

Triangulation as a multi-perspective strategy in a qualitative study of information seeking behaviour of journalists

Hannele Fabritius

Department of Information Studies
University of Tampere, Finland
lihafa@uta.fi

INTRODUCTION

Recently, the importance of application of multiple, qualitative methods has been emphasised in the field of information seeking and retrieval research. (See Fidel 1993; Vakkari 1997). One of the earliest and most ambitious attempts to apply multiple methods was the research project on information needs and information services in local authority social services departments. (Wilson & Streatfield 1977; Wilson, *et al.*, 1979; Wilson 1981). In studies on information needs and seeking qualitative methods have gained a leading position in the 1990's (Vakkari 1997: 451). Indisputably, this is the case when looking at recent information needs, seeking and use research carried out by Algon (1997), Ellen (1998), Barry (1995), Byström (1997), Iivonen (1996), Kirk (1997), Kuhlthau (1993), Solomon (1997) and Sonnenwald and Lievrouw (1996). Furthermore, though the approach of the study is qualitative the application of quantitative techniques is not necessarily excluded. In methodological literature attention is paid to integrating qualitative and quantitative techniques. These methods are not opposite but they complement to each other.

In a qualitative study various methods can be combined. Triangulation can be seen in two ways: firstly, to ascertain the validity of research; secondly, to employ the methods that are appropriate to the subject investigated. Application of triangulation in the former way aims at the full, 'objective' picture of the subject studied, while the picture obtained in the latter way is like a kaleidoscope. Thus the ultimate reason for triangulating is to gain deeper understanding of the phenomenon studied.

Triangulation can be applied in many ways and in all phases of the research project. This paper will discuss methodological triangulation employed in the process of data gathering of a study where information seeking behaviour of journalists is investigated. The purpose of the study is to examine what the role of digital information in journalistic practice is, how journalists utilise new information technology, to what use information sought is put, and finally how well or badly the digital systems support journalistic work.

The variety of methods applied in this study will be described. Attention will be devoted to the ways in which the methods varied and developed in the course of the fieldwork, and how the interaction between the research setting and methods applied took place.

MAJOR ASPECTS OF TRIANGULATION

Findings must be assessed against a conceptual framework. The idea is that methods and concepts continuously interact with observations and theory. Both concepts and research methodology act as empirical sensitisers of scientific observation. Concepts and methods open new realms of observation, but concomitantly close others. Two important consequences follow: if each method leads to different features of empirical reality, then no single method can ever completely capture all the relevant features of that reality; consequently, sociologists must learn to employ multiple methods in the analysis of the same empirical events. (Denzin 1989: 13).

Triangulation is defined as the use of multiple observers, methods, interpretative points of view, and levels and forms of empirical materials in the construction of interpretations. Triangulation, or the use of multiple methods, is a plan of actions that will raise researchers above the personal biases that stem from single methodologies (Denzin 1989: 235, 270).

Denzin (1989, 236-237) identifies four basic types of triangulation:

- 1) data triangulation; the use of variety of data sources
- 2) investigator triangulation; the use of several different researchers or evaluators
- 3) theory triangulation; the use of multiple perspectives to interpret a single set of data
- 4) methodological triangulation; the use of multiple methods to study a single problem

The fifth type of triangulation, interdisciplinary triangulation, is introduced by Janesick (1994: 215). She suggests that by using other disciplines it is possible to broaden the understanding of method and substance.

This paper will concentrate on the employment of methodological triangulation in data gathering process of the study of journalists' information seeking behaviour.

The research setting

Databases are said to have at least two implications in the journalistic work process. On the one hand, it is argued that electronic databases are going to revolutionise the editorial work and computer-assisted journalism is said to be the future of the art. On the other hand it is claimed that databases have no significant effect on writing. Computer-assisted journalism is a more general term describing the use of a wide variety of software like spreadsheets, word processors, databases and so on. (Koch 1991; *see also* Leonard 1992). In textbooks on journalism the potential benefits of on-line searching for reporters and editors are hardly mentioned (Johnson 1992). It has not been demonstrated how or in which way databases are to revolutionise journalistic work. Similarly, little is known about specific benefits and problems which systematically result from using databases for reporting. (See Nicholas 1996; Nicholas & Williams 1998).

