



<http://www.diva-portal.org>

Postprint

This is the accepted version of a paper published in *Journal of Documentation*. This paper has been peer-reviewed but does not include the final publisher proof-corrections or journal pagination.

Citation for the original published paper (version of record):

Lundh, A H., Dolatkah, M., Limberg, L. (2018)

From informational reading to information literacy: Change and continuity in document work in Swedish schools

*Journal of Documentation*, 74(5): 1042-1052

<https://doi.org/10.1108/JD-11-2017-0156>

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

Permanent link to this version:

<http://urn.kb.se/resolve?urn=urn:nbn:se:hb:diva-15001>

# From informational reading to information literacy: Change and continuity in document work in Swedish schools

Anna Hampson Lundh

Mats Dolatkah

Louise Limberg

## Abstract

**Purpose** This paper attempts to historicise research conducted in the fields of Information Seeking and Learning and Information Literacy and thereby begin to outline a description of the history of information in the context of Swedish compulsory education.

**Design/methodology/approach** Document work and documentary practices are used as alternatives to concepts such as information seeking or information behaviour. Four empirical examples of document work – more specifically informational reading – recorded in Swedish primary classrooms in the 1960s are presented.

**Findings** In the recordings, the reading style students use is similar to informational reading in contemporary educational settings: it is fragmentary, facts-oriented, and procedure-oriented. The practice of finding correct answers, rather than analysing and discussing the contents of a text seems to continue from lessons organised around print textbooks in the 1960s to the inquiry-based and digital teaching of today.

**Originality/value** The article seeks to analyse document work and documentary practices by regarding “information” as a discursive construction in a particular era with material consequences in particular contexts, rather than as a theoretical and analytical concept. It also problematises the notion that new digital technologies for producing, organising, finding, using, and disseminating documents have drastically changed people’s behaviours and practices in educational and other contexts.

**Keywords:** Document Theory; History of Information; Information Behaviour; Information Literacy; Information Practices; Primary Education; Reading; Sweden

**Article Classification:** Research paper

## 1. Introduction

Research within the Library and Information Science (LIS) sub-fields of Information Seeking and Learning and Information Literacy is often motivated by the notion that new digital technologies for producing, organising, finding, using, and disseminating documents have drastically changed people's behaviours and practices in educational and other contexts. Even though changing technologies entail changing information behaviours and practices, it is problematic to base research in this field on this premise only. One risk that we run when emphasising the new, digital, and technological aspects of contemporary information activities is that longer processes of change and continuity may become obscured. If the historical roots of present-day information activities are not taken into account, current changes might be misinterpreted and the impact of new technologies might either be overstated or taken for granted.

In this paper, we will focus on what is called *informational reading*, as it was practiced in Swedish primary school classrooms in the late 1960s. We will give examples of situations where informational reading was taught and discuss these situations in terms of continuity and change. In this way, we will illustrate how a particular style of reading can be seen as a predecessor to information activities in contemporary school settings. Thus, this is an attempt to historicise research conducted in the fields of Information Seeking and Learning and Information Literacy and thereby begin to outline a description of the history of information in the context of Swedish compulsory school.

Informational reading is a term used in the 1962 Swedish national curriculum for comprehensive school and resembles activities that LIS scholars of today call, for example, information seeking and the practicing of information literacy. When the new Swedish compulsory and comprehensive school was introduced through the curriculum of 1962 – decades before the still ongoing digitalisation of Swedish schools started – informational reading was presented as a useful didactic method and as an important skill for the democratic citizen in a modern and fast developing world. In the curriculum, informational reading was described as a type of reading used to “gathering facts, understanding an account and following a line of thought” [“inhämta fakta, förstå en redogörelse och följa en tankegång”] (Skolöverstyrelsen, 1962, p. 145). It included learning how to navigate in nonfiction literature through indices and tables of content and finding correct answers to factual questions. It was contrasted to *experiential reading*, which was closely tied to fiction.

