

Information-seeking behaviour of distance learning students

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Introduction

There is a constant stream of studies focusing on young undergraduates' information behaviour. Distance learners and mature students, if included in the studies are not usually identified as such. These students are often mature students who have other needs than young undergraduates living near the university. In the literature some problems and barriers faced by these students are noted, e.g. reasons for dropout. However, an increasing number of universities are offering distance learning programmes as an additional educational facility. Flexible learning requires a different type of pedagogics and service than the university and the university library traditionally offer. Many of the participants in these distance learning programmes live far away from their host institution, and therefore do not have the same opportunities as students living on campus as regards the use of university libraries as information sources. Consequently, distance learners demand various services from their local public library as well as from other available institutions that might be found in their neighbourhood. What hinders distance students in their studies and how they overcome these problems have to be identified, in other words the information behaviour of distance learners ought to be studied.

The aim of the study

Hitherto, distance learners information acquisition has been associated with specific problems because they have had more difficulties than campus students in utilising university library resources. To be able to improve the conditions for distance learners we need deeper knowledge about the hindrances and problems distance learners face in their information-seeking process. The aim of the project is to gain deeper understanding of distance students' information behaviour pattern. The questions this study deals with are:

- *What problems do distance students encounter in their information provision and how do they solve these problems?*
- *What information channels do distance students use, and how do they use them?*
- *Why do distance students use the information channels they use?*
What role do various information channels fill for distance students?

Theoretical framework

In this section relevant studies within information behaviour will be briefly accounted for. The aim of this chapter is not to compile a complete survey of the literature, but to recount some of the research that has interested me, particularly Wilson's and other researchers mentioned below.

Information behaviour

Researchers have been interested in information behaviour for over 40 years, although in the beginning the concept was mostly connected with information centres. In the late sixties, [Paisley](#) (1968) and [Allen](#) (1969) introduced models which dealt with elements that influence information-seeking behaviour. [Wilson](#) (1981) was possibly the first researcher to present the concept of *information-seeking behaviour*. However, today Wilson considers the concept *information behaviour* more suitable because it also includes other behaviours along with seeking behaviour. Wilson is of the opinion that a general information behaviour model should at least include the three following elements:

- information need and its drivers, i.e., the factors that give rise to an individual's perception of need;
- the factors that affect the individual's response to the perception of need; and
- the processes or actions involved in that response. ([Wilson 1997](#): 39).

Information needs, information-seeking and formation behaviour are intertwined concepts which make the concept *information behaviour* very complex.

Several well known researchers have been working with developing our understanding of the users' information needs, but for the present a brief introduction will be given of only two researchers. Research which is of specific interest to my study and which is presented here are pertain to Kuhlthau, and Limberg. Kuhlthau has conducted empirical studies of students information seeking behaviour in libraries. She has developed a model of the information search process which includes six stages: Task Initiation, Topic Selection, Prefocus Exploration, Focus Formulation, Information Collection and Search Closure. The model deals with three realms common to each stage, namely the *affective*, the *cognitive* and the *physical*. In this six stage model of the search process information professionals can intervene and help the users to identify as well as solve their information needs depending on where the users are in their seeking process ([Kuhlthau, 1994](#)).

[Limberg](#) (1998a, 1998b) states that content is crucial to how people seek and use information. This is contrary to the understanding that information-seeking is a general process which occurs independently of the content in the information. The aim within LIS to establish a general view of information-seeking, restrains the research and limits understanding of the various ways in which people seek information. Hence, if it were accepted that there is more than one type of information process, it would stimulate a deeper understanding of the information-seeking process in general within the field. Instead of trying to prove that the information-seeking process can be described with one model, common for different users in different contexts... ” the differences between contexts, situations and groups should be examined and illuminated, not with the purpose of separating groups but to better understand information seeking as a phenomenon.” ([Limberg, 1998a](#): 230 (my translation)).

As my project focuses on how distance students seek information in their studies, Kuhlthau's research is interesting since she studied information seeking in a learning context from the student's perspective. However, I believe that content is an important factor in explaining how people seek and use information, which is why I also regard Limberg's work as useful.

Distance education

What we know today as *distance education*, has its origin in teaching and learning by correspondence. Correspondence education has been known for decades and in an earlier form, even centuries, mainly through adult education. As media other than the written word became common and played a progressively greater role, the term correspondence education was regarded by many as too narrow. Hence, the term, distance education was adopted in the English-speaking world in the early 1970's ([Holmberg, 1995](#): 3). Numerous definitions of the concept distance education exist. There is a risk that a narrow definition of the concept may not be useful in all situations because distance education may be different at different places. In spite of this problem Holmberg describes the concept as follows in his book *Theory and Practice of Distance Education*.

