

Use of Social Media in Scholarly Communication by Faculty in Universities in Maharashtra

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ABSTRACT

The present study investigates the use of academic social media platforms for scholarly communication in relation to the research purpose at five popular non-agricultural state universities in Maharashtra. The study highlighted ResearchGate and its important role in scholarly communication, with teaching faculty using it to share research, collaborate and stay informed. Analysis showed that faculty members actively engage with social media for academic networking and knowledge dissemination. Social media platforms enhance the effectiveness of scholarly communication by increasing accessibility, reach, and opportunities for collaboration. The impact of social media is evident in foster information exchange and broader engagement within academic communities. The ranking of universities based on social media use revealed that institutions encouraging digital engagement and social media integration among faculty demonstrate more effective scholarly communication practices overall.

KEYWORDS: Social media, Scholarly communication, Academic social media platform, ResearchGate, Research interest score.

1. INTRODUCTION

Social media has become an increasingly influential tool in the field of academics, offering both opportunities and challenges for students, teachers and educational institutions. We now use platforms like YouTube, LinkedIn and even Instagram and Facebook to share educational content, promote online learning and connect learners with experts worldwide. Many students use social media to collaborate on group projects, access study materials and stay updated on academic events and announcements. On the other hand, use it to engage with students outside the classroom and to share research or instructional videos. The excessive use of social media can also lead to distractions, reduced productivity and a decline in academic performance if not managed properly. When used responsibly, social media can enhance the learning experience and foster a more connected informed academic community.

Social media offers opportunities for peer learning and global networking, allowing students to connect with experts, scholars, and learners from different cultural and academic backgrounds. Despite these benefits, it is important to

recognize the potential downsides, such as distractions, misinformation, cyberbullying, and overreliance on digital interactions. These risks can negatively impact focus and academic performance if not managed carefully. While social media can greatly enrich the academic experience, it must be used mindfully and purposefully to support, rather than hinder educational goals.

2. REVIEW OF LITERATURE

The study conducted by Ashraf K. explores the scholarly use of social media among full-time doctoral students at the University of Calicut, Kerala. Social media, in this context, refers to user-generated internet platforms that facilitate the sharing and dissemination of academic content. The study surveyed 160 doctoral students across various departments, with 108 valid responses (response rate: 67.5%), using a questionnaire method and analysing the data through SPSS. The majority of respondents were female (78.7%) and represented disciplines such as Science, Social Science, Humanities and Commerce.

The findings indicate that while most doctoral students are aware of and use social media for academic purposes, the level of active engagement such as writing, commenting, or participating in discussions remains low. Platforms like ResearchGate and Academia.edu were commonly used due to their ease of access and research-focused features. However, awareness of specialized academic platforms like Kudos, Mendeley was limited. Social media was found to be particularly useful during the early stages of research, aiding in literature discovery and networking. The study concludes by emphasizing the need for institutional support and training to enhance the effective scholarly use of social media and encourages further research into its impact on academic communication.

3. OBJECTIVES OF THE STUDY

The paper aims to find out the following objective can be laid out as follows:

- To study the features and usage patterns of the academic social media platform ResearchGate.
- To analyse how teaching faculty members use social media for scholarly communication.
- To assess the impact of social media on scholarly communication effectiveness.
- To rank universities based on their use of social media for scholarly communication.

4. SCOPE OF THE STUDY

This study focuses on five popular non-agricultural state university in Maharashtra state which is 1. Savitribai Phule Pune University, Pune 2. Shivaji University, Kolhapur, 3. Dr. Babasaheb Ambedkar Marathwada University, Chhatrapaati Sambhajinagar, 4. Sant Gadge Baba Amravati University Amravati 5. Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. To study all teaching department faculty and examines their academic performance on the social media research platform ResearchGate. The scope includes analysing their presence, publication count, research impact, collaboration networks and engagement levels on the platform.

5. HYPOTHESIS

H1: There is no significant different in use of social media in scholarly communication

6. METHODOLOGY

This study used a quantitative research approach to collect data from university faculty members who actively use the ResearchGate social media academic platform. Data was selected using a cluster random sampling method to ensure a representative sample. Clusters were based on academic disciplines and within each cluster only faculty members with active ResearchGate profiles and visible academic activity such as publications, citations, or research discussions were included. This helped focus the study on genuine users of the platform who are engaged in academic publishing and collaboration. Data were gathered directly from users' ResearchGate profiles, ensuring accuracy and relevance.