Even though the classroom activities described in this paper were described as informational reading in the curriculum, we contend that this does not warrant that they are regarded as information activities in any *theoretical* sense. Instead – as described in further detail below – we see the term informational reading as an expression of a particular era, namely the post-war period when Sweden was starting to transform into a post-industrial, services society, and when it was thought that Swedish students in the newly introduced compulsory school needed to be taught how to read with a focus on information (see Dolatkah and Lundh, 2016). In a similar vein, today's students are described as being in need of Media and Information Literacy. However, when this type of literacy is discussed and studied, aspects of reading are not usually put to the fore. In the following, we will argue that Information Seeking and Learning and Information Literacy research would have much to gain from reintroducing an empirical focus on reading activities.

## 2. Information seeking and learning in contemporary society

Thus, this paper seeks to contribute to the research sub-field of Information Seeking and Learning – which to some extent overlaps the research area of Information Literacy (Limberg and Sundin, 2006) – through a historical analysis. Research in these fields takes an interest in how information seeking as an activity is learnt and what people learn from information seeking activities, often, but not always, in educational settings (Limberg and Alexandersson, 2010).

Theoretical inspiration within the field ranges from cognitive constructivism (e.g. Kuhlthau, 2004) to phenomenography (e.g. Limberg, 1999) and sociocultural approaches (e.g. Francke *et al.*, 2011), which create somewhat different foci: from information seeking as a process taking place in the individual mind to information activities as practical and material activities that are socially negotiated. In either case, the concept of information is certainly important within this area, although it is not entirely clear what the concept might entail.

Even though Information Seeking and Learning research generally focuses on individuals and groups of people and their learning, some of the studies within this area also provide a good picture of contemporary educational settings in which the studied information activities take place. Of particular importance for the present study are a number of studies conducted in Sweden during the past decades. These studies take an interest in what students learn – and sometimes do not learn – when working with school assignments that require the reading of self-chosen materials, often using digital resources. They show how students, when working with so called project-based, problem-centred or student-centred assignments, encounter a number of difficulties stemming from the tension between seemingly independent inquiry and the formal requirements of the educational institution (e.g. Alexandersson and Limberg, 2012; Andersson, 2017; Gärdén, 2016; Lundh, 2011; Lundh *et al.*, 2015). This tension seems to lead to students' exerting themselves to find single, factual, correct answers – often by copying and pasting already existing text – rather than engaging in complex analyses. They also try to give the impression of being actively occupied, at the expense of working with the contents of the assignment (Limberg *et al.*, 2008; Gärdén *et al.*, 2014). Similar tension, but linked directly to searching, is identified in students' ways of adapting their information activities in relation to teachers' expectations and attitudes concerning types of information sources. Wikipedia, for instance – not a legitimate source, or “encyclopaedias in the library”, – a legitimate source (Andersson, 2017). One way of describing this tension is to use the Foucauldian terms of a shift from “external to internal disciplining” (Alexandersson and Limberg, 2012, p. 147) where the individual student is supposed to understand what to do with an assignment and how to work with it independently, at the same time as the assignment will be assessed and graded. This often leaves the students uncertain of whether they are meeting the requirements of the assignments or not.

Recent research on information activities in Swedish school contexts has also broadened interest in information *seeking* to include information *searching* as an object of learning (Andersson, 2017; Sundin and Carlsson, 2016). However, the same studies indicate that neither the Swedish curriculum nor teaching practices have changed to adapt to contemporary conditions for learning via digital tools (Sundin 2015; Sundin and Carlsson 2016). Sundin's analysis of the Swedish national curriculum (2015) showed that awareness of

technologies for searching on the Internet is not mentioned<sup>1</sup>. Studies of teachers' experiences of supporting students' information searching for learning purposes indicate that the teachers have difficulties in conceptualising search as an object of teaching. They tend to talk about the critical assessment of sources rather than the complexities of searching, such as, for instance, Google's ranking of sources and possible consequences thereof (Sundin and Carlsson, 2016). This research provides evidence that teaching practices do not change swiftly in accordance with the introduction of new technologies.

