

Online Collaborative Research Platform: A Tool to Scholars with a Special Study on Research Scholars of Gauhati University

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Abstract

This paper discusses the modern research methods, which are available now in open access cloud based system, through online networking models. Our research as well as researcher has now reached worldwide, and we are truly in the age of information transfer and sharing world, where we all want to share our ideas and information and in return collect some other information. In near future, tool like Academia.edu, Knimbus, ResearchGate, Mendeley definitely rule the world of sharing. Now capacity building can be possible through collaborative tools in the era of ICT. The paper also gives a case study on research community of Gauhati University, who feels this type of platform has enormous potentiality.

Keywords: Collaborative Tools, Cloud Based Library Service, Knimbus, Mendeley, ResearchGate

1. Introduction

“The new Einstein will be ones who share” - The Wall Street Journal, 2011.

With the advent of social and collaborative environments, student, research community and information seekers became more active and participative as they not only have access to contents but also create and share them, becoming proactive.

Communication has evolved, and with this evolution came the new media and the possibility of live conferencing, video sharing, social networking, collaborative tools, allowing the students to create, work collaboratively and communicate in a more direct way with their peers and their teachers.

To help faculty, researchers, and students in the field of their common interests and make connections, many libraries have created a virtual research community that uses an entity-relationship ontol-

ogy model to organize and present information on people, research, and education activities. This single point of access for scholarly activity can be done with many collaborative research platforms, which are easily available in today's ICT world, e.g., ResearchGate, Knimbus, SSRN (Social Science Research Network), Academia.edu, etc.

Many areas of academic research have been moving inexorably in the direction of interdisciplinary collaboration as Internet technologies have enabled academics to make connections with each other and find online research materials with increasing speed and accuracy. To remain competitive, universities today must have the ability to take an integrated view of traditional disciplines from across the intellectual spectrum, and to transform that view into academic programs calling on multiple disciplines.

2. Objective of the Study

The main objective of this study is to find out the effectiveness of the use of Collaborative research tools, which are now rapidly increasing in the field



of research. This is a special study which focuses the scholars of Gauhati University, who feel that this type of platform has great impact on research. From this study, we want to find out the potentiality of this type of Collaborative tools to retrieve relevant information in this world of ‘information overload’.

3. Methodology of the Study

For gathering information related to use of collaborative tools by the research scholars of Gauhati University, following survey research techniques were used for this study:-

- Ø Through a prescribed Questionnaire,
- Ø Discussion and face-to-face interview of the research scholars

Keeping the above scope and objectives in mind, data required for the study were collected through a questionnaire. On the basis of the data and information collected through the questionnaire, it was analyzed on different scales.

4. What Is Collaborative Research?

Here the words ‘Collaborative’ means the action of working with one or more other people to produce or create something. Collaborative research is an umbrella term for methodologies that actively engage communities and policy makers in the research process from start to finish.

This means that university researchers, community-based organizations, and policy makers will work together to:

- “ frame the problems to be tackled and the questions that need to be answered;

- “ undertake the research and interpret the results in terms of their significance for community and policy change; and
- “ Disseminate the research findings and advocate for change.

Collaborative research is engaged scholarship in action, in which university researchers, community members, and policy makers respect the knowledge that each partner brings to the discussion so that together they might know better how to understand the complex problems facing our communities and how to design and implement research-based responses to those problems.

5. Online Collaborative Research Platform (OCRP): A Tool for Scholars

Wikipedia, itself a symbol of collective intelligence and collaboration in a Web 2.0 world, collaboration is “a recursive process where two or more people...work together toward an intersection of common goals...by sharing knowledge, learning, and building consensus.” (<http://en.wikipedia.org/wiki/Collaboration>)

Here collaboration tools are those that enable remote collaboration. In many cases, a collaboration tool is synonymous with a communication medium or device. However, given the rapid introduction of new tools and the almost as speedy demise of tools that don’t find a critical mass of users, identifying characteristics of effective tools may help uncover tools that are already being used within disciplines. In addition, identifying features of effective tools may guide developers in creating next-generation tools.

Predicting which communication device/medium will make a good collaboration tool can be a tricky business. A good tool should:

- ❖ Promote communication;
- ❖ Share a diagram, photograph, paper, or similar objects;
- ❖ Allow natural interactions; and
- ❖ Be easy to use and learn.

Beyond these basic and perhaps traditional characteristics, today's collaboration tools enable persistent micro-interactions—or the sharing of almost trivial updates between collaborators. The face-to-face equivalent of this interaction might come from sharing an office with a colleague for several months.

