

Information as social and intellectual capital in the research career: a gender perspective

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Introduction

The academic community is a stratified social structure built on competition and a need to be acknowledged. In this environment men and women do not have the same opportunities and one manifestation is that women have difficulties in gaining access to social networks. This is likely to affect women's access to information, particularly information otherwise difficult to get, since that is usually available through informal personal contacts. Information exchange is fundamental for researchers and the foundation for their competence and authorisation. By being acknowledged by others the researcher and his/her research are given a value. The researcher can thus be seen as part of a social system. In this system information is needed for problem solving as well as advancement and both the amount and type of information available affect the researchers' participation and position in the system. Therefore, when studying how men and women find for them relevant information, it is interesting to take into consideration differences in access to information. If women have less or different opportunities to gather needed information, how will their information behaviour be affected? In addition, attention may be given to new information technology with new ways of getting into contact with people. There could be a potential for improved means of communication, beyond established structures.

The purpose of the thesis is to study the information behaviour of male and female post-graduate students from a gender perspective, with special focus on informal contacts and the importance of new information technology. This is done by a study of post-doctoral students in two academic settings. The goal is to gain a better understanding of the importance of information from different kinds of personal contacts for the research career and the role of information technology in the creation of such contacts. Information behaviour is regarded as the interplay between information needs, access to and use of information and the effects of information use ([Höglund & Persson, 1985](#)). These four aspects are treated as problem areas to which research questions are related. The behaviour is to a large extent affected and formed by a social context in which various demands, expectations and ideas affect people's ways and possibilities to act. Doctoral students are by means of their education, socialised into a social context in which information is necessary both for problem-solving and advancement and can thus be seen as an intellectual and social capital. The processes in which these capitals are acquired and their influence on the students' research careers are important to understand. Research on women and the academic community with descriptions of structural conditions will be used for an understanding of the students' milieu.

Problem areas and hypotheses

The need for information is governed not only by cognitive reasons; equally important are affective and physiological ones ([Wilson, 1981](#)). The doctoral students' needs are responsive to personal needs and shaped in a social process where competition is central and in which information is needed in order to understand prevailing norms within the subject field. For example what subjects are appropriate, which scholars that are central to the field etc. Depending on what a student does and wish to accomplish, different kinds of information are sought from various sources. At the beginning of their post-graduate studies students may need information to understand the structure of the subject and the local environment, while later they may need to be familiar with international structures and actors related to their own research. This includes information about ways to financing, contacts and distribution of research material. For an understanding of the reasons for wanting information one must therefore look to the situations of the students; what they are doing, their expectations, future plans, financing etc. and what they need in order to handle their situations as post-graduate students.

A person's access to information affects how various needs can be satisfied. The sources from where information is available are often divided into formal and informal, giving access to different kinds of information. Through formal sources, e.g. journals, public information is found which is central to the intellectual capital. This information is not always contemporary, as the process leading to publication can be protracted. Informal sources give access to information otherwise difficult to find about research in progress but also information of actors, values and other important aspects of research, i.e. the social capital needed for positioning in the field. The direct interaction between people is central and informal exchange of information is often considered one of the most important sources for information. The mapping of informal contacts are therefore of great importance for an understanding of the information behaviour, in particular since different kinds of personal contacts are likely to give access to different kinds of information and the access to informal sources may vary more than access to formal contacts. Concerns will therefore be given to whom the doctoral students have contact with, what information is gathered from whom and why.

Access to information varies over time. At the beginning of the research studies the supervisor is likely to play a large role, not only as a mediator of information but also to introduce the students to interesting networks. As the students become socialised into the subject fields they will probably develop personal contacts of their own and habits for gathering of information. Influential factors are knowledge of sources, personal preferences etc. Changes over time will therefore be investigated.

With an interest in information from personal contacts it is relevant to study the use of new information technology since there are opportunities for interaction between people with similar interest on equal conditions. The study will look at how male and female students use different functions, particularly functions involving human interaction, such as mailing lists. There are findings indicating that women value these kinds of contacts more than men do ([Lincoln, 1992](#)).

The interest in usage of information and the effects of usage help to see information as part of daily activities. How different kinds of information are used and how useful different kinds of sources are. The results of the use of information are mirrored in how the students' information behaviour is affected, for example what new needs that arise due to the usage and if access, and thus the possibilities to satisfy the needs, are changed. It is also possible to look to changes in the students' total situations by observing production and advancement in the field as well as seeing to their own satisfaction. How are their theses affected? What are their positions in the field? Are they content with their situations and how are they evolving?

These problem areas interact in a complex pattern, which makes it important to study

all of them although the focus of the study is on access to information through various sources. Access to information is an important aspect, where inequality may exist between men and women, but availability and different kinds of needs for information affect the final use of sources and consequently the information the students gather. Various needs may change their access to information as new contacts are developed with people who are perceived to have important information.

The preliminary hypotheses that the study will work with are:

- There are differences in access to and participation in social networks between male and female doctoral students, for example types of personal contacts and the proximity of these contacts to the departments in which the students are active. These differences affect their information behaviour and in the long run their research careers.
- These differences are likely to decrease as their research studies proceed, resulting in more equal patterns of progress of their careers.
- New information technology is important for the establishment of informal contacts for the doctoral students, for example to build social networks of their own, a function which may be valued higher by female students than male.

