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Exploring doctoral Community Social media preparedness for a B-School using A socio-technical Lens

Anindita Paul[1]

[1]Assistant Professor, Information Technology and Systems at the Indian Institute of Management Kozhikode, Kozhikode, India. IIMK Campus P.O., Kozhikode, Kerala 673570, India; Email: apaul@iimk.ac.in; Phone Number (+91) 495 2809122

Abstract

Doctoral research scholars look for quality information to fulfil their research pursuits. They are information alert as they have a narrowed down interest area for which they are constantly looking out for information. The behaviour, environment and the associations of the research scholar play an important role in creating conducive grounds for quality information seeking. A qualitative enquiry using the Socio-technical lens that looks at individuals, social and technology in a context and explores the interaction between these. The study explores the Social Media preparedness of the doctoral community. The study was conducted in a premier B-School located in South India. Preliminary findings indicated that communities play a major role in supporting the scholars information behaviour. However, communities in the physical spaces, though enable them to be in proximity to each other, the online communities enable a better support system for information. Attitude and comfort level with seeking information from Social Media was also found to be a major hindrance to utilise it for information seeking. Library has a crucial role to play in this regard. The scholars see the library as a place where they will start their information search.

Keywords: Social Media, Doctoral Students, Information Seeking, Social Networking Sites.

1　　Introduction

Research scholars' information seeking behaviour is an important area of study owing to the easy accessibility to information through various information sources in the digital age. The pursuit of quality information is what differentiates the research scholar from the casual information seeker. The environment and the associations of the research scholar plays an important role in creating conducive grounds for quality information seeking. With a bombardment of information ranging in topicality, credibility, relevance and other criteria, scholars have to filter and narrow down on useful information. Studies have discussed that credibility of information is relative to the context, source, type of information and sometimes intuition too (Hilligoss & Rieh, 2008, Mai, 2013). Rieh and Danielson (2007) discuss the various associations of credibility and postulate how scholars attribute credibility of information to their knowledge of individual affiliations or source characteristic and domain knowledge when looking at web information. Also, Rieh (2002) adds the importance of judgment factors of information quality (information is useful, good, current and accurate) and cognitive authority (trustworthiness of the information) to be important for scholar's web information retrieval.

With the different dimensions of scholars' information seeking strategizing their information behaviour to get the 'best' information possible becomes challenging. In such a case it won't be an overstatement to say that the right information may often times be a factor of luck.

Studies have also looked into information that is obtained serendipitously or unexpectedly (Erdelez, 1997; 2000, 2004; Erdelez & Rioux, 2004; Williamson 1998; Foster and Ford, 2003). Serendipitous discovery of information in the academic environment has also been studied (Erdelez, 1997, 1999; 2005; Watson, 2008; McBirnie, 2008; Sun et al., 2011; Foster and Ford, 2003; Makri & Blandford, 2012a,b). With the ubiquitous information environment, there is a need to understand how the environment can be shaped to make serendipitous discovery of information a reality. Can systems be designed to facilitate such an unexpected chancing upon information that is useful? Bawden (as cited in Bawden, 2011, p.13) suggested certain specific features for serendipitous information discovery through systems –

> inclusion of peripheral and speculative material; provision of interdisciplinary information; representations of information to bring out analogies, patterns, exceptions etc.; emphasis on browsing facilities; encouragement of informal channels; information geared to individual preferences and requirements; direct involvement of the information user; appropriate use of new information technologies; an overall information-rich environment.

Though designing for serendipitous discovery of information is a challenge, studies have attempted to suggest some aspects of designing for accidental acquisition of information (Makri and Warwick, 2010). Also in the special issue of information research, Erdelez and Makri (2011), stress on the importance of developing for 'opportunistic discovery of information' by developers of digital information resources. They draw attention to the need for more work in creating environments that shift from information search to information discovery, a pull to push.

Doctoral scholars information seeking is of significance and complicated that further affects the quality of their output. New developments in technology has seen increasing reliance on information systems. Social Media (SM) has added to the repertoire of features afforded by information systems at the core of which lies the network value. It has taken the information age by storm in that it has enabled a shift from collecting to connecting. A blog by Paul (http://researchblog.iimk.ac.in/?p=338) reflects on the emergence of the 'relevant and redundant' information that the new age information seeker has to deal with owing to the directed and yet redundant information that is due to the information overload.