Collaborative tools can act as an effective service for libraries in terms of capacity building through collaboration, where ICT engulfed the services of libraries. It is an online, open access, cloud based, and internet based service, where users can get their information from their own computers from anywhere. Some of the tools have features like this that they can also access e-resources of the libraries also (e.g. Knimbus).

5.1 Features of OCRP

There are a number of competing research platform services aimed at the research and scientific community. Their main features include:

- ❖ Free to the user
- ❖ Access to material from anywhere in the world
- ❖ Web-based discussion groups
- ❖ Geographically separate research teams can work together better
- ❖ Easier Collaboration between researchers in different countries

- ❖ Sharing of own research collection effectively

5.2 Benefits of the use of OCRP

Some of the benefits from this type of research tools are:

- ❖ Visibility
- ❖ More manuscript submissions
- ❖ More international papers
- ❖ Better quality papers
- ❖ More citations and impact
- ❖ Could help with sustainability
- ❖ Improved editorial quality
- ❖ Makes the 'local' international

OCRP can act as a diagnostic tool for

- ❖ Researchers
- ❖ Journals
- ❖ Funders
- ❖ Institutions or libraries
- ❖ Countries

6. A New Approach to Digital Tools and The Literature Review

There is a whole range of other Web 2.0 tools besides Facebook and Twitter that are particularly conducive to communicating in knowledge networks. Academia.edu, for example, is a social networking site specially designed for academics and has over three million registered users worldwide. These users can share documents with one another on the site, monitor the impact of these publications, and view the latest research developments for specific topics.

The diffusion of information via the internet has let us drowning in an ocean of knowledge. But, tools like Mendeley, ResearchGate, Knimbus come to rescue to find fresh water in this ocean of knowledge in terms of visibility, collaborations, and access to information and knowledge.

Collaboration is especially practical for the bibliographic review. Most Ph.D. students begin their dissertation work by accumulating on their desk all the indispensable articles recommended by each member of the research group. Each platform is used in a specific way and offers diverse functionalities.

7. OCRP Tools: An Introductory View

Some most used OCRP tools are described below.

7.1 Academia.edu

Originally from the west coast of the United States, the platform Academia.edu brings together around one million academic users. Its primary mission is to allow quick exchange of scientific publications and is used especially by university students.

According to its website “Academia.edu is a platform for academics to share research papers.” (<http://www.academia.edu>) The company’s mission is to accelerate the world’s research. Academia.edu is a well-known network site with over a million researchers. A major benefit of academia.edu is that scholars can upload various documents including publications and a CV, join conversation in scholarly communities and select from a range of interests to follow. It is free to sign up. Till date it has over 11,823,255 academic users who have added 3,069,756 papers and 1,170,000 research interests. Academia.edu attracts over 15.7 million unique visitors a month.

7.2 Knimbus

Knimbus is a knowledge platform that serves anyone who is involved in the consumption or creation of knowledge. Its vision is to democratize knowledge across all spheres. However, Knimbus also seeks to provide students cutting-edge knowledge beyond their curriculum by providing access to thousands of e-books, theses and international course documents. It is an Indian company, founded in 2010 by Rahul Agarwalla and Tarun Arora, to address challenges faced by researchers when searching for information across multiple data sources.

Knimbus’ single search and access window connects users to more than a billion items of content which are searched and analyzed in real time using its massively parallel system and intelligent algorithms. This reduces hours that researchers would otherwise spend looking for information, and enables them to focus on core research. It is valuable for users who want to know what others from the same field are reading and finding relevant. Thus, the collective intelligence of the research community based on what people read, tag, comment on and share creates an information signal leading to better information discovery. Many leading institution in India has been using Knimbus for searching of e-resources. In North-Eastern India, Dibrugarh University and NEHU are active members of Knimbus.

7.3 Mendeley

Mendeley is “a free reference manager and academic social network that can help organize research, collaborate with others online, and discover the latest research.” Its tagline is “It is time to change the way we do research”. (<http://mendeley.com>) Mendeley lets users upload and share pdfs and

encourages collaboration with a group feature in which members can share documents, follow updates, make comments and track progress within the groups they create. Users can also search for papers in Mendeley's crowd-source database, add papers to their profile's library and comment on the papers of their colleagues directly. Mendeley is not only a social media site, but an open source reference manager that is free to sign up for and download onto computer.

