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# **AWARENESS AND USE OF ACADEMIC SOCIAL NETWORKING SITES AMONG LIBRARY AND INFORMATION SCIENCE PROFESSIONALS IN NORTH EASTERN REGION IN INDIA**

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## **Abstract**

*A variety of Academic Social Networking (ASN) Platforms, Including ResearchGate, Academia.edu and Google Scholar, have gained popularity over the past decades. A common capability of many of these academic social networking websites is to provide an online repository to which users can upload and share research papers. Now 10 years since the launch of the three main platforms which currently lead the market (Academia.edu, ResearchGate, and Mendeley), it is timely to review how and why ASNS are used. Recently Microsoft Academic also. These sites allow uploading academic articles, abstracts, and links to published articles; track demand for published articles, and engage in professional interaction. This study investigates the nature of the use and the perceived utility of the Academic Social Networking Sites among the LIS Professionals in the North Eastern Region in India. This study reveals that Non Teaching Professionals have knowledge of ASNSs. Google Scholar and Academia are the most used ASNSs among LIS professionals. 77.5% of the LIS Professionals indicated their preference for uploading a full-text version of their publications and 52.42% accessed the relevant ASNS at least daily.*

**Keywords:** ASN, ResearchGate, Academia.edu, Mendeley, Research, LIS Professionals, Academic Community, Professional Interaction

## **Introduction**

Academic Social Networks (ASNs) are similar to social networking sites, but designed for the academic community. These online platforms allow you to develop a profile and connect with other researchers, while also allowing you to share academic related content. These tools are typically free to use. The most attractive feature of these sites is their offer of a user-friendly way to present your research articles and other scholarly outputs to your colleagues and scholarly communities worldwide. The scholarly information lifecycle has traditionally focused on publications as the key outputs of the process. However, the growth of social media and networked technologies has altered the cycle to include newer media such as blogs, podcasts and networking sites, all of which expand a scholar's profile in new and increasingly interactive ways.

ASNS are modifying traditional patterns of scholarly communication by providing an alternative means of discovering research outputs, then it is important to understand not only the characteristics of the member academics but also the principal motivations for their engagement with these websites and their services. Given the role of libraries in supporting researchers throughout the whole scholarly communication lifecycle, a general understanding of how academics use ASNS will enhance the ability of librarians to provide effective advice and resources.

### **Academic Social Networking Sites – Short Note**

The recognition and depth usage of online social networking websites among the current generation is an open secret. People mostly use these social networking sites for recreational reasons to share their life experiences, events, Photos and videos with their friends in the circle. Another branch of on-line social networks has recently appeared, called Academic Social Networking Sites (ASNS). The ASNS serve different purposes than entertainment. These platforms target the educational community and fulfill their scholarly needs. As the scope of ASNS is limited to the academic community, they appeal greatly to academics.

**Academia.edu** is a similar resource that allows users to create a personal profile, upload papers, request feedback, follow researchers, send personal messages to other researchers and view analytics on your papers. Users on Academia.edu can also import contacts from Facebook, Twitter, Yahoo and Google to find colleagues who already have Academia.edu profiles, thus connecting many different networking tools described. Academic.edu is a commercial social networking site for researchers. A researcher can create a profile, upload their work, and select areas of interest to find networks of users with similar interests. Analytics related to engagement with uploaded research is available.

**Google Scholar** provides a search engine that can be used to identify hyperlinks to articles that are publically available or may be obtained through institutional libraries. Users who select to create a personal Google Scholar profile can access them citations per year metrics. Articles uploaded on ResearchGate, Academia.edu or other databases can also be linked to your Google Scholar profile so that readers can find hyperlinks to all of scholar work.

**ResearchGate** is a commercial social networking site for researchers. A researcher is able to create a profile, share papers, engage in discussion, and find collaborators. Some metrics exclusive to this platform are also available.

**Mendeley-** Academicians may already be familiar with Mendeley as a reference manager, but it acts as an academic social network. Researcher can develop a profile, share research papers, and connect with researchers. Mendeley was acquired by Elsevier in 2013.

**Microsoft Academic Search (MAS)** a mere document retrieval service that counts citations. It mechanically provided the bibliographic records grouped by authors, journals, institutions or research disciplines, that although with a limited quality control it is enough for being considered for research evaluation and scientific benchmarking.