One reason for the lack of systematic consideration of the effects of electronic databases on journalism may be the widely held but largely unexamined assumption that computer-assisted journalism utilising databases is just the same old journalism but with better tools. One may argue that the effect of using databases in the context of news writing, or journalistic work in general, is and will be minimal. It is assumed that databases will help the work of organising information and bringing data to the reporter, but changes will have no fundamental effect on journalistic work or on the structure of an item itself. (Koch, 1991).

From this point of view it is important to try to find out what the impact of the new technology on the journalistic work is, and how its meaning is constructed in the journalistic item processes. The content of the term 'new technology' is quite broad including on-line databases, CD-ROM files, Internet resources like the World Wide Web, different search engines, Usenet discussion groups and electronic mail.

News writing has its own rules and assumptions which govern the work of the journalists. The same principles apply to a somewhat looser extent to all other types of journalistic articles and other items; for instance a feature piece can be written in a number of ways and styles, but regardless of the style it attempts to catch something important, relevant or essential. In this regard the new methods of information gathering in journalistic practice are of special interest.

The ongoing, empirical research is guided by the principles of grounded theory introduced by Glaser and Strauss (1967; Strauss & Corbin, 1990). The approach of this study can be characterised as a user-oriented one but the

journalists are taken primarily as producers, or actors, not only consumers, or users.

The study focuses on two issues of interest. First, the journalistic work practice and journalists' information environment:

- What kind of task is news reporting as a journalistic work process?
- What is the nature of the information environment of journalists?
- What kind of sources do the journalists use?
- Do they find these sources satisfactory?
- What problems and barriers have they faced when using these sources, particularly digital information?

Secondly, the main issue of the study is the role of digital information in news reporting:

- What is the role of digital information in journalistic work; in particular in covering the news events?
- What is the purpose of the search for digital information in preparing a particular piece of news or other journalistic item?
- How are digital sources utilised?
- Is digital information replacing or complementing some traditional ways of seeking information?
- If so, which sources are replaced?
- What is the relationship between digital information and information acquired or sought from other sources?

The term searching behaviour refers to both information seeking and retrieval processes (Marchionini, 1995). The journalists' searching behaviour is investigated by means of seven hierarchical concepts. When moving from general to more specific the concepts are: journalistic culture, the medium's culture, the department's culture, journalistic work practice, journalistic item processing, information seeking and information retrieval. (See Fig. 1).

The definitions below are based on previous study carried out by the present author (Fabritius, 1994), preliminary analysis of the data and literature (Kuutti & Puro, 1998).

Journalistic culture includes the values and norms, activities and routines, which generally constitute the practice of journalism. It also is sometimes understood in a more limited sense as good, proper journalistic custom. For example, news criteria, news values and newsworthiness are significant concepts in journalistic culture, reflecting the more general, philosophical concepts of importance and relevance.

A medium's culture. The culture of a particular journalistic medium, a newspaper, a local radio station or other single editorial office, complies with the general journalistic culture, but also includes its own motivations, traditions, customs, organisations and features. For example, if a newspaper has a political

view or covers a certain geographical region, or if a magazine specialises in a specific subject area: they all have their own spheres of interest and styles.

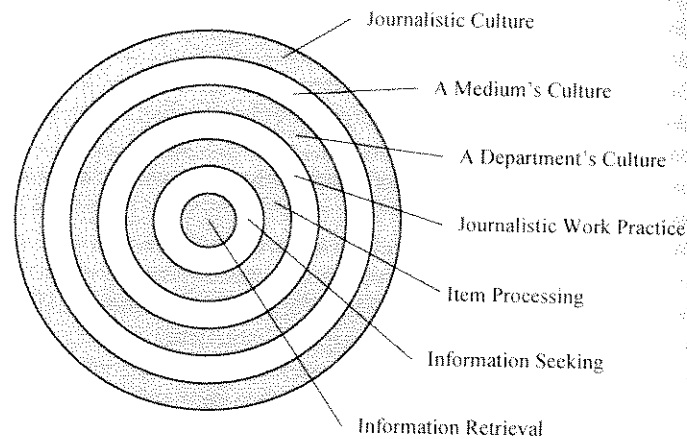


Figure 1. Targeting journalistic searching behaviour

A department's culture. Consequently, some variations may occur within a single editorial office, between the various departments. For instance, the ideas about what is important are different at the foreign desk and in the sports department of a newspaper; some stylistic differences may also be found.