7.4 My Science Work

MyScienceWork is a professional scientific social network dedicated to open access. It allows scientists, engineers, and students to issue their own professional individual information, like data sheet, profile, CV, and publication list. This search engine and communication platform provides a large set of suggestions of work teams, conferences, events, news, and also scientific job offers freely available to each user. MyScienceWork supports the circulation of open-access scientific texts. Its search engine gathers the main open-access databases online. It also provides a popular science media dedicated to posting news items about multidisciplinary professional research. It contains scientific news articles, video abstracts, researchers' biographies, opinion pieces and dossiers about open access, women in science, doctorate and science 2.0.

7.5 ResearchGate

The tagline of ResearchGate is "built for scientists, by scientists, with the idea that science can do more when it is driven by collaboration." (<http://www.researchgate.com>) The main goal of ResearchGate is to connect scientists in order to foster collaboration. With over 4 million users, its

community is composed of several disciplines. ResearchGate provides an online platform for users to build an online portfolio, present their research, search a database of user publications, and lists scientific conferences. Signing up for ResearchGate is free.

It started when two researchers discovered firsthand that collaborating with a friend or colleague on the other side of the world was no easy task. Founded in 2008 by physicians Dr. Ijad Madisch and Dr. Sören Hofmayer, and computer scientist Horst Fickenscher, ResearchGate today has more than 4 million members. It believes that science should be open and transparent.

7.6 SSRN (Social Science Research Network)

Social Science Research Network (SSRN) is devoted to the rapid worldwide dissemination of social science research and is composed of a number of specialized research networks in each of the social sciences. They now have hundreds of journals, publishers, and institutions as partners in publishing that provide working papers for distribution through SSRN's e-library and abstracts.

The SSRN e-library consists of two parts: an Abstract Database containing abstracts of over 535,500 scholarly working papers and forthcoming papers and an Electronic Paper Collection currently containing over 439,900 downloadable full text documents in Adobe Acrobat pdf format.

7.7 Social Science Space

Social science space, developed by the social sciences journal SAGE, and SSRN, the Social Science Research Network, both offer a place for debate and

discussion of the humanities and social sciences, funding policies, research governance, etc.

8. Advantage And Disadvantages of OCRP

8.1 Advantages

- ◆ The ability to locate other scholars with similar research interests.
- ◆ The power to upload papers, articles, and even books to contribute to a worldwide digital repository.
- ◆ Quick retrieval of required information on respective research needs.
- ◆ Easy to access database.
- ◆ Provides additional cloud storage facility to users (e.g. Knimbus, Mendeley etc.)
- ◆ OCRP make it clear that the papers uploaded will be shared with others instead of stored in a dusty server room, never to be heard from again.

8.2 Disadvantages

- ◆ The biggest hurdle of OCRP is that it can be obsolete or stop working anytime (e.g., Knol, 2collab from Elsevier, etc). Though, import of the data can be possible.
- ◆ Academic networking sites are facing big challenges in finding an effective way to ensure that only legitimate academics participate.
- ◆ Anyone can pass themselves off as an academic and scholars could be misled into putting their details on it.
- ◆ Some sites are so careful to screen members that they seem almost impossible to join.

◆ If there is no internet connection, then it is not be possible to access this type of tools.

◆ Many times, this type of research tools fails to reach all types of scholars.

9. DATA ANALYSIS AND FINDINGS

The data collected in the responses received through the questionnaires was analyzed and interpreted. The questionnaire was provided to more than 150 scholars of Gauhati University doing research in various fields. But, due to various constraints, only 80 respondents filled their questionnaire.

9.1 Usability of OCRP tools

This study focused on Research Scholars of Gauhati University. The respondents were from various department of respective university. The analysis of data collected from respondents is presented below.

a. Status of respondents

All the respondents have been classified in two categories (Table 1). It is observed that out of 80 respondents, 58 (72.5%) were male and 22 (27.5%) respondents were female.

Table 1: Status of respondents

Status	Respondents	
	Numbers	%
Male	58	72.5
Female	22	27.5
Total	80	100

b. Frequency of visit to the library

Table 2 shows that out of 58 male researchers, 38 (65.52%) visited the library sometimes (not regular basis), followed by 20 (34.48%) 2-3 times a week,

while 14 (63.64%) females visited the library sometimes, followed by 8 (36.36%) 2-3 times a week. It is noticeable that nobody among the researchers visited the library on daily basis.