SM use in higher education has lately beein investigated in developing countries (see, Basu, 2017; Falahah and Rosmala, 2012; Sobaih et al., 2016). Tess (2013) reviewed studies on SM use in higher education and found positive aspects of SM use for higher education such as affective outcomes of SNS integration and communications. Some of the shortcomings that he pointed out was the need for more intuitive format of the SM, perception of the SNS space as personal than educational, quality of educational material and related issues of copyright.

Information seeking is a complex phenomenon that involves acquiring, using and implementing information (Kumar, 2013). To add to this, various factors affect the information seeking behaviour of an individual or a group of individuals, i.e. motive, channels and sources of information and barriers to information. Considerations of the increasing complexities of information seeking, enables a holistic view of the information seeking behaviour of an individual.

This study uses interpretive approach to look at the heavily loaded information environment of the doctoral scholar community in one of the higher-ranking B-Schools of India and investigates their information seeking behaviour. There are available resources, campus infrastructures, information habits and other means which the scholars can avail. The study intends to understand the scholars' social media preparedness that will assess their openness to an internal community platform for the B-School specially geared towards the doctoral scholar segment as this would enable better networking and sharing of information. A socio-technical approach is used that looks into individual information seeking styles, community behaviour and finally the existing infrastructure and its use by the scholars. The authors claim that such an approach is important towards understanding of the need for an additional platform for networking and the additional value it will create for the doctoral community.

2   Literature Review

Studies have looked at various angles of scholar information seeking behaviour. George et al. (2006) found information seeking behaviour of graduate students as both random and organized. They found students, sought information iteratively. Besides the internet, people too held an important place in their information seeking. Use of connections to seek information maybe cultural where collectivist cultures may rely more on contacts when seeking information. However, with easy accessibility to information through the internet more options have opened up and there is a possible shift towards the internet.

In spite of the important role played by the internet in information seeking, the reliability of information has been a major concern. Information obtained through internet may not be as reliable as through a trustworthy contact. Carpenter (2012), however, found that doctoral scholars assured the reliability of information through a number of other ways such as the impact factor of journals, status or credibility of open access journals in the eyes of academic colleagues and potential employers; strong preference for peer-reviewed journals; citations by other publications etc. However, in some

cases the perception of the information seekers may work against quality measures of information such as their mistaken assumptions that open-access journals are inferior. The internet, in any case, was the easiest way to access information mainly because of accessibility. The scholars valued the information that they got from the internet with some variations among various disciplines about the perceived importance of the internet and the discipline-wise search process also differed. Inter-disciplinary variations in information seeking were also found in a study of doctoral students of physics by Jamali and Nicholas (2006). They found that the common way in which students go through the initial familiarization process is to get introduced to a few key resources, usually papers and sometimes books or conference proceedings, suggested by their supervisors as a start point. This was mostly because these students joined a running research project which then lead them to search for information on the references of the project papers whereas arts and humanities doctoral students start with their own research plans and proposals. Jamali and Nicholas inferred that students normally start by chaining and tracking references eventually tracing their way to meet their information needs. Hence, the information seeking may vary between disciplines.

Library has a major role to play in information seeking of scholars that often access the journals and books subscribed and bought by the library. Journals available from the library is useful when scholars get what they are looking for through the library's resources. Drachen et al. (2011) found this to be true, nevertheless they also found that online library services are very much in use and physical buildings very less so. The library tools such as the reference management software was not as widely used as was expected. The study found that information research habits are often established long before the PhD studies and they further develop during the PhD process but mostly without library support. It implies that culture is also one probable determinant that further reflects in the information behaviour of scholars. Liao et al. (2007) found differences in international students' information seeking with that of American students. He found the use libraries was much more active and often for international students than American students during their graduate studies. Although American academic library services are quite new to the international students, they don't think those services are difficult to use. A similar pattern was observed for their strong interest in reference instruction/orientation/workshops and reference compared to American students. They also found distinctive studying style of international students who preferred group study/discussion in libraries compared to the American students.