7. ANALYSIS AND DISCUSSIONS

The ResearchGate profile of the faculties in Universities in Maharashtra was searched and the data about their research publications uploaded on ResearchGate was collected. The ranking of Universities was done based on No. of Research Publications uploaded by their faculty members on ResearchGate, Average paper per faculty member, Citations Per Paper, Research Interest Score per Faculty members.

7.1 NUMBER OF RESEARCH PAPERS UPLOADED BY FACULTY MEMBERS IN UNIVERSITIES

The following table depicts an analysis of the ResearchGate profiles of faculty members from five universities. Our study encompassed a total of 370 faculty members across these institutions.

Table - 1 Use of social media in Scholarly communication

Sr. No	Name of University	No. of Faculty members	No. of Research Publication	Average (Publication/Teacher)
1.	Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar	60	4300	71.66
2.	Shivaji University, Kolhapur	97	6884	70.96
3.	Savitribai Phule Pune University, Pune	132	7229	54.76
4.	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	52	2368	45.53
5.	Sant Gadge Baba Amravati University, Amravati	29	1135	39.13

The above table explore the comparative analysis of five universities in Maharashtra based on their number of teaching faculty members, research publications, and the average percentage of research publications per faculty member. Among these institutions, Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar stands out with the highest average research productivity at 71.66%, despite having a relatively smaller faculty size of 60 members. This indicates a strong emphasis on research output per teacher. Similarly, Shivaji University,

Kolhapur also demonstrates impressive performance, with an average of 70.96% from 97 faculty members and 6884 research publications, showing both high volume and efficiency in research.

On the other hand, Savitribai Phule Pune University, Pune has the highest number of faculty (132) and total publications (7229), but a lower average percentage of 54.76%, suggesting that while its overall research contribution is significant, the per-faculty output is relatively moderate. Rashtrasant Tukadoji Maharaj Nagpur University and Sant Gadge Baba Amravati University rank lower in terms of both total publications and average output, with the latter having the lowest average percentage at 39.13%, which may indicate limited research activity or resources.

Table- 2 University wise Research Score

Sr. No	Name of University	No. of Teaching Faculty Members	No of Research Publication	Research Interest Score	H Index	R.I / Faculty Members
1.	Sant Gadge Baba Amravati University, Amravati	29	1135	23978.47	230	826.84
2.	Savitribai Phule Pune University, Pune	132	7229	83057.6	1582	629.22
3.	Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar	60	4300	35683	650	594.72
4.	Shivaji University, Kolhapur	97	4684	56824	1082	585.81
5.	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	52	2368	18053	457	347.17

The Table 2. Presents a comparative analysis of five universities in Maharashtra based on their teaching faculty strength, research output and impact. Savitribai Phule Pune University leads significantly in terms of research publications (7229), Research Interest (RI) Score (83057.6) and H-index (1582), indicating a broad and impactful research presence. Despite having the largest faculty count (132), its RI per faculty member (629.22) is not the highest. That distinction goes to Sant Gadge Baba Amravati University, which, with only 29 faculty members, has an impressive RI per faculty of 826.84 highlighting the high research productivity and influence of its smaller team. Similarly, Dr. Babasaheb Ambedkar Marathwada University and Shivaji University also show strong individual faculty contributions with RI per faculty values of 594.72 and 585.81 respectively, though lower in total output compared to Pune University.

Rashtrasant Tukadoji Maharaj Nagpur University shows the lowest performance across most metrics, especially with the lowest RI per faculty (347.17), suggesting relatively lower research intensity per academic staff. Overall, the data suggests that while total research output scales with faculty size, some smaller universities achieve remarkable per-capita research impact.

Table - 3 Ranking of University on Citation per Paper

Sr. No	Name of University	No. Research Publication	No. of Citation	Citation/ Paper
1.	Sant Gadge Baba Amravati University, Amravati	1135	40998	36.12
2.	Savitribai Phule Pune University, Pune	7229	131604	18.21
3.	Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajnagar	4300	50350	11.71
4.	Shivaji University, Kolhapur	6884	75643	10.99
5.	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	2368	23216	9.80

The analysis of the research output and impact of five universities in Maharashtra, India, reveals notable differences in both productivity and citation influence. Savitribai Phule Pune University, Pune, stands out with the highest number of research publications at 7,229 and the highest total citations at 131,604, indicating its dominant role in academic output. However, when it comes to average citation per paper, it records a relatively moderate 18.21, suggesting that while its research volume is high, individual papers receive moderate attention.