Table 2: Frequency of visit to the library

Frequency	No. of Respondents					
	Male	%	Female	%	Total	%
Everyday	0	0	0	0	0	0
2-3 times a week	20	34.48	8	36.36	28	35
Sometimes	38	65.52	14	63.64	52	65
Never	0	0	0	0	0	0
Total	58		22		80	

c. Purpose of visit to the library

Table 3 shows that 26 (44.82%) male scholars visit the library to access e-resources, 25 (43.10%) to access the available information to update knowledge, 23 (39.65%) to use the internet section for research-data processing, 20 (34.48%) to borrow books, 18 (31.03%) to consult the dailies and 19 (32.75%) for all the purposes. While 12 (54.54%) female scholars visit the library to access the available information to update knowledge, 10 (45.45%) to borrow books, 8 (36.36%) to use the internet section for research-data processing, 6 (27.27%) to consult the dailies, 5 (22.72%) to access e-resources and 9 (40.90%) for all the purposes.

Table 3: Purpose of visit to the library

Purpose	No. of Respondents					
	Male	%	Female	%	Total	%
To access the available information to update knowledge	25	43.10	12	54.54	37	46.25
To borrow books	20	34.48	10	45.45	30	37.5
To use the computers for research-data processing	23	39.65	8	36.36	31	38.75
To access the e-resources	26	44.82	5	22.72	31	38.75
To consults the dailies	18	31.03	6	27.27	24	30
For all of the above purpose	19	32.75	9	40.90	28	35

d. Preference of documents

Table 3 shows that 32 (55.17%) male scholars prefer digital documents followed by 6 (10.34%) physical and 20 (34.49%) prefer both medium; while 8 (36.37%) female scholars prefer digital documents followed by 5 (22.73%) physical and 9 (40.90%) prefers both medium.

Table No. 4. Preference of documents

Documents prefer most	No. of Respondents					
	Male	%	Female	%	Total	%
Digital	32	55.17	8	36.37	40	50
Physical	6	10.34	5	22.73	11	13.75
Both	20	34.49	9	40.90	29	36.25
Total	58		22		80	

e. Awareness about Online collaborative Research Platform (OCRP)

Table 5 shows that 30 (51.72%) male scholars were aware of ResearchGate followed by 8 (13.79%) Academia.edu, 3 (5.18%) Knimbus, 3 (5.18%) SSRN, 2 (3.44%) each for Mendeley and Social Science Space and 10 (17.25%) scholars were unaware of OCRP. On the other hand, 8 (36.36%) female scholars were aware of ResearchGate followed by 3 (13.63%) Academia.edu, 2 (9.10%) Social Science Space, 1 (4.55%) SSRN and 8 (36.36%) scholars were unaware of OCRP.

Table 5: Awareness of OCRP

Online Collaborative research platform	No. of Respondents					
	Male	%	Female	%	Total	%
Academia.edu	8	13.79	3	13.63	11	13.75
ResearchGate	30	51.72	8	36.36	38	47.5
Knimbus	3	5.18	0	0	3	3.75
My science work	0	0	0	0	0	0
SSRN (Social science research network)	3	5.18	1	4.55	4	5
Social Science space	2	3.44	2	9.10	4	5
Mendeley	2	3.44	0	0	2	2.5
Unaware	10	17.25	8	36.36	18	22.5

f. Contribution made by Researchers

Table 6 shows that 18 (31.03%) male scholars' contribution is made by sharing of papers, followed by 17 (29.31%) collection of information, 13 (22.41%)

collaboration and 10 (17.25%) made all the contributions; while 9 (40.90%) female scholars' contribution is made by collection of information, followed by 3 (13.63%) sharing of paper, 2 (9.10%) collaboration and 8 (36.37%) made all the contributions.

Table 6: Contribution made by Researchers

Contributions	No. of Respondents					
	Male	%	Female	%	Total	%
Collaboration	13	22.41	2	9.10	15	18.75
Sharing of Paper	18	31.03	3	13.63	21	26.25
Just for collection of information	17	29.31	9	40.90	26	32.5
All of the above	10	17.25	8	36.37	18	22.5

g. Reasons for using Online Collaborative Research Platform

Table 7 shows that 24 (51.06%) male scholars find use of OCRP very interesting and easy, followed by 7 (14.90%) connecting researchers worldwide and easy to find required information, 5 (10.63%) pleased to see their research work on web; while 3 (30%) female scholars find OCRP very interesting and easy to find required information, followed by 1 (10%) connecting researchers worldwide and, 1 (10%) pleased to see their research work on web.

Table 7: Reasons for using Online Collaborative Research Platform

Reasons	No. of Respondents					
	Male	%	Female	%	Total	%
It helps in connecting researcher worldwide	7	14.90	1	10	8	14.03
It makes research very interesting and easy	24	51.06	3	30	27	47.37
It makes easy to find required information	7	14.90	3	30	10	17.54
Pleased to see own research work on web	5	10.63	1	10	6	10.53
All of the above	4	8.51	2	20	6	10.53

h. Facing of problems in using OCRP

Table 8 shows that 26 (32.5%) respondents find this type of tool complex to use, 23 (28.75%) find the problem of speed of internet and 19 (23.75%) thinks that there are lack of sufficient information; while 22 (27.5%) respondents don't have much knowledge on this.