### **3. The history of information from a document theoretical perspective**

With its interest in information activities in a particular historical context, the present paper could also be seen as a contribution to the relatively new research area of Information History. Two of the main advocates for this emerging field, Alistair Black (2006) and Toni Weller (2008), state that a distinguishing feature for Information History is its "informational spin on *particular* past events or topics" (Black, 2006, p. 443) and its "emphasis on informational aspects" of certain areas of historical research (Weller, 2008, p. 4). However, the two authors acknowledge that one problem for the field is that information is an abstract notion – rather than a tangible phenomenon – for which there exists a multitude of definitions. This causes, as for LIS in general, some epistemological and methodological difficulties.

One of these difficulties is summarised by Skouvig and Andersen (2015, p. 2063) who state that: "[i]nformation seems to be a modern invention (Day, 2001), and yet information history argues that information has always been present". Hence, it is not clear whether the study of information history should start from a current definition of information when examining the past or rather take an interest in how information was defined during previous eras (assuming that such definitions existed and were of importance) (cf. Weller, 2008, p. 23). In either case, the information historian has to concur with the idea that information is of great importance to *current* societies, both as an abstract concept and as some kind of material object. Accordingly, we would argue that the treatment of information as a theoretical, abstract concept actually leads to "presentism" – the tendency to use contemporary understandings of the concept of information in analyses of historical situations – and which Weller (2008, pp. 92-94) warns information historians to be cautious of.

In our view, the attempt to use the concept of information to analyse and understand the concept of information is problematic. It can be seen as an example of how LIS is "trapped in its own discursive formations" (Wiegand 1999; Radford, 2003) where the concept of information has been appropriated to the extent that it is no longer seen as a rhetorical device, but rather as a given and unquestionable ingredient of the discipline. Our proposition, as a way out of this entrapment, is to analyse the historical and social projects through which the "invention" (Day, 2001; Wiegand, 2007) of the concept of information came about. The history of information would then not study information per se, but rather take an interest in the discursive construction of the concept of information in a particular era and its material consequences in particular contexts.

Lundh and Dolatkah (2016) recently introduced a dialogically-based document theory as an alternative to information-based theories as a basis for the study of activities and institutions

traditionally of interest to LIS. For LIS research on learning, such as Information Seeking and Learning and Information Literacy research, using information as a theoretical concept leads to difficulties, as it – indirectly or overtly – implies that human cognition can be described in terms of computational information processing (cf. Capurro and Hjørland, 2003; Hjørland, 2000; Linell, 2009). As alternatives, concepts such as document work (Trace, 2007) and documentary practices (Frohmann, 2004a; 2004b) have been introduced. Through these concepts, “information” can be studied as part of historical and social projects. Of interest for the analysis presented in this paper is the social project of introducing a new compulsory and comprehensive school in Sweden in the 1960s and in particular, how a discourse of informational reading appeared and was manifested within this project. In the following, we will use the concept of *document work* to describe the activities that the students engage in in the classrooms, and *documentary practices* to describe traditions that persist over longer periods of time and that may not be tied to specific technologies (cf. Andersen, 2006).

Next, we will analyse a number of classrooms situations taking place well before classrooms became digital, but where students were required to engage in informational reading, that is, look for written information in order to solve a school task. The analysis will provide a basis for discussing continuity and change in terms of document work and documentary practices in Swedish schools.

#### **4. Informational reading in the late 1960s**

The following analysis concentrates on the activity of informational reading, as it appeared and was manifested in Swedish primary schools in the 1960s. The classroom situations which will be described originate from 223 lessons varying from 40-45 minutes each in length in the subject of Swedish in year six (where most students were 12 years old), captured through audio-recordings and partly through video recordings during the academic years of 1967/1968 and 1968/1969 by a team of researchers at the University of Gothenburg (Bredänge *et al.*, 1971). The original recordings have been digitised, analysed, and coded with a focus on document types and reading styles; the latter including informational reading (for detailed coding scheme see Dolatkah and Lundh, 2016). Of the 115 lessons where reading as an object of teaching and learning occurred, 71 included informational reading.

The analysis of all of the recorded Swedish lessons (Dolatkah and Lundh, 2016) shows that informational reading was the most common type of reading practiced; 61.7% of these reading lessons included informational reading, while 45.2% included experiential reading. Furthermore, informational reading was given greater prominence during the lessons, whereas experiential reading was often used as a time-filler or reward when other assignments had been completed. Generally, the teaching of reading was text-book driven; at least 55.2% of the 115 reading lessons included the use of textbooks, whereas other materials were used to a much lesser extent.