Jamali and Nicholas (2006) found behavioural aspects over time that shape the doctoral students information seeking. This has to do with the practice followed among the doctoral community. As they move further in their studies, they improve their information seeking skills and, become capable of finding literature and information faster. They also become more efficient in filtering through information resources. Doctoral scholars are reliant on use of e-print archives for keeping up-to-date. Their study also investigated the evaluation of various resources for searching information like library, google scholar, listservs, OPAC etc. One of the main problems for the participants was not having access to older articles. A multidisciplinary study of academic researchers by Ge (2010) found influence of factors such as availability, accessibility, usability, source quality, and research topic specialty, disciplinary constraints, perceived ease of use, awareness, and personal constraints on the use of electronic resources. Drachen et al. (2011) found inaccessible information is often disregarded. The typical behaviourisms of the doctoral students can help the library shape its offerings. It is important that proper facilities through the infrastructure and library be provided in line with the information seeking behaviour of the doctoral scholars that enhances the searchability of information. In that sense the important aspects of user-friendliness and access to quality information needs to be kept in mind.

Further, Foster and Ford (2003) found serendipitous discovery of information a common occurrence among doctoral scholars. They also found attitude and strategic decisions could influence serendipitous information acquisition. According to them, there could be an element of design in making serendipity possible. They observed that gatekeepers such as that of library classification schemes could manifest serendipity. With convenient access to the internet various tools in the WWW such as those brought by SM can also be designed in a way to provide seamless access to information including possibilities for serendipity. A SM use study by Dantonio et al. (2012) on PhD scholars found many opportunities for serendipitous discovery of information that would interest the scholars. Other indica-

tions of its usefulness for the everyday use of scholars which included leisure was also found. Services with SM functions such as Zotero, Mendeley, Wikipedia etc. were also found to be useful.

3   Methodology

The study used qualitative method to understand the information behaviour of doctoral student in the context of the doctoral student community in one of the premier B-Schools in Southern India. An unstructured focus group (FG) interview technique with an interview guide was used to collect data. Wilkinson (2004) suggests FGs provide insights on an issue or topic, because the interaction process stimulates memories, discussion, debate and disclosure in a way that is less likely in a one-to-one interview. Our study was exploratory in getting an overview of doctoral students information seeking, multiple FGs were seen as providing useful indicators of doctoral students' information seeking behaviour and perceptions about SM specifically geared towards the doctoral students. Questions were directed towards understanding how do the doctoral scholars seek information, factors that affect their information seeking, information resources used and process of information seeking and how does social media feature in their information seeking. Their impressions were also sought on bonds between the members of the community and the hurdles faced in the information seeking process. Mass mailers were sent to the doctoral community for recruiting participants for the study. The participants of the study were divided into three groups based on the stage of maturity in the doctoral program- 1) Pre-Comprehensive, 2) Post-Comprehensive, 3) Pre-Thesis. Three FG interviews were conducted with four, three and seven students respectively (referred from here on as P1,P2…P14). Each FG lasted for at least 1 hour each. Krueger and Casey (2014) recommends a small size for FGs with more passionate and experienced participants who have more to share. Our interviews were with doctoral students who were into the different stages of the program and for a duration of at least three years, enabled them to share their experiences in-depth. Hence, the smaller sample size was not so much of a concern at least for the ones that were in the first and second FGs. Rather the third FG had the earliest stage of doctoral scholars into the program and hence was compensated by increasing the size of the group as is recommended by Krueger and Casey. In any case, because of the availability of the doctoral students from a limited pool, a recommended size of at least 5 participants could not be maintained for two of the three FGs. The participants belonged across different specializations in business studies such as Information Technology and Systems, Marketing, OB & HR etc. At the end of each FG, the participants filled up a short questionnaire indicating the importance of the different information resources available to them in the current setting on a Likert scale.

