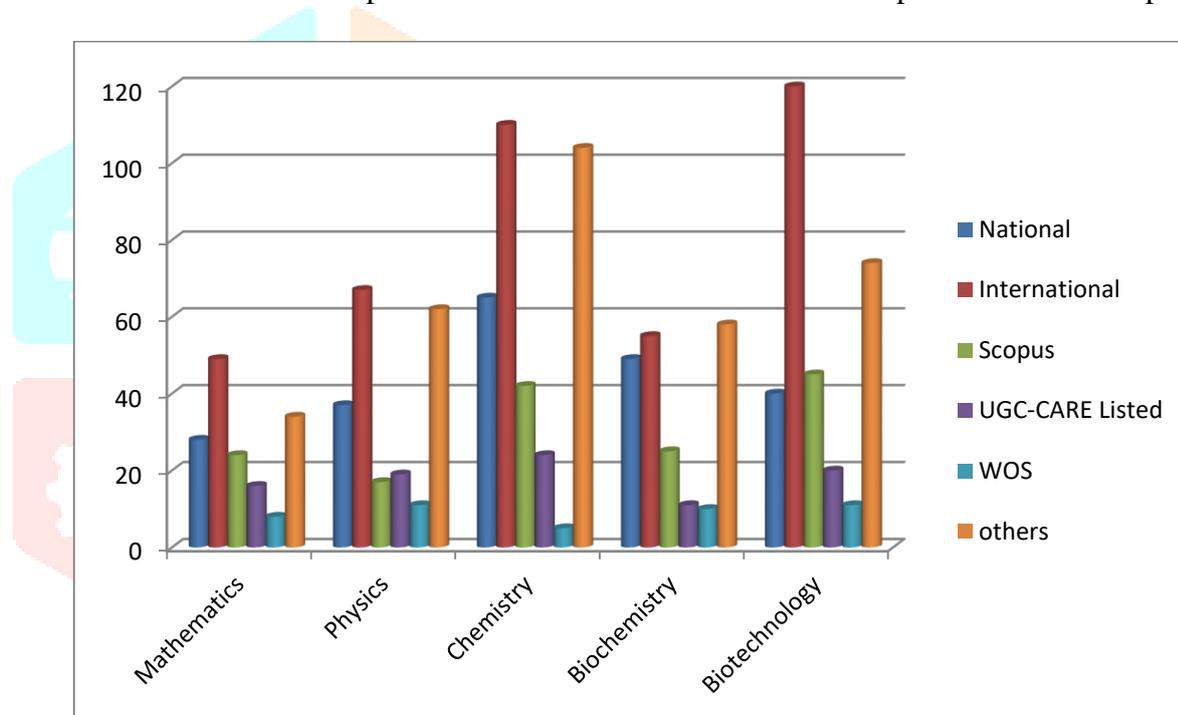


Fig.1 Publication of articles in department &amp; category wise Indexed Journals

In case of Scopus indexed journals Biotechnology department has published 45 articles, on the other hand chemistry department has highest articles published in that is 42 in UGC-CARE listed journals. It is also observed that Physics and Biotechnology department scored 11 articles in web of science indexed journals. Overall observation from the above table all the science department has published highest that is 153 in Scopus indexed journals.

Table.5 Publications of Books &amp; Proceedings

S.No.	Department	Books	Publication in Proceedings	Total
1	Mathematics	19	28	47
2	Physics	5	30	35
3	Chemistry	4	19	23
4	Biochemistry	5	31	36
5	Biotechnology	15	34	49
<b>Total</b>		<b>50</b>	<b>142</b>	<b>192</b>

The table 5 reveals that publication of books mathematics department has scored highest (19), on the other part chemistry department scored only 4 books. In case of publication of proceedings Biotechnology department have scored 34, on the other hand chemistry department published 19 only. Overall observations from the above table biotechnology department have published 49 journals & proceedings on the other part chemistry department lowest publication that is 23 only.

Table.6 Authorship of Publications of Articles

S.No	Department	Faculty	Research Scholar & Supervisor	Total Publications & Percentage
1	Mathematics	22	55	77 (12%)
2	Physics	48	56	104 (17%)
3	Chemistry	82	93	175 (28%)
4	Biochemistry	32	72	104 (17%)
5	Biotechnology	58	102	160 (26%)
		<b>242(39%)</b>	<b>378 (61%)</b>	<b>620</b>

It is observed from the table.6 chemistry department faculty have published 82 articles on the otherhand research scholars and research supervisor jointly published 102 articles during the autonomy period. Among the total publications 61 % that is 378 articles are published joint author, rest of them 39% that is 242 articles are published individual faculty members of the research departments.