Theory

The theoretical base for the study is research on information needs and seeking in library and information science. Information gathering is seen as being a part of a social system in which information seeking is an activity performed in order to satisfy personal needs ([Wilson, 1997](#)). By stressing social dimensions a shift occurs from studying information-seeking behaviour to the importance of information in different social settings. The word gather is used in order to emphasize the fact that a person may not only actively seek for some specific piece of information but may also browse, i.e. randomly find out if something is of interest, or the person may receive unasked-for information from someone, e.g. a supervisor. The person may or may not find this information useful.

The personal sources that are of special interest in the study can be studied on an individual level but they can also be regarded as parts of various social networks. Social networks are here understood as contacts between people that are more or less regulated and continuous ([Höglund & Persson, 1985](#)). According to Höglund and Persson, information in these may be shared between well-informed people rather than with those less well-informed. Newcomers in a subject field may have difficulties gaining access to relevant networks ([Cronin, 1982](#)). In the study the networks of individual doctoral students will be studied with respect to kinds of contacts and what information is gathered from whom ([Haythornthwaite, 1996](#)). These networks will then be compared with one another.

Another point of departure for the study is descriptions of the academic community as a hierarchic research culture built on competition for financing as well as visibility as a researcher, sometimes called male. This leads to a need to be acknowledged by people that are higher up in the hierarchy ([Fox, 1991](#)). In this environment informal, social networks are formed, normally maintained by men, and there are reasons to believe that women are more exposed when trying to gain access to these.

As a framework for interpretation of information behaviour and the formulation of research questions the so-called gender system is used ([Hirdman, 1987](#)). Gender is here understood as a social phenomenon with a fundamental social and structural ordering of men and women in society. In this relation men are generally given the preferential right of interpretation, leading to an uneven distribution of resources. These relationships are seen as circumstances in which people have opportunities to

act. Descriptions of the academic community as a male research culture belong here. By such a perspective, men and women do not have to act differently, but women have to adjust to structural and cultural conditions where they do not have the same status as men.

Different directions of what is called The Social Shaping of Technology, for example the SCOT (Social Construction of Technology) school offer a way to understand information technology and its use ([Bijker, et al., 1987](#)). The meaning and function of technology are considered to be created in different contexts, e.g. production or usage, which changes focus from technology as a fixed artefact towards a conception of flexibility and ambiguity ([Lie, 1995](#)). In the study this leads to an awareness that information technology may have different values depending on who uses it and for what reasons. Feminist research on e.g. women's participation and experiences of computer-mediated communication are also of interest here ([Kramarae & Taylor, 1993](#)).

Methods, workplan and progression

The methodological point of departure for the thesis is pluralistic, i.e. various methods are used to gather and analyse empirical data. Both quantitative and qualitative methods elements are present, although the latter predominate.

As a preparation of interview questions the study begins with pilot interviews with three senior researchers about their information habits and experiences from their research careers. Overall the thesis is based on case-studies of two research departments, one where research groups are common, for example in the natural sciences, and one where individual work dominate such as in the humanities. Six doctoral students from each department, three male and three female, in different stages of their education, will be interviewed, a total of twelve students. By dividing the post-graduate studies in three phases, initial, middle and final, and choosing two students from each phase, it is possible to relate different phases of their careers to their information behaviour.

Since knowledge of the social settings in which the doctoral students are active in is important, participant observation will be used to get an insight. Focus will be on the history of the departments, their work, culture of seminars etc. Complementary methods are reading of material and interviews with people with a good knowledge of the departments. A bibliometric mapping will also be done for a notion of connections between researchers and who are working with similar questions. This will later be compared with the students' personal networks for an understanding of their integration and positions in the field.

Further, to investigate the situations of the students and their information behaviour, deep interviews and diaries that the students will be asked to keep, will be used. The keeping of the diaries will take place during three separate weeks in two months. The students will account for their daily activities; when information is gathered and used, what type of information, from where etc. To reduce their workload some parts of the diaries will consist of ready-made alternatives.

There will be two interviews per student, separated by the diaries. The initial interviews will focus on a reconstruction of the students' way through their research studies to their present situation. In the following interviews the first interviews and the diaries will be followed-up with a deepening of their needs of information, ways of gathering information etc. Throughout the study, a mapping of personal networks as well as the use of information technology is important and will be given special attention.

In the analysis the empirical material will be used to give a picture of the departments and the doctoral students' careers. These will be compared with one another for examples of the interplay between context and information behaviour. As the study has a gender perspective special attention will be paid to structural and cultural circumstances which may affect the development of information behaviour and the research careers.

The gathering of data and writing of the thesis is planned to take four years, with data collection the first two years and analysis and writing the following two.

Preliminary work plan:

Year 1 Pilot study; Description of departments; Bibliometric mapping; 1st round of interviews

Year 2 Diaries; 2nd round of interviews; Parallel working at the material

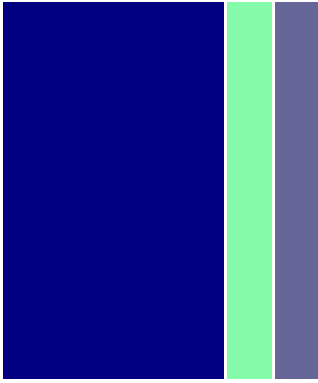
Year 3 Working at the material and analysis

Year 4 Continuous analysis and completion of the thesis

Progress: The work is still at its beginning. Last autumn I presented a plan for my dissertation and now I am seeking financing. The next step is to work on a literature review and discuss information behaviour related to a gender perspective.

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