There is another feature in departmental culture. It may well be the case that, for example, the culture departments of separate editorial offices resemble each other quite a lot, and they share a certain subculture to a greater extent than the different desks or departments within a single office. Such an inter-office departmental culture originates, not from a particular medium's culture, but from a more general level of the journalistic culture, interpreted or assimilated through the interests and ways of one or other journalistic subject area. For the time being it might be assumed that at the side of the medium's culture there is another, perhaps more vague but nevertheless existing subject area culture, which also bears on a certain department's culture.

Journalistic work practice. The general principles of journalistic culture, conveyed through the particular medium's and department's cultures, and applied to the daily working circumstances, take the form of procedural practice. There are phases consisting of monitoring events, planning, selecting, seeking information, shaping the pieces of news or other journalistic items, designing the

layout or the broadcasting schedule and the like. Procedures applied and actions taken in sudden and surprising situations, the very core of news reporting, also belong to the procedural practice. For example, the news criteria, which belong to the level of the journalistic culture in general, are applied in the course of editorial decisions.

Item processing. The process of preparing a piece of news or other journalistic item – an editorial, a commentary column, a background article or a feature story – can be seen as a series of continuous, proceeding stages. The steps of the procedural practice are now taken with regard to a particular event or subject. In practice the stages of item processing do not follow each other in a strict chronological order, but nevertheless logical steps can be distinguished. The 250 diary forms in the material of this research represent 250 instances of journalistic item processing. Through such item considerations the more general features, described above on the previous levels, can be observed and analysed.

Information seeking. Sources of information sought and consulted during the item process may be of varying kinds: persons, documents, observations and the like. Material can be in any conventional or digital form. The information acquired may also be used for different purposes: for facts, double-checking, assessments, opinions and so on. Source criticism is an essential element of the proper journalistic procedural practice.

Information retrieval. Information retrieval techniques are required for information sources in digital form, whether in traditional databases or in less organised digital resources.

As Figure 1 indicates, information seeking and retrieval can be put into a broader context, which affects the ways in which information sources are approached and information sought is utilised. On the level of journalistic culture, the contextual factors orienting information seeking are very general by nature, and they influence information behaviour indirectly, whereas journalistic item process may set rather concrete requirements for information behaviour. Furthermore, situational factors such as lack of time manifest themselves most clearly in this context.

The process of data gathering

The data was collected in 1996 and 1997 in *Helsingin Sanomat*, which is the only national, daily newspaper in Finland. It is a quality newspaper, and the circulation is half a million copies.

The basic idea of methodological triangulation is that the research setting and methods applied interact with each other in the course of fieldwork. The methods employed in data gathering were as follows:

Observation

Observation techniques can be classified by the nature of the researcher's involvement in the research setting. A classic typology of the roles is originally outlined by Gold in 1958 (Adler & Adler 1994: 379). Four modes through which observers may gather data are: the complete participant, the participant-as-observer, the observer-as-participant, and the complete observer.

Nowadays, a greater involvement, even a membership role, is recognised in the practice of qualitative fieldwork. In most cases, three membership roles seem to appear: the complete-member-researcher, the active-member-researcher and the peripheral-member-researcher. Researchers in peripheral membership roles feel that an insider's perspective is essential in forming an accurate appraisal of human group life. So, the researchers observe and interact close enough with members to establish an insider's identity without participating in those activities constituting the core of group membership. (Adler & Adler, 1994: 379-380; see also Adler & Adler, 1987).

