

Use of Scholarly Communication Networks and Social Networking Services in Research in Mahatma Gandhi University, Kottayam, Kerala

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Abstract

In sociology, social interaction is the process by which a member/ members of society act and react to other members. It includes the action that is done and the reaction that is received. While interaction signifies a wider purview, communication is more specific that involves exchange of information. Prior to modern communication technologies, people used either broadcast media, such as television, radio and newspapers, or private communication tools like telephone. But these methods lack group-based interactions. With the advent of the internet, this polarisation between public and private media started to change.

Social media has not only affected the daily modes of interaction between individuals, but has also influenced teaching, learning, and research. Social media websites and messaging applications, which allow personal as well as group interaction, improved the communication between the faculty members, and research scholars across the globe. Along with research collaboration tools like Authorea, Dropbox Paper, Google Docs, Overleaf, PubPub etc. and scholarly communication networks like ResearchGate, Academia.edu etc., popular social networking services like Facebook, Twitter, LinkedIn etc. and messaging applications like WhatsApp, Telegram etc. more or less plays a vital role in scholarly communication. The study aims to analyze the usage and impacts of social media among the research scholars under Mahatma Gandhi University, Kottayam. Review of literature, collection of data from primary and secondary sources, etc. are the key references of the study.

Keywords: social media, research, collaboration tools, scholarly communication

“Man is by nature a social animal; an individual who is unsocial naturally and not accidentally is either beneath our notice or more than human. Society is something that precedes the individual. Anyone who either cannot lead the common life or is so self-sufficient as not to need to, and therefore does not partake of society, is either a beast or a god. ”

This statement made by Aristotle in his *Politics* reflects how far communication is essential for the sustenance of human relationships. Language as the prime tool for communication enhanced human's quest for knowledge and exchange of information. Social interaction is all about the action that is done and the reaction that is received. While interaction signifies a wider purview, communication is more specific that involves exchange of information. Communication is a two-way process and made possible through a medium either verbal or non-verbal.

Prior to modern communication technologies, people used either broadcast media, such as television, radio and newspapers, or private communication tools like telephone. While the first is more of a one-way communication, the second involves personal interaction than group level. Hence, these methods lack group-based interactions. With the advent of the internet, this polarisation between public and private media has started to change.

The first phase of World Wide Web, called Web 1.0, was a read-only web. The contents were delivered to the audience and that was a one-way interaction; the only tool for interaction then was e-mail. But with its next phase, Web 2.0, World Wide Web has become more social and interactive. The broadband internet, better browsers and content development tools made internet more accessible and user friendly. With Web 2.0, software has become more open source, providing users with a greater ability to influence the web (Fischetti, 2010).

The social web allows for more collaborative education. Along with Web 2.0, e-learning also moved into its next interactive phase, E-learning 2.0 (Redecker, 2009). Massive Open Online Courses has made learning more flexible and open (Laplante, 2001). Distance education is moving to the internet at present. E-learning platforms and learning management systems offers anytime anywhere access to information, and this has changed the modes of research (Prensky, 2001). Following the model of social media platforms (SNSs), scholarly communication networks (SCNs) like ResearchGate, Academia.edu etc. offers a large database of academic resources to the enthusiasts. Moreover, exclusive academic collaboration platforms like Authorea, Dropbox Paper, Google Docs, Overleaf, PubPub etc. helps research scholars to collaborate and progress in a research area.

Scholarly collaboration network is a platform through which research and other scholarly writings are created, reviewed, publicized to the scholarly community, and preserved for future

reference. SCNs are originally meant for networking with fellow researchers, and have been increasingly used for sharing research papers (Michael, 2019).

Founded in 2008 by physicians Dr. Ijad Madisch and Dr. Sören Hofmayer, and computer scientist Horst Fickenscher, ResearchGate is the professional network for scientists and researchers. Over 15 million members from all over the world use it to share, discover, and discuss research. Its mission is to connect the world of science and make research open to all.