Distance education is a concept that covers the learning-teaching activities in the cognitive and/or psychomotor and affective domains of an individual learner and a supporting organization. It is characterized by non-contiguous communication and can be carried out anywhere and at any time,

which makes it attractive to adults with professional and social commitments. ([Holmberg, 1995](#): 181).

However, in the recent literature the concept *flexible learning* is more commonly used than distance education. This concept is not easy to define either, however, my understanding of flexible learning is that it takes place, is shaped and adapted to the students' needs, rather than to the needs of the teachers or the institution offering the course. Irrespective of which concept is used (distance learning or flexible learning) it might be described as personal learning for it removes the barriers of space, time and location. The technology we have today makes this possible. The information superhighways have led to an exponential expansion of distance education. This is what [Hawkrige](#) (1995) called the Big Bang theory in distance education. Some universities have already created a Big Bang for their students, but some are still in the initiation stages of the process. The Big Bang refers to two-way communication between students and teachers as well as student access to an enormous amount of information through the distance education network ([Hawkrige, 1995](#): 3). On the other hand there are barriers to using the technological tools. This creates, in turn, a need for information literacy support for distance learners. An example of measures to meet those needs, the library staff at the Central Queensland University in Australia has produced several computer-assistance learning programs aimed at the students. These packages aid the students using the library catalogue, searching electronic databases and Internet searching ([Appleton & Orr, 2000](#): 15-17).

It appears that a comprehensive theory of distance education including all relevant and social aspects is hard to find. However, the situation could possibly be different if the theorising is restricted to the teaching-learning process. A theory covering the teaching-learning aspects of distance education could be, on the one hand, mainly of a descriptive character, dealing with learning and, on the other hand, of a prescriptive character dealing with teaching ([Holmberg, 1995](#): 173). Holmberg tries to build a theory of distance education capable of generating testable hypotheses, in which learning, teaching, and their organisational/administrative frames are embedded. The role of the supporting organisation in distance education is seen as being on a highly personal level, where discussions between students and teachers are believed to bring about improved performance and enhance study pleasure. Such discussions would require a certain level of student maturity, self-discipline and independence. [Perraton](#) (1987) argues that it is not possible to apply only one single theory of distance education. He points out that it could be interesting to study distance education in terms of three inter-related systems of teaching, administration and assessment. We are not trying to develop theories of distance learning separate from theories in general face-to-face education, but rather studying in which ways these theories differ when applied to distance education.

Holmberg agrees with Perraton and accounts for many hypotheses derived from distance learning, teaching and from organisations and administration. He admits that his theory cannot be applied everywhere and in all circumstances. However he claims that the theory has some explanatory power, since it suggests a coherent view of sufficient learning and teaching in distance education which identifies a general approach complementary to learning and to the teaching efforts related to learning ([Holmberg, 1995](#): 181).

Several theories within the field show that distance education theory is based on general education theory even though it represents a separate type of education which has certain target groups, methods and media. Further, distance education has divergent circumstances which vary from other types of education ([Holmberg, 1995](#): 160-161).

Method

In the methodological literature research methods are usually divided in two parts, depending on whether the approach used to analyse the collected data is qualitative or quantitative. However, most researchers agree that it is the research topic that is decisive in the choice of method. In this project qualitative interviews were regarded suitable for getting answers to the research questions. [Kvale](#) (1997) states that the aim of the qualitative interview method is to describe and interpret the themes that exist in the interviewees' life sphere. 'Interviews are particularly suitable when you wish to study people's view of the meaning of the lives they live, for describing their experiences and understanding of themselves and for elucidating and developing their own perspective of their life sphere' ([Kvale 1997](#): 100 (my translation)). Diary notes taken by the respondents complement the qualitative interviews. In other words, this project is of a qualitative character using two kinds of data gathering methods:

- A. Qualitative interviews. The interviews are semi-structured and concentrate on three main themes. These are: 1) the participants' problem/problem solving when seeking and using information in their studies. 2) the participants' experience of information seeking in their studies. 3) their experience of information sources/channels used.

- B. Additionally the students were asked to keep diaries while they were seeking information for a certain assignment/paper. They were encouraged to describe how the search went, if they encountered any problems, and if so how these problems were solved etc.

Selection of cases

The selection of cases was not an easy task. After much consideration distance students in Library and information science (LIS) were selected. The reasons for selecting students in LIS are multiple. Students in this discipline are, in my opinion, quite special and not typical distance students as regards information seeking. This is because students in LIS are studying how to seek information and how to make information accessible for their future clients. In most other disciplines the focus is on other subjects and the information seeking process is only something that the student has to cope with in order to be able to access information on his or her subject.

The question of how many students should be interviewed was a difficult one. [Kvale \(1997\)](#) warns against an excessive data material and states that it is the content that matters not the quantity. If the data material is too large, the analysis will become too time consuming. Because of the enormous quantity of data it can be difficult to conduct a deep analysis which in turn can result in a superficial product ([Kvale, 1997](#): 163). Hence, the researcher should interview as many informants as needed in order to fulfil the goal of the research ([Kvale, 1997](#): 97).