The observation I conducted can be defined as participant observation. My role as a researcher can be described as a peripheral membership. Everybody knew I was doing research and my aim was to interact with the respondents and the editorial staff but not to participate in their daily work. Observation was employed most in a pilot study by sitting beside the journalist. In order to learn to know the journalistic practice I applied a technique of talk aloud. (Ericson & Simon 1993: 222, 226-228; Ingwersen, 1982; Isenberg, 1986). While working the journalist told me all the time what she or he was doing. The term 'shadowing' is quite expressive of this kind of observation. So, when the journalist had to go to interview somebody outside the editorial office, or when she or he conducted the weekly routines in certain public offices or municipal departments checking possible news items I asked if I could come along. I also visited many press conferences with the journalists.

I took part in daily and weekly editorial meetings at the departments for economics and domestic news. There I was able to observe other journalists than those I had been shadowing. The same thing happened when I was looking at how the journalists worked as a team at the news desks in the evenings. This level of observation can be called departmental: I was able to see how they interact.

During the observation periods I kept detailed hand-written field notes. When journalists conducted searches from databases or the World Wide Web, they were also asked to talk aloud and these speeches were tape-recorded.

Interviews

The purpose of the interviews was to clarify the questions that could not be answered through observation alone. The information acquired in this way is

retrospective. In this kind of open-ended or active interviews (Holstein & Gubrium, 1995; see also Fontana & Frey, 1994) the journalists were encouraged to offer their own definitions of matters and themes under discussion.

Thirty journalists working at the departments for domestic news, foreign news, economics and the Sunday edition were interviewed. Most of the journalists were working in shifts, and three of them worked as specialised journalists. In order to gain contextual information archivists and technical staff who are responsible for the information system maintenance, the in-house databases and the training of journalists in the utilisation electronic systems were also interviewed.

The selection of interviewing themes was determined by the results and experience gained in the pilot study. Furthermore, the research setting was modified to be more holistic than that of the pilot study, where the main interest was the use of in-house databases focusing on the search techniques used in the searches conducted by journalists, the selection of search keys and relevance judgements of search results. On the basis of the pilot study it turned out that the use of one information seeking tool cannot be properly studied separately from the whole process of information seeking. Similarly, the work processes of journalists have to be taken into account.

The issues discussed in interviews were the work tasks of the journalist, how the journalist defines the news criteria, what makes a good news story, for whom the journalist writes, what kind of feedback the journalist gets from the readers, what kind of information gathering methods the journalist uses. One technique I have especially used when discussing the searches and utilisation of digital information sources is the critical incident technique (Flanagan, 1954). I have asked the journalist to provide examples of successful and unsuccessful searches. Only few journalists were able to remember and give examples.

As techniques, interviewing and observing come close to each other. As a matter of fact, much of the data gathered in participant observation originates with informal interviewing in the field (Lofland & Lofland, 1984).

Diary form of journalistic item processing

When observing journalists, I soon realised that it was impossible to capture all kinds of news item processes. I only captured short examples. It was also difficult and time consuming to follow the entire process. Besides, not all journalists were willing to be shadowed. That is why a structured document in a form of a diary of journalistic item processing was developed. The diary form contains a list of sources which can be used in news writing. In the same context there are columns for the purpose of using special source, and the importance of the source. The journalist wrote up the diary after writing a piece of news or

other journalistic item. Having received the diaries I located the printed items from the newspaper, carefully read them and the completed diary. Data analysis was utilised at this stage of data collection. The printed pieces of news and other journalistic items were studied. Thereafter, the processes of news writing and information seeking, and especially the utilisation of digital information were discussed with the journalists. During these discussions the journalist was free to tell how she or he got the idea of the story, in which order each source was used, what the purpose of using the source was; difficulties faced in the use digital or other sources were also discussed. The interview sessions concerning completed diaries were repeated as many times as needed.

Eighteen journalists agreed to keep the diaries. The total number of completed diaries was 250. For some journalists keeping diaries seems to have been a reflective experience. They felt that it was amazing to realise how many threads are needed to twist together in order to make a story. They had experienced the process like returning to the roots of journalistic work. Those who said this had longer work experience, younger respondents seemed still be training themselves in journalistic practices.