Academia.edu is a platform for academics to share research papers. The company's mission is to accelerate the world's research. Academics use Academia.edu to share their research, monitor deep analytics around the impact of their research, and track the research of academics they follow. Over 107 million academics have signed up to Academia.edu, adding 24 million papers.

Collaborative research, as a team work, have the ability to achieve more than one scholar can on his/her own. There are many online tools and platforms for sharing information and working together, like Authorea, Dropbox Paper, Google Docs, Overleaf, PubPub etc. Authorea is the leading collaborative platform to read, write, and publish research. It allows researchers to write documents together and attach references, figures, and data; its features include collaborative editing, automatic citation formatting, and tracking changes. It is owned by the publishing company Wiley through Atypon. Dropbox Paper is another flexible workspace that brings people and ideas together. With Paper, teams can create, review, revise, manage, and organize—all in shared documents. Google Docs brings your documents to life with smart editing and styling tools to help you easily format text and paragraphs. Like Office 365 of Microsoft, documents can be shared to a group of scholars and edit information.

Overleaf is an online LaTeX and Rich Text collaborative writing and publishing tool that makes the whole process of writing, editing and publishing scientific documents much quicker and easier. It supports almost all LaTeX features, including inserting images, bibliographies, equations, and more. There is only a single master version of each document which everyone has access to. It includes a history of all of your changes and it is impossible to make conflicting changes.

PubPub accepts submissions, manage peer review, publish to the web with one-click DOI generation, export to print, and more. Scholars can publicly post papers and citations, publish

a lab blog, host resources, and use private channels for lab notes and journal clubs. Pubpub can also be used to host interactive conference website.

Even though there are exclusive platforms available for researcher scholars to interact and exchange information, popular social networking sites still plays a vital role in research. The popularity and availability of members in these platforms make these sites and messaging services attractive to the research scholars. As the platform with the highest number of memberships, Facebook has a number of Pages and Groups exclusively created to assist research scholars. Since faculty members and scholars from different parts of the world are present in this platform, it is easy for anyone to get connected to the desired individual or group. Though Twitter is a micro-blogging platform, it allows members to sent direct messages and easily get attention for the desired service. LinkedIn is a professional social networking platform and a takes a more formal approach to member interaction.

Many institutions use social media to share research with the general public. Social media can increase the distribution of an article's message and also potentially increase dissemination of the article itself. Authors can consider using social media to increase the dissemination of traditionally published articles (EeeLN H., 2017).

This study aims to analyse the usage and consequences of social media among the research scholars under Mahatma Gandhi University, Kottayam. To create a community of faculty members and students in the university and affiliated colleges, Mahatma Gandhi University, Kottayam has a Facebook page and the institution posts details of events and programmes organized. The research scholars in the state of Kerala has an association and the researchers of Mahatma Gandhi University are members of this community. The association's Facebook page provides updates on the events organised by it. The scholars get alerts on research opportunities, conferences and job vacancies. The following data is based on the engagement of research scholars in these platforms.

Objectives of the Study

The following objectives are framed to evaluate the study:

1. To explore the use of information technology for getting desired information
2. To examine various devices used to access electronic resources

3. To identify the kinds of information the research scholars of both Science and Social Sciences seek
4. To find out the usage of resources and tools in scholarly communication
5. To examine the purpose of using scholarly communication networks
6. To study the frequency of use of SCNs and SNSs
7. To evaluate and study the availability of resources from SCNs and SNSs
8. To evaluate the instructions and guidance the user receives from these platforms
9. To evaluate the usability of SCNs and SNSs

Data Analysis

1. Distribution of Questionnaire to the Population

The respondents are classified into two categories as Men and Women, and the table shows that the number of the research scholars both male and female taken into account for the study.