Table 8: Facing of problem in using OCRP

Reasons	No. of Respondents					
	Male	%	Female	%	Total	%
Internet speed is slow	19	32.75	4	18.18	23	28.75
Non-availability of sufficient documents	12	20.68	7	31.81	19	23.75
Complex to use	18	31.03	8	36.36	26	32.5
Don't have much idea	11	18.96	11	50	22	27.5

i. Subject-wise awareness of OCRP

Table 9 shows that scholars of economics have the highest number of respondents 11 (18.96%) both male and female regarding awareness of OCRP, followed by 7 (12.06) biotechnology, 6 (10.34%) library and information science, 5 (8.62%) Physics, 4 (6.89%) chemistry, and 3 (5.17%) computer science, education, mass communication, political science, mathematics, statistics, history and 2 (3.44%) commerce; while botany had only 1 female (1.72%) respondent.

Table 9: Subject-wise awareness of OCRP

Subject	No. of Respondents					
	Male	%	Female	%	Total	%
Economics	8	20	3	16.67	11	18.96
Computer science	3	7.5	0	0	3	5.17
Commerce	1	2.5	1	5.55	2	3.44
Education	1	2.5	2	11.12	3	5.17
Mass communication	3	7.5	0	0	3	5.17
Library & Information Science	4	10	2	11.12	6	10.34
Assamese	1	2.5	0	0	1	1.72
Political science	2	5	1	5.55	3	5.17
Chemistry	3	7.5	1	5.55	4	6.89
Physics	4	10	1	5.55	5	8.62
Biotechnology	3	7.5	4	22.23	7	12.06
Mathematics	3	7.5	0	0	3	5.17
Statistics	2	5	1	5.55	3	5.17
History	2	5	1	5.55	3	5.17
Botany	0	0	1	5.55	1	1.72
Total	40		18		58	

10. Conclusion

The collaborative research platforms as discussed above are doing their best to improve research in a transparent way. Although there are various pros and cons in every innovation, however, if some innovations lead us to benefits then it is good to choose them. These are, of course best in use of research purpose, but, in near future it is not only going to be helpful for researchers but also student community who love to do innovative things and love to seek information. Libraries as well as library personnel have much to do in it. Without their help, information seekers and researchers, flooded with several options of these research platforms, may be in dilemma regarding choice of suitable options. The open research is already accepted widely in science and technology, but, in case of social sciences it is still in novice stage. It is like eHarmony for the brain instead of the heart. If there is a need and a demand for such a thing, it could really take off.

References

1. Chakraborty, Nirmali. Activities and Reasons for Using Social Networking Sites by Research Scholars in NEHU: A Study on Facebook and ResearchGate. In Proceeding of the 8th Convention PLANNER-2012, Sikkim University, Gangtok, 01-03 March 2012. Ahmedabad: INFLIBNET Centre, 2012. pp. 19-27.
2. Leone, Beth Di and Edwards, Elizabeth. Innovation in Collaboration: Using an Internet-Based Research Tool as a New Way to Share Ethnographic Knowledge. *Ethnographic praxis in industry*, 2010, Vol. 10, No. 1, pp. 122-135.
3. Burpee, K, Fernandez, L. Scholarly Communication at Canadian Research Libraries: Conversations with Librarians. *Journal of Librarianship and Scholarly Communication*, 2014, 2(2):eP1121. <http://dx.doi.org/10.7710/2162-3309.1121> (Retrieved in 01/07/2014)
4. <http://onlinelibrary.wiley.com/doi/10.1111/j.1559-8918.2010.00012.x/pdf> (Retrieved in 01/07/2014)
5. <http://www.knimbus.com> (Retrieved in 28/06/2014)
6. <http://researchgate.net/> (Retrieved in 27/06/2014)
7. <http://www.academia.edu> (Retrieved in 02/07/2014)
8. <http://www.mendeley.com> (Retrieved in 28/06/2014)
9. <http://www.mysciencework.com> (Retrieved in 28/06/2014)
10. <http://www.ssrn.com> (Retrieved in 28/06/2014)
11. <http://www.socialsciencespace.com> (Retrieved in 28/06/2014)
12. <http://en.wikipedia.org/wiki/Collaboration> (Retrieved in 01/07/2014)

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