Visualising techniques

I also made an attempt to employ video taping of a search conducted by the journalist participating in the pilot study. I soon noticed that although video taping would have been useful, it is too demanding a technique both for the informant and the researcher. Utilising this technique would have required a research assistant at least to carry the video camera from one place to another.

Instead of video taping, I started to take photographs in all kinds of situations: journalists working at news desks and personal work stations or sitting around the table in daily and weekly editorial meetings. I also took photographs of the computer screens when something interesting came up, for instance, when somebody had conducted a search from an in-house database or from the Internet.

Visualising methods offer means of revealing implicit interaction in social situations. They permit the capturing of the relevant contextual elements that shape action. They address history and maturation when they seek to explore a particular event and its effects on persons. But they also cause problems. The crucial point is what is chosen to be photographed and what is omitted. (Denzin, 1989: 31). From the methodological point of view photographing can also be seen as a remote observation. (Adler & Adler, 1994: 378). Then photos taken are complementary information to those field notes I kept. They helped me to remember the situations better.

Collecting Documents

For the analysis I gathered various kinds of documents produced in the newspaper office. These are lists of work shifts, agendas of daily and weekly editorial meetings, material I got in press conferences and so on. This is additional data, which will help me to remember and retrieve certain events connected with the daily work of the journalists.

Research journal

Finally, in the course of doing research, especially during fieldwork periods keeping the personal notebook appeared to be a reflective process for myself. When reading it afterwards I really feel I was there, in the field. This research journal has proved to be an endless source of inspiration for me, as well as the encouragement from the study responding journalists.

DISCUSSION

This paper explored the opportunities and challenges of triangulation in the stage of data gathering of an empirical study of information seeking behaviour of journalists. The use of multiple methods, triangulation, reflects an attempt to secure an in-depth understanding the subject studied. The goal of triangulation is a fully grounded interpretative research approach.

The way triangulation was employed in this study means the combination of the methods complementing each other. It means also interaction with methods and the research setting in order to gain a deeper understanding of the phenomenon under study. The most important methods applied were participant observation, interviews and diary forms of the journalistic item processing. Additional methods were collecting documents, taking photographs and keeping a research journal. Not all these methods were used at the same time; the combination of methods has varied during the fieldwork according to experience gained from a particular method and requirements assessed by the research setting.

The use of multiple methods aiming at triangulation is demanding for the researcher. Triangulation is labour intensive and time consuming, which causes problems from the point of view of the research economy. Another problem is that application of several methods in data gathering and analysis may turn out to be eclectic.

It is easy to agree with Silverman (1985: 105-106; 1993: 157-158), who has criticised the expectation that by applying triangulation a 'complete picture' of the phenomena under study could be presented. The situated character of actions should always kept in mind and that they only make sense in context.

Qualitative research is inherently multimethod in focus. However, the use of multiple methods, or triangulation, reflects an attempt to secure an in-depth understanding of the phenomenon investigated. Because each occurrence is situated and unique, then the same unit, behaviour, or experience can never be observed twice. Thus triangulation is not a tool or a strategy of validation of data in the traditional sense, but an alternative to validation (Denzin, 1989: 244; Denzin & Lincoln, 1994: 2; Fielding & Fielding, 1986: 33; Flick, 1992). As Flick (1992: 194) states, triangulating different perspectives gives access to multiple versions of the phenomenon that is studied. Triangulation takes into account the fact that subjective knowledge and social interactions should be understood as parts of local, institutional and social contexts and also against the historical backgrounds of those contexts.

As Denzin & Lincoln (1994) suggest, the combination of multiple methods, empirical materials and perspectives in a single study can best be seen as a strategy that adds rigor, breadth, and depth to any investigation. Triangulation is not just mechanical cross-checking of facts obtained by application of various methods; the methods should not be playing against each other. The purpose is interpreting 'reality', or actions which take place in the subject under study. Thus, the ultimate challenge of triangulation is multiperspectivity both in methods and interpretations.