Group	Number of Questionnaire Distributed	Number of Questionnaire Received	Percentage
Male	110	103	93.6
Female	80	75	93.75
Total	190	178	93.68

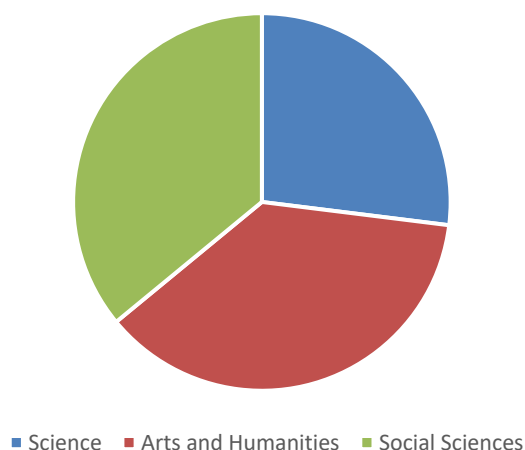
As the table shows, 93% of total respondents replied to the questionnaire in male and female categories. The random sampling covers the total the population of 190 of which 93.68% (i.e. 178) in total is taken into account for the study.

2. Subject-wise Information

Group	Male	Female	Total	Percentage
Science	30	18	48	26.97%
Arts and Humanities	49	17	66	37.07%
Social Sciences	43	21	64	35.96%
Total	122	56	178	100

The above table represents the discipline groups and the Arts and Humanities scholars are actively engaged in the information seeking activities by 37.07% than the next Social Science group with a 35.96%; and remaining Science discipline group has less than 30% participation, i.e. 26.97%.

Subject-wise Information



3. Use of Scholarly Communication Tools

Scholarly Communication Tools	Social Sciences & Arts	Science	Total	Average
ResearchGate	18	05	23	13%
Academia.edu	32	25	57	32%
Dropbox Paper	14	10	24	13.5%
Google Docs	37	15	52	29%
Authorea	13	09	22	12.5%
Total	114	64	178	100%

Based on the usage statistics given in the above table, Academia.edu and Google Docs are the most widely used scholarly communication tools with 32% and 29% of total usage respectively. The SCN ResearchGate and collaborative tool Dropbox Paper have only slight differences with 13% and 13.5% of usage respectively. Authorea is the lesser used service by scholars in all disciplines with only 12.5% of usage.

4. Use of Social Networking Services

Social Networking Services	Social Sciences & Arts	Science	Total	Average
Facebook	41	23	64	36%
WhatsApp	43	30	73	41%
Telegram	14	09	23	13%
Twitter	07	04	11	06%
LinkedIn	04	03	07	04%
Total	109	69	178	100%

The usage statistics of Social Networking Services shows that they are more popular among the scholars than the scholarly communication tools. The most popular platforms, Facebook and WhatsApp has a usage of 36% and 41% respectively. Another messaging platform Telegram even with could hosting has only 13% of usage. LinkedIn has only 4% popularity among the scholars as a collaborative tool.

Findings

The above study and data analysis brought out some of the findings and inferences on the usage of SCNs and SNSs among the research scholars in Mahatma Gandhi University, Kottayam, Kerala.

- The Popularity of scholarly communication tools is among the Social Science and Arts scholars than the Science scholars.
- The Popularity of social networking services is among the Social Science and Arts scholars than the Science scholars.
- Academia.edu and Google Docs are the most widely used scholarly communication tools among Science scholars and Social Science and Arts scholars.
- Collaborative research tools are less popular than Scholarly Communication Networks.
- Social Networking Services like Facebook and WhatsApp are more popular than the Scholarly Communication Networks.
- Most of the scholars use the resources for enhancement of research and learning.
- The participation of Social Science and Arts Scholars is more active than the Science scholars since the science scholars use the laboratory experiment activities more than SCNs and SNSs.

Conclusion

The above study of information seeking behaviour of research scholars using SCNs and SNSs shows that users have the tendency to use mobile friendly applications and services than desktop software or web sites. It shows the increasing affinity towards handheld devices like smartphones and tablet computers. The SCNs and SNSs enrich the best access to information resources. The scholars rely more on open source and popular resources than subscription-based services. Even though there are a number of scholarly communication platforms and collaboration tools, scholars of Mahatma Gandhi University, Kottayam rely on SNSs for collaboration and exchange of information. More accessible, optimised, mobile-friendly and cost-effective services are to be introduced to make exclusive scholarly collaboration more engaging and popular.

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