4   Analysis

The FG interviews were transcribed and imported in NVivo10 for analysis. The transcripts were analysed open-coded. The coding was done with individual, social and infrastructural lens in the context of a B-School doctoral program. Some of the codes were *community related, difficulty, information source, search behaviour*. Figure 1 shows the percentage coverage of each code for FG 1. The codes acted as pointers towards the information environment of these doctoral scholars in the context of the B-School. A cluster analysis of the codes were done that indicated the occurrence of codes that occurred together through the transcript (Figure 2). Figure 3 exhibits the structural occurrence of the nodes in the FG 1.Two of the nodes, *Information Sources* and *Search Behaviour* had subcategories of the other codes that are within the respective boxes. The size of the boxes represent how many of the interview items were coded by the respective nodes and the colour represents the frequency of the nodes in a continuum of low to high. The figures were examined for most occurring nodes as well as association between them. It maybe noted that the node *Social Media* had the most percentage coverage as the discussion on social media was deliberate at the end of the interview.
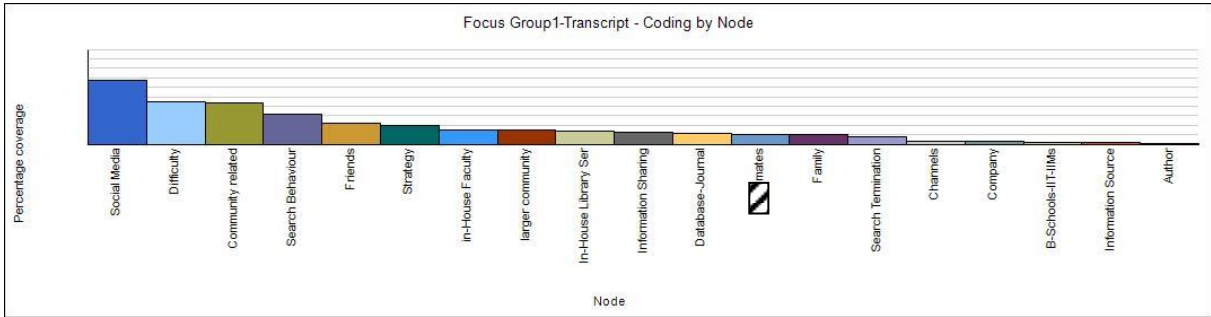
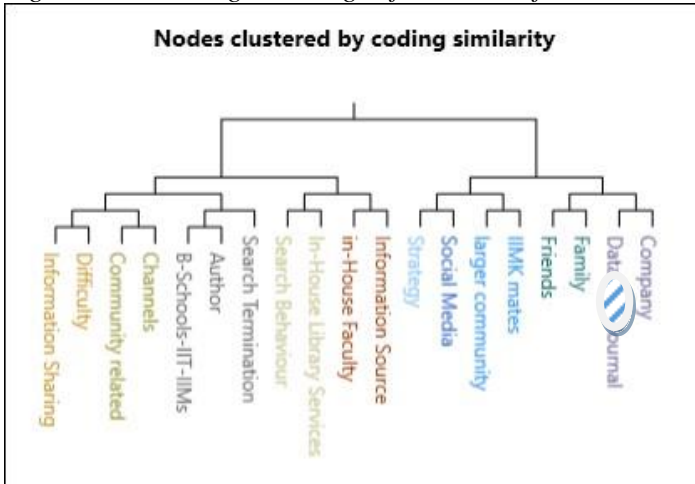*Figure 1: Percentage coverage of each node for Focus Group 1*

Figure 2: Dendrogram showing the cluster analysis of the nodes of Focus Group 1
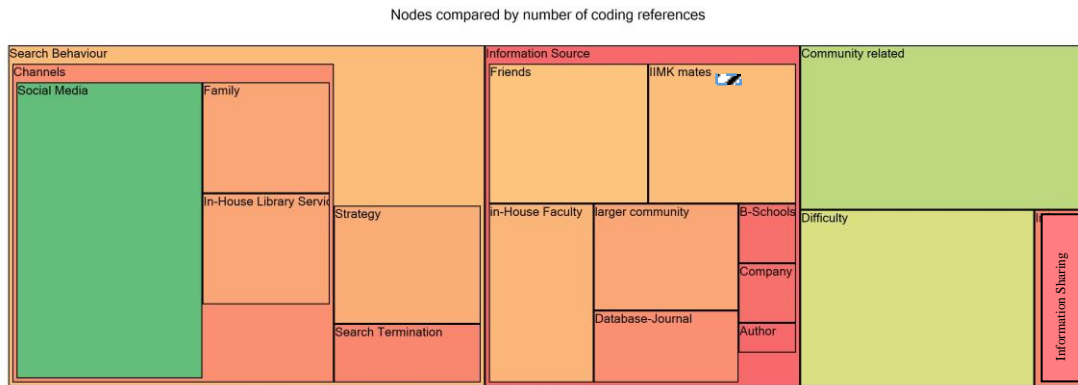

Figure 3: Tree map of the structure and frequency of occurrence of the nodes for Focus Group 1

5   Preliminary Findings

The doctoral scholar community in the B-School studied is a relatively small group of 48 students coming from the diversity multi-cultural Indian population. The findings indicated aspects related to individual preferences, role of community and infrastructure. There was a significant role that community played in the information seeking behaviour of scholars. The participants belonged to two major communities - based on region that spoke the same language, and the same disciplinary area they were pursuing their doctorates in, which determined who they bonded to more and the resources they looked for. Being a part of the larger doctoral community of researchers that spread outside the school also had significance in their information behaviour as they were proactively looking at being a part of such broader community through social media and at times have reached out to them when needed.