REFERENCES

- ADLER, P.A. & ADLER, P. (1987) *Membership roles in field research*. Newbury Park: Sage.
- ADLER, P.A. & ADLER, P. (1994) Observational techniques. In: N. K. Denzin & Y.S. Lincoln, eds. *Handbook of qualitative research*. Newbury Park: Sage, 377-392.
- ALGON, J. (1997) Classification of tasks, steps, and information-related behaviors of individuals on project teams. In: P. Vakkari, R. Savolainen & B. Dervin, eds.. *Information seeking in context. Proceedings of an international conference on research in information needs, seeking and use in different contexts 14-16 August, 1996, Tampere, Finland*. London: Taylor Graham, 205-221.
- BARRY, C.A. (1995) Critical issues in evaluating the impact of IT on information activity in academic research: developing a qualitative research solution. *Library and Information Science Research*, 17, 107-134.
- BYSTRÖM, K. (1997) Municipal administrators at work - information needs and seeking (IN & S) in relation to task complexity: a case-study amongst municipal officials. In: P. Vakkari, R. Savolainen & B. Dervin, eds. *Information seeking in context. Proceedings of an international conference on research in*

- information needs, seeking and use in different contexts 14-16 August, 1996, Tampere, Finland*. London: Taylor Graham, 125-146.
- DENZIN, N.K. (1989) *The research act. A theoretical introduction to sociological methods*. 3rd ed. Newbury Park, CA: Sage.
- DENZIN, N.K. & LINCOLN, Y.S. (1994) Introduction: entering the field of qualitative research. In: N.K. Denzin & Y.S. Lincoln, eds. *Handbook of qualitative research*. Newbury Park, CA: Sage, 1-17.
- ELLEN, D. (1998) The role of telecentres in the provision of community access to electronic information. *Information Research: an electronic journal*, 4(2) Available at: <http://www.shef.ac.uk/~is/publications/infres/isic/ellen.html>
- ERICSON, K.A. & SIMON, H.A. (1993) *Protocol analysis: verbal reports as data*. Cambridge, MA: MIT Press.
- FABRITIUS, H. (1994) *Toimituksen tekstiarkiston muodon vaikutus toimittajien informaatiokäyttäytymiseen*. [The effect of the form of the newspaper textarchive on information behaviour of journalists]. University of Tampere. Department of Information Studies. Master's thesis.
- FLANAGAN, J.C. (1954) The critical incidence technique. *Psychological Bulletin*, 51, 1-22.
- FIELDING, N.G. & FIELDING, J.L. (1986) *Linking data*. Newbury Park, CA: Sage.
- FIDEL, R. (1993) Qualitative methods in information retrieval research. *Library and Information Science Research*, 15, 219-247.
- FLICK, U. (1992) Triangulation revisited: strategy of validation or alternative? *Journal for the Theory of Social Behaviour*, 2, 175-198.
- FONTANA, A. & FREY, J.H. (1994) Interviewing. The art of science. In: N. K. Denzin & Y.S. Lincoln, eds. *Handbook of qualitative research*. Newbury Park, CA: Sage, 361-376.
- GLASER, B.G. & STRAUSS, A.L. (1967) *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine.
- GUBRIUM, J. (1988) *Analyzing field reality*. Newbury Park, CA: Sage.
- HOLSTEIN, J.A. & GUBRIUM, J.F. (1995) *The active interview*. Newbury Park, CA: Sage.
- IIVONEN, M. (1996) Completion of quantitative and qualitative methods: example from a consistency study. In: P. Ingwersen & N.O. Pors, eds. *Proceedings CoLIS2. Second international conference on conceptions of library and information science: Integration in perspective. October 13-16, 1996*. Copenhagen: The Royal School of Librarianship, 149-160.
- INGWERSEN, P. (1982) Search procedures in the library - analysed from the cognitive point of view. *Journal of Documentation*, 38, 165-191.
- ISENBERG, D. J. (1986) Thinking and managing: a verbal protocol analysis of managerial problem solving. *Academy of Management Journal*, 29, 775-788.