## **Review of Literature**

**Goodwin et al. (2014)** examined the impact of changes to the user interface style upon communication via the site. ResearchGate initially used a group-based structure to facilitate discussions; this modified to topic-based discussions, and additional recently to “question and answer” style posts. Whereas sharing of knowledge or opinions was equally likely in every mode, the move away from group-based discussions was marked by a lack of social cues and less courteous interactions.

**Li et al. (2015)** analyzed a sample of 1,021 answers posted on ResearchGate to examine characteristics of “quality” answers (quality being defined by the number of up votes received). The authority of respondents, posting quicker and longer responses was positively associated with quality. Objectivity and fact is again important in the ASNS context as answers containing social elements were negatively associated with quality.

**Manca and Ranieri (2016)** surveyed the Italian Higher Education sector concerning their levels of use of a variety of social media platforms in terms of personal, professional and teaching use. ResearchGate and Academia.edu were grouped together, and lower levels of use were reported overall in relation to teaching compared to personal or professional uses. The information suggests a relationship between participants' teaching expertise and level of personal use of the sites, whereas age was related to the level of personal use. Gender was found to be important in all together three uses, with females demonstrating higher personal, professional and teaching uses of ASNS.

**Ortega (2017)** builds upon the 2015 study to examine temporal differences in the institutional population at Academia.edu, Google Scholar Citations and ResearchGate. The results suggest that over time the differences in disciplinary populations observed at different sites may equilibrate over time, as growth of the initially well represented subjects slowed in the sample while growth increased in under-represented areas. Growth rates also showed differences according to job position and academic seniority, with Academia.edu showing an increase in more senior academics, while ResearchGate shows growth in terms of more junior academics and graduate students.

**Yan and Zhang (2018)** scraped profile information from an oversized sample of Research Gate users (87,083) across sixty one U.S. universities. Although social network information was not explicitly analyzed, the information included figures for follower and following counts. Comparisons were drawn according to the research activity level of the academics' institutions, with larger levels of followers (and interestingly, lower levels of

followees) being related with higher research active institutions. Academics were also found to be most likely to connect with others from the same institution.

**Jordan K (2019)** discussed the history and definition of ASNS, before providing a comprehensive review of the empirical research related to ASNS to-date. Five important themes within the research literature are identified, including: the relationship of the platforms to Open Access publishing; metrics; interactions with other academicians through the platforms; platform demographics and social structure; and user perspectives. Although the profile of uses in differs slightly for Mendeley, Academia.edu and Research Gate demonstrate the same footprint. The uses which score most extremely relate to being contactable and discovering others, and sharing content. Two of the themes mentioned during that paper are present, with tracking metrics being moderately important, whereas discussions and actively interacting with others do not score extremely overall.

## **Methodology**

The study was quantitative in nature, a survey research method was adopted and an online questionnaire was used to data collection. The survey was designed in a way that a single respondent was not allowed to give more than one response. The survey was carried out from August to October 2019. In the given period, a link to the online questionnaire was sent to all the LIS Professionals in the North Eastern Region in India by email. Reminders were sent to the respondents to get maximum participation in the study. Eleven closed questions were included in the questionnaire covering different aspects of the awareness, usage and feelings of LIS Professionals about ASNs. The total population of the study consisted of approximately Two Hundred and Five LIS Professionals. Out of the 205 Lis Professionals 159 responded to the questionnaire giving a response ratio of 77.6%. The data was thoroughly analyzed and results were presented in tables by using the mean and frequencies.

## **Objectives**

- ✚ To find out the most popular Academic Social Networking Site by the respondents.
- ✚ To examine the number of registered profiles in Academic Social Networking sites.
- ✚ To extract the principal purpose of Usage of ASN by the LIS professionals in North Eastern India.
- ✚ To know the reason from the respondents for uploading publications in ASN.
- ✚ To identify the frequency of access, devices using to access the ASN by the respondents.
- ✚ To determine the preferred format to upload in the ASN among the LIS Professional in the North Eastern Region, India.