On the other hand, Sant Gadge Baba Amravati University, Amravati, despite having the lowest number of publications (1,135), has an impressive citation per paper ratio of 36.12, the highest among all the listed institutions. This implies a strong impact per publication and suggests a focus on quality over quantity. Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajnagar, and Shivaji University, Kolhapur, both demonstrate solid research outputs, with 4,300 and 6,884 publications respectively, but lower citation-to-paper ratios of 11.71 and 10.99, indicating moderate influence per research work.

Lastly, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur shows a relatively lower performance with 2,368 publications and 23,216 citations, resulting in a citation per paper rate of 9.80, the lowest in this group. While Savitribai Phule Pune University leads in sheer volume and total citations, Sant Gadge Baba Amravati University demonstrates the highest impact per publication, highlighting contrasting strengths between research quantity and quality among these institutions.

8. HYPOTHESIS TESTING

Table 3, indicate the total no of publication per total no of teaching faculty members of university using ResearchGate to testing the hypothesis we used the correlation then for this The Pearson correlation coefficient measures the strength and direction of the linear relationship between two variables.

H₀= There is no significant difference in use of social media in scholarly communication.

Table- 4 University wise Research Publication

Sr. No	Name of University	No of Teaching Faculty Members	No of Research Publication
1.	Savitribai Phule Pune University, Pune	132	7229
2.	Shivaji University, Kolhapur	97	6884
3.	Dr. Babasaheb Ambedkar Marathwada University, Chhatrapati Sambhajinagar	60	4300
4.	Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur	52	2368
5.	Sant Gadge Baba Amravati University, Amravati	29	1135

The Pearson correlation coefficient (r) shows the strength and direction of a linear relationship:

r > 0.5: Strong positive

0.3 < r ≤ 0.5: Moderate positive

0 < r ≤ 0.3: Weak positive

-0.3 < r < 0: Weak negative

-0.5 ≤ r ≤ -0.3: Moderate negative

r < -0.5: Strong negative

From Table 3, to calculate the person correlation coefficient, following values are calculated.

$$N= 5$$

$$\sum X= 370$$

$$\sum Y = 21916$$

$$\sum X^2= 33978$$

$$\sum Y^2= 125033546$$

$$\sum XY= 2036027$$

N = No. of University, X = Total no of Teaching faculty, Y = Total No. of Publication.

$$R = \frac{N \sum (XY) - \sum (X) \sum (Y)}{\sqrt{N \sum X^2 - \sum (X)^2 \times N \sum Y^2 - (\sum Y)^2}}$$
$$= 0.32388$$

The range between 0.3 to 0.5 moderate and positive. Hence null hypothesis is rejected. From this there is a moderate relationship between the faculty members using social media for scholarly communication.

CONCLUSION

ResearchGate is a widely used academic platform that fosters collaboration and knowledge sharing among researchers worldwide.

ResearchGate plays a significant role in advancing scholarly communication by connecting researchers, facilitating resource sharing and promoting interdisciplinary collaboration.

The comparative analysis of five universities in Maharashtra reveals significant variations in research productivity, impact and faculty strength, highlighting diverse institutional strategies toward academic excellence. Savitribai Phule Pune University leads in total research output and citation count, with 7,229 publications and 131,604 citations, reflecting its broad research base and institutional capacity. However, its moderate citation per paper (18.21) and research interest (RI) per faculty (629.22) suggest room for enhancing per capita impact. In contrast, Sant Gadge Baba Amravati University, despite having the smallest faculty and lowest publication count (1,135), demonstrates the highest citation per paper (36.12) and RI per faculty (826.84), emphasizing research quality over quantity. Dr. Babasaheb Ambedkar Marathwada University and Shivaji University also show commendable per-faculty productivity, with average research output percentages exceeding 70%, highlighting effective faculty engagement in research. Conversely, Rashtrasant Tukadoji Maharaj Nagpur University lags across most metrics, indicating lower research intensity and impact.

Overall, the findings underscore that institutional size does not necessarily correlate with research efficiency. Universities with smaller faculties can achieve substantial scholarly influence through strategic focus on quality, faculty support, and targeted research investment. This underscores the importance of aligning institutional priorities with research excellence for sustainable academic development.

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