Table.7 Departmentwise Collaborative publication in Indexed Journals

S.No	Department	SCOPUS		UGC-CARE LIST		WOS		OTHERS	
		F	F&RS	F	F&RS	F	F&RS	F	F&RS
1	Mathematics	10	14	5	11	2	6	24	10
2	Physics	5	12	12	7	4	7	42	20
3	Chemistry	15	27	7	17	2	3	72	32
4	Biochemistry	7	18	5	6	6	4	38	20
5	Biotechnology	10	35	8	12	5	6	52	22
<b>Total</b>		47	<b>105 (68%)</b>	37	<b>53 (58%)</b>	19	<b>26 (57%)</b>	<b>228 (68%)</b>	104
<b>Gross Total</b>		<b>153</b>		<b>90</b>		<b>45</b>		<b>332</b>	

F=Faculty F&RS= Faculty & Research Scholar

According to the above table shows that all the research departments Faculty and research scholars jointly published in indexed journals as 68% in Scopus indexed journals, 58% in UGC-CARE Listed Journals and 57% in Web of Science journals , on the other hand 68 % (228) of Faculty individual publication in other journals. Over all observations reveals that most of the indexed journal articles are published in Collaborative authors.

### VIII. Findings:

- Over all observations of study reveals that total publications of the college after autonomy period is 812
- Overall production of research scholars by the science departments is 609 (M.Phil., and Ph.D)
- The departments of Mathematics 264 M.Phil., Scholars during the period of 17 years, incase of Ph.D., 26 Candidates only produced
- Chemistry department have produced 37 Ph.D. Scholars during the period of 17 years, incase M.Phil., only 106 candidates have produced
- It is found that articles are published in Scopus indexed journals, UGC-CARE list, Web of Science and other high impact factor journals
- 70% of articles published as joint author in indexed journals and UGC-CARE listed journals
- Further it is noticed most of the single author (faculty) publications in other common journals
- Mathematics department has published more number of books that is 19 compared with other departments
- Biotechnology department has scored highest in overall publications of books and proceedings that is (49)
- Collaborative authors publications is scored 61%(378) among the 620 publications
- Single author that is faculty publications is only 39% (242) only
- Chemistry department scored 175 publications are Joint author that is faculty & research scholar among the 620 publications
- Incase of joint author publications the department of Biotechnology scored highest that is 102 and also publications of proceedings 34
- The study also reveals that all the research departments Faculty and research scholars jointly published in indexed journals as 68% in Scopus indexed journals, 58% in UGCARE Listed Journals and 57% in Web of Science journals ,
- 68 % (228) of Faculty individual publication in other journals.
- Overall observation from the study reveals that all the science department has published highest that is 153 in scopus indexed journals
- Over all observations reveals that most of the indexed journal articles are published in Collaborative authors.

### IX. Suggestions:

Based on the overall observations the study suggested that all the research departments have to publish more articles in reputed indexed journals. Further it is suggested that individual publications will be hiked, also suggested that the management of the institution or Government to contribute partial financial support to the faculty. Publication of books with ISBN number also to be concentrated by the department. Also suggested that the management should honour the faculty every year for their individual publication in reputed indexed journals. Incase of publication in high impact factor journals and reputed indexed journals healthy competition among the research departments to be needed.

### X. Conclusion:

This research study conducted for the purpose of to know the each department performance and contribution for the college. Overall observations of the study reveals that research publication of Mathematics and chemistry department contributed more. It is also observed that department of biotechnology published more articles in research and peer reviewed journals. It is also reveled from the study that number of faculty also a constraint to publish more research articles, and produce more research scholars. Based on this study institutions those who applying for NIRF, NAAC, NBA Accreditation other ranking purpose publications, research contributions is essential. Every institution has to decide that each department has to publish minimum 25 research papers per year in indexed and reputed peer reviewed high impact factor journals. Based on this multiply into 5 years it will be 125 papers per department. Accordingly

for 10 department in a higher educational institution  $10 \times 125 = 1250$  papers for five years. It will automatically boost up the ranking in publication aspect. It is suggested that the quality and quantity plays important role in research publication of the institution. Every institutions has to decide publication of articles in UGC-CARE LIST, SCOPUS, PROQUEST, Web of Scienceetc., indexed journals. At least two article publish per year by a faculty, it will be multiply by the total department. Further its is suggested that the management of the institution's have to contribute partial financial support for the faculty members to publish articles in reputed indexed journals. More research contributions for the institution will be result of good ranking of the institutions.

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