## Data Analysis and Interpretation

### Preferred Academic Social Networking Sites

Name of ASN	Frequency	Percentage
ResearchGate	109	68.5
Academia.edu	132	83.0
Google Scholar	143	89.9
Mendeley	79	49.7
Microsoft Academic	48	30.2

Table 1 - Preferred Academic Social Networking Sites

From a list of five major ASNS, respondents were asked to indicate their preferred option. Above the table shows that the majority of respondents (89.9%) preferred Google Scholars. Academia.edu (83%) and Research Gate was preferred by 68.5%, with LIS Professionals predominantly for their usage. Less than 50% of respondents ranked both Mendeley and Microsoft Academic as their preferred Academic Social Networking Sites.

### Source to Know About ASN

Name of ASN	Frequency	Percentage
Via Internet	31	19.5
Through Professional Friends	58	36.5
From the conferences and Workshops	55	34.6
While as student/scholar From the Department	15	9.4
Total	159	100

Table 2 - Source to Know About ASN

Respondents were requested to choose the sources where they learn/know about Academic Social Networking Sites. Majority of the respondents known about ASNS through professional friends (36.5%). Followed by from the conference and workshops (34.6%). Only 9.4% of respondents are chose the sources of while as a student/scholar from the department.

### Number of Membership

Professionals Types	Single	Dual	Multiple	Total
Teaching Professionals	09 (21.9)	12 (7.5)	20 (12.6)	41 (25.8)
Non Teaching Professionals	34 (36.8)	43 (45.7)	17 (10.7)	94 (59.1)
Research Scholars	11 (45.8)	6 (25.0)	7 (29.2)	24 (15.1)
Total	54 (33.9)	61 (38.4)	44 (27.7)	159 (100)

Table 3 - Number of Membership

North Eastern LIS Professionals in India were also asked number of Academic Social Networking Sites accounts single/dual and multiple for academic promotional activities. As shown in above the table, more than 38% of the respondents had dual ASNS usage and 33.9% of

LIS professionals had only single accounts, out of 159 respondents only 44 (27.7%) respondents have multiple Academic Social Networking Sites accounts. And also noticed out of 59.1% Non Teaching Professionals 45.7% respondents are had joined dual Academic Social Networking sites.

### Principal Purpose for Using ASNS

Purpose of Using ASN	Frequency	Percentage
To Searching for articles	141	88.7
For Downloading full text articles	116	72.9
To Sharing existing research project with experts in the same field	112	70.4
For Interacting with peers	110	69.2
To Staying up-to-date with latest research trends	94	59.1
Tracking the reading and citation of the articles	104	65.4
To Get free access of publications	98	61.6

*Table 4 - Principal Purpose for Using ASNS*

Above the table, more than half of the respondents indicated that their primary purpose which was mentioned by the researcher for joining an ASNS. Nearly above one-third 88.7 percentages were specifically To Search for articles and 72.9 percentages of LIS professionals are responding for Downloading full text articles and followed by To Sharing existing research project with experts in the same field, For Interacting with peers. Only 59.1 percentages of the professionals are opting for the purpose of To Staying up-to-date with latest research trends.

### Reasons for Uploading Publications

Reason For Uploading Publications	Frequency	Percentage
For Marketing and publishing	109	68.5
For Citations	124	77.9
To Downloads	98	61.6
To Views/Reads the articles	101	63.5
Information sharing with students/early career researchers	78	49.1
To Following researchers	67	42.1
To know the Publication statistics	90	56.6

*Table 5 - Principal Purpose for Using ASNS*

Library and Information's Science Professionals of North Eastern Region were asked to indicate the main motive for uploading any of their research publications to the ASNS which they have accounts. Above the table shows that the main reason for respondents to upload their research publications was to accrue citations (77.9%). This was followed relatively closely by a desire for Marketing and publishing (68.5%), To Views/Reads the articles (63.5%). To have publications downloaded (61.6%). Only 42.1 percentage of Professional are responding for following researchers.

### Preferred Format to Upload the Publications

Preferred Format	Frequency	Percentage
Full-text	124	77.9
Abstract	94	59.1
Abstract and references	89	55.9
Metadata	43	27.0

*Table 6 - Preferred Format to Upload the Publications*

The preferred formats for uploading research publications are tabulated here from the respondent's response. Slightly more than two-thirds (77.5%) of the respondents indicated their preference for uploading a full-text version of their publication. Followed by Abstract (59.1%), Abstract and references (55.9%) and only 27% of the percentage of response in Metadata format.