Twenty students were selected for the study. The interviewees were selected by choosing every other student from a name list. The students were of different ages and came from all parts of the country. They were all distance students signed up for a four year part time study programme which results in a Master's degree in LIS. The students were in the 2nd year of their studies when interviewed. I wanted to investigate a group that had some study experience because it would be more likely that they had conducted some independent work that had required information seeking. At the same time I wanted a 'modern' group of students that used the Internet as a work tool in their studies. It was not until 1998 that a condition of acceptance at the University College distance programme was to have access to the Internet. Internet access was one criterion for selecting this group.

Implementation of the research

After an initial study period, during which the research plan was designed, pilot interviews were conducted with two students. The interview was transcribed and analysed. The pilot interview helped me to focus more on the central question in my project. The interview was also good training in conducting interviews. It made me reflect over my own shortcomings as an interviewer. After analysing the interview I was able to reconstruct the interview guide.

Nine of the students were interviewed in my office at the University College prior to attending a meeting. Ten informants were interviewed in their home towns.

In order to minimise the anxiety of the informants they were informed, before the interview took place, that all the interviews would be anonymous. The interviewees were given assumed names in order to secure their anonymity. All the informants accepted that the interview would be recorded.

The students were interviewed when they were relatively new to a certain course¹. In the interview they were asked about their information behaviour, information needs and the problems they had faced when acquiring information for their studies. They were also asked about their information channels, what kind of channels they used, why and how they used them. This included how the students used the public library in their local community as well as the university library, what role the Internet played in the students' information-seeking process and how they used the Internet for their information provision. What other channels did the distance students make use of and what barriers were they confronted with while seeking information?

Interviews were also conducted with the distance students' study co-ordinator at the Swedish School of Library and Information studies as well as with their librarian². I felt that knowing about the type of library service offered to the students and being informed about the administration of the course would help me to understand the context students were acting in as well as helping me to interpret the students' actions and answers.

The students were also asked to keep a diary for about two to three occasions when they were seeking information for the five-credit paper in their studies. The students were asked to record how they sought information and why

they chose to use the information source they selected. Finally, they were asked to report the results of their information search. In May 1999, thorough written instructions on keeping the diary were posted to the students. The paper was due in September and the students were asked to return their diaries at the same time.

Method of analysis

The study is conducted from the students' perspective and reflects their point of view. Hence, the research project highlights how the students' experience seeking information, how they state that they use various information channels, what problems they meet, how they feel about the usefulness of the information channels etc., rather than how useful in fact these channels are.

Currently, I am working on the analysis of the interviews through a hermeneutic approach. The Atlas/ti software programme was selected to assist in exploring the material and to find patterns and categories. There are various methods within qualitative research designed for structuring data material. The majority of these methods are aimed at identifying categories in the data material, generating ideas about them and exploring the meaning of the data. It is significant that the software does not limit the method used. Richards & Richards warn against '...the real dangers of software constraining and distorting research'. ([Richards & Richards, 1998](#): 212). The most common method used when structuring data material is the so-called *Code and Retrieve method*. Richards & Richards describe the method as follows: 'It also expresses theories that can be represented by codes and then tested by looking for codes in text and studying the relationship of codes. Computer-based code-and-retrieve will do this better, because computers are good at working with structure, not content. In a code-and-retrieve system, we express or define content by coding the text.' ([Richards & Richards, 1998](#): 216). The method entails that the researcher marks a certain section in the text and codes it in order to be able to retrieve this text later when analysing the material. The *Code and retrieve* method can only be used when we are working with text that has been coded.

After the data material was coded certain questions/themes were selected and similarities and diversities are identified by each individual as well as by the whole. Then the next question/theme is chosen and analysed in the same way. Gradually a structure is built up in the material. So far I am working only with the first phase *the structure*, the second phase, *the interpretation* of the material is yet to come.

Time schedule

During 1998 a project plan was worked out, the theoretical framework took form and an interview guide was designed. Twenty interviews (phase I) were conducted during the period March, 1999 to May, 1999. Currently, I am working on the analysis of the interviews. Early in 2001 the data collection will be completed by a second series of interviews conducted with the interviewees. The interviews will be analysed between March and December 2001 (phase II). Writing and further analysis would commence in the same period. The thesis should be revised and completed by the end of 2002.

Notes

¹ The course in question "Human interaction with libraries and information systems" started in December 1998 and will finish in September 1999. The course is 14 credits and the students will have to work on a number of assignments which require information seeking. The course is to be completed by a 5-credit assignment/paper that requires independent information seeking.

² A librarian appointed as a contact person between the library and the institution.

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