- JANESICK, V.J. (1994) The dance of qualitative research design. Metaphor, methodolatry, and meaning. In: N. K. Denzin & Y. S. Lincoln, eds. *Handbook of qualitative research*. Newbury Park, CA: Sage, 209-219.
- JOHNSON, J.F. (1992) The unconsciousness fraud of journalism education: computer database skills are essential for serious journalism. Why are j-schools failing us? *Quill*, 80, 31-34.
- KIRK, J. (1997) Manager's use of information: a grounded theory approach. Information seeking in context. In: P. Vakkari, R. Savolainen & B. Dervin, eds. *Proceedings of an international conference on research in information needs, seeking and use in different contexts 14-16 August, 1996, Tampere, Finland*. London: Taylor Graham, 257-267.
- KJAER JENSEN, M. (1995) *Kvalitativa metoder för samhälls- och beteendevetare*. [Qualitative methods for social and behavioural scientists]. Lund: Studentlitteratur.
- KOCH, T. (1991) *Journalism in the 21st century. Online information, electronic databases and the news*. Twickenham: Adamantine Press Ltd.
- KUHLTHAU, C.C. (1993) *Seeking meaning: a process approach to library and information services*. Norwood, NJ: Ablex Publishing.
- KUUTTI, H. & PURO, J.-P. (1998) *Mediasanasto*. [A dictionary of the media]. Jyväskylä: Atena.
- LEONARD, T. (1992) Databases in the newsroom: computer-assisted reporting. *Online*, 16, 62-65.
- LOFLAND, J. & LOFLAND, L.H. (1984) *Analyzing social settings. A guide to qualitative observation and analysis*. 2nd ed. Belmont, CA: Wadsworth.
- MARCHIONINI, G. (1995) *Information seeking in electronic environments*. Cambridge: Cambridge University Press.
- NICHOLAS, D. (1996) An assessment of the online searching behaviour of practitioner end users. *Journal of Documentation*, 3, 227-251.
- NICHOLAS, D. & WILLIAMS, P. (in press) *The changing information environment: the impact of the Internet on information seeking behaviour in the media*. Paper presented at the Second Conference on Information Seeking in Context 13-15 August, 1998, Sheffield, UK.
- SILVERMAN, D. (1985) *Qualitative methodology and sociology. Describing the social world*. Aldershot: Gover.
- SILVERMAN, D. (1993) *Interpreting qualitative data. Methods for analysing talk, text and interaction*. Newbury Park, CA: Sage.
- SOLOMON, P. (1997) Information behavior in sense making: A three-year case study of work planning. In: P. Vakkari, R. Savolainen & B. Dervin, eds. *Information seeking in context. Proceedings of an international conference on research in information needs, seeking and use in different contexts 14-16 August, 1996, Tampere, Finland*. London: Taylor Graham, 290-306.
- SONNNEWALD, D.H. & LIEVROUW, L.A. (1996) Reflektiivinen käytäntö. Kokemuksia informaatiojärjestelmän suunnittelua käsittelevästä laadullisesta tutkimuksesta. [Reflective practice. Experiences from a qualitative study of information system design]. *Informaatiotutkimus*, 15, 2-12.
- STAKE, R. (1995) *The art of case study research*. Newbury Park, CA: Sage.
- STAKE, R. (1994) Case studies. In: N. K. Denzin & Y.S. Lincoln, eds. *Handbook of qualitative research*. Newbury Park, CA: Sage, 236-247.
- STRAUSS, A.L. & CORBIN, J. (1990) *Basics of qualitative research. Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- VAKKARI, P. (1997) Information seeking in context. A challenging metatheory. In: P. Vakkari, R. Savolainen & B. Dervin, eds. *Information seeking in context. Proceedings of an international conference on research in information needs, seeking and use in different contexts 14-16 August, 1996, Tampere, Finland*. London: Taylor Graham, 451-464.
- WILSON, T.D. & STREATFIELD, D.R. (1977) Information needs in local authority social services departments: An interim report on project INISS. *Journal of Documentation*, 33, 277-293.
- WILSON, T.D., STREATFIELD, D.R. & MULLINGS, C. (1979) Information needs in local authority social services departments: A second report on project INISS. *Journal of Documentation*, 35, 120-136.
- WILSON, T.D. (1981) A case study in qualitative research? *Social Science Information Studies*, 1, 241-246.