### Preferred Device to Access ASNS

Name of ASN	Frequency	Percentage
Desktop Computer	52	32.7
Laptops	85	53.5
Tablet	16	10.1
Smart Phone	4	2.5
Other Devices	2	1.2
Total	159	100

*Table 7 - Preferred Device to Access ASNS*

The majority of the respondents (53.5%) are used Laptops followed by Desktop Computers, Tablets and Smart Phones. Only two respondents are chosen the other devices to access the Academic Social Networking Sites for Connecting with their research and other researchers.

### Frequency of Access to ASNS

Frequency of Access	Frequency	Percentage
Multiple times a day	39	24.5
Daily	84	52.8
Twice a week	33	20.7
Weekly	3	1.8
Whenever I require	-	-
Total	159	100

*Table 8 - Frequency of Access to ASNS*

Respondents were asked to indicate the frequency with which they accessed the ASNS which they have accounts. Above table shows that, more than half (52.8%) accessed the relevant ASNS at least daily. Nearly one quarter (24.5%) chose multiple times a day followed 20.7



percentage of respondent's responses for twice a week. Unfortunately no one response for 'whenever I require' as their level of frequency of access of ASNS.

## **Findings and Suggestions**

Found from this study majority of respondents (89.9%) preferred Google Scholars. Academia.edu (83%) and Research Gate were preferred by 68.5%, with LIS Professionals predominantly for their usage. The majority of the respondents known about ASNS through professional friends (36.5%). Followed by from the conference and workshops (34.6%). More than 38% of the respondents had dual ASNS usage and 33.9% of LIS professionals had only single accounts, out of 159 respondents only 44 (27.7%) respondents have multiple Academic Social Networking Sites accounts. 88.7 percentages were specifically used to Searching for articles and 72.9 percentages of LIS professionals are responding for downloading full text articles and followed by to Sharing existing research projects with experts in the same field, for Interacting with peers. The main reason for respondents to upload their research publications was to accure citations (77.9%). Followed relatively closely by a desire for Marketing and publishing (68.5%), to Views/Reads the articles (63.5%). To have publications downloaded (61.6%). (77.5%) of the respondents indicated their preference for uploading a full-text version of their publication. Followed by Abstract (59.1%), Abstract and references (55.9%). The majority of the respondents (53.5%) are using Laptops followed by Desktop Computers, Tablets and Smart Phones. (52.42%) accessed the relevant ASNS at least daily. Nearly one quarter (24.5%) chose multiple times a day. The study was performed on a relatively small population in only one country. It limits our ability to generalize from this study to all users of ASNS.

A role for libraries in this domain stems from the fact that, while traditionally they have provided information support and training to researchers, more recently this has been expanded to include support in all aspects of the scholarly communication lifecycle, including research impact. No longer is it just a matter of having one's research published; it is also important for authors to build an effective academic profile so as to expand the reach of their ideas. From a library perspective, therefore, there is a role for librarians in educating academics about not only the benefits of using ASNS as a platform for enhancing their visibility but also best practice in creating an effective academic profile. In the present-day scholarly communication environment, this complements the current role of providing advice, for example, on the selection of an appropriate journal in which to publish. A well-planned post-publication strategy is important for enabling the widest possible access to one's research as well as maximizing its impact.

## **Conclusion**

Academic Social Networking sites offer a new way to communicate and collaborate to researchers and scientists. ASNSs offer to Academicians to Connect to other academician across the world, join discussion forums, read practical case studies, update about research

methodologies adopted by various researchers, contact with supervisor and peers, as publishing platform, comments to improve and bibliographical control. There is no denying that technological and communication advances have changed the way we make connections and access information. Face-to-face interaction is still crucial, but social networking has, in a way, “changed the rules of the game.” Platforms such as Research Gate, Academia.edu, Google Scholar, Microsoft Academic and mendeley can be utilized to create a personal brand, disseminate scientific findings and connect with researchers worldwide.

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