Apart from community influences, the personal attitude and characteristics of the scholars were also seen in their information seeking preferences such as qualities of friendliness or personality as well as personal attitudes towards the information being searched or perceptions about people and processes. The technology of the day such as the features afforded by social media also shaped their information seeking and so did the infrastructure and facilities offered by the B-school. We reflect upon the findings using the individual, social and technological aspects.

Figure 4 shows the responses to the questionnaire the scholars filled up at the end of the FG interview. According to their response, quite a few rate e-journals and Google Scholar as most important for information seeking related to their research. There was quite a bit of importance given to the academic community that included faculty within the B-School and fellow doctoral students. Only one respondent, across the group of 14 in all the FGs, did not see the use of social networking sites as that important. The other sources that they used for information seeking also included Youtube, Academia.edu, e-Books Blogs, SSRN (Social Science Research Network), Newsletters, Email alerts, Google, TED Talks, Online newspaper and Library. The people resources that they indicated is important for them were those of authors of papers, faculty from other colleges, students and friends from other colleges, company contacts, family members and other social ties. A few also indicated traditional sources such as books, library and coursework to be preferred information sources for their work. All of this placing people before things.
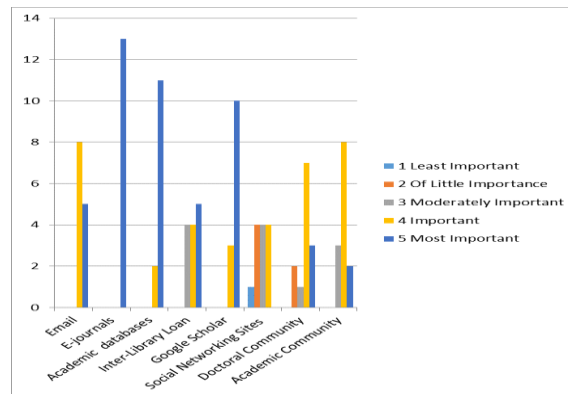

Figure 4: Satisfaction levels of using different information resources

The participants mentioned a few times using SM for strategy. Apart from that, fellow college mates and larger community was also seen as a reliable information source, something that the participants also indicated in their questionnaire response. Figure 3 also indicates that *community related* and *difficulty* were two of the other major occurrences in the interview indicating there were quite a bit of hurdles in information seeking of the participants and that community had a some role to play in all of this. It is also apparent from figure 3 that people such as faculty, college mates and friends were an important information source compared to the library which was taking a comparatively lesser preference. It is possible that the conveniences of online access has replaced library services. This also reflects in the literature that indicate a shift towards online library services than physically using the library facility.

Among the four participants in FG1- P1, P2, P3 and P4, the difficulties faced varied across. P4 had more difficulties with the library subscriptions being limited and the process they used for subscribing to journals and other resources, which did not consider the doctoral scholars need. P1 too mentioned one instance where she was unable to access resources because the library did not provide them. Most of P3's difficulty was related to the unique nature of the information she was seeking for which she had to look around for the right source quite a bit. There was no organised assistance provided for which she faced difficulty. As for P1, due to his contacts and friendly personality he had quite an active friend group that were proactive in his information as well as he had reached out to the academic

fraternity from where he had received quite a bit of help. Though in some cases faculty had a role to play in the doctoral scholars' information seeking, it was not a regular occurrence for all. It is possible that faculty cannot always play an active role in the scholars' information seeking owing to their own time constraints.

The analysis of the rest of the data will enable a better understanding of the social media preparedness of the doctoral scholars. With the current analysis, there seems to be areas where the online media is helping quite a bit in information seeking, however it can still be enhanced to account for factors that increase credibility and free flow of information across the community in an academic setting. This can be achieved by looking at the existing social media use by research scholars and identifying gaps in order to address those. This has implications for academic institutions that can involve the library in the pursuit of developing better facilities for information access.

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Research Office

Indian Institute of Management Kozhikode

IIMK Campus P. O.,

Kozhikode, Kerala, India,

PIN - 673 570

Phone: +91-495-2809238

Email: research@iimk.ac.in

Web: https://iimk.ac.in/faculty/publicationmenu.php