Below, four examples of how informational reading was taught and practiced will be presented, using transcripts and descriptions of activities captured in the recordings. These situations have been chosen as they are good examples of how informational reading activities appeared in the data set as a whole. In the presentation of the examples, names

and other identifying data have been changed in order to ensure the confidentiality of the study participants.

#### **4.1 Read and respond**

A common way to organise informational reading was to have the students answer oral or written questions to a particular text. One such example is a lesson recorded in the afternoon of 12th February 1968. In the beginning of the lesson, the students are instructed by their teacher to read four parts of *Animals of the world* [*All världens djur*], a textbook which was being used in several classrooms included in the study.

The teacher distributes copies with instructions and a few questions that she has constructed on each of the four texts; one on the yak, one on the Indian cobra, one on the tiger, and one on the Indian elephant. The students are allowed to read the texts in the order of their own choice. They are instructed to write their answers – that need to be sentences, rather than single words – on a blank page. The students use the rest of the lesson to work individually at their desks with the questions while the teacher circulates in the classroom to help individual students. Several times during the lesson, the students are instructed to read the specific paragraph before they start to respond to the related questions.

Some of the students seem reluctant to actually do the assignment and when they ask about why they have to work with them, they get varying answers: On the one hand, the teacher says that the questions themselves are not important, but rather that the students actually read the texts; and on the other hand, she says that the point of the exercise is that the students can learn how to respond to questions in writing. The questions appear to be about details and can be responded to by a single sentence. Hence, this lesson is an example of a textbook-driven lesson where informational reading is practiced in order to find correct answers to given detailed questions, using pre-defined texts.

#### **4.2 Read and present**

To prepare for and carry out oral presentations was also a common element of informational reading activities. A good example is a lesson from the afternoon of 25th January 1968. At the beginning of the lesson, the teacher sits at her desk and the students at theirs. On the blackboard, maps of Australia can be seen. The teacher starts the lesson by referring back to a previous lesson where they talked about where Australia is situated and she explains that the wildlife in Australia is unusual as the continent has been separated from the other continents for a long time. She then goes on to distribute assignments to work on during the lesson. All the students are supposed to read from the same textbook according to the following instructions:

First, you read through what we are supposed to do once. After that, you read carefully and note down the most important things. And at the end of the lesson we will tell each other what we have read.

[Translation of “Först läser ni igenom vad vi ska göra en gång. Sedan tar ni och läser noga och antecknar det viktigaste. Och så i slutet på timman ska vi ta och berätta vad vi har läst.”]

Each row in the classroom is instructed to read about one animal each; they will read about the koala, the kangaroo, the Tasmanian wolf, the platypus, the black swan, and the sharks.

Basically, the teacher's instructions are followed during the 40-minute lesson: The students read in silence – intermittently they ask questions and get responses from the teacher – take notes, are asked to silently practice their findings, and finally present these through a discussion led by the teacher where she asks questions – some more open-ended than others – and the students respond by reading from their notes. The discussion is abruptly finished as the bell rings.

Thus, the lesson is very much textbook-driven and directed towards finding facts about a given topic. In the teacher's instructions, emphasis is on procedure – how to read, what to do with the text in a technical sense, and finding answers – rather than discussing and analysing its contents.

#### **4.3 Study skills**

In both examples above, the students are instructed to approach texts in specific ways in order to be able to respond to questions and recapitulate what they have read. In some lessons, the techniques of approaching texts become the main object of teaching and learning. One example is a lesson recorded in the morning of 26th March 1969. In this lesson, a text is read aloud by the teacher and the students are instructed to take notes in a way that they are said to be able to use whenever they listen to a lecture.

In the beginning of the lesson, the teacher talks about the difference between practicing handwriting [“välsskrivning”], spelling [“rättskrivning”], and taking notes quickly while listening. He talks about how the latter involves making up your own abbreviations, sometimes making sketches, and finally making a fair copy after the lecture. For the specific exercise during the lesson, the students are instructed to either use a ballpoint pen or underline text written in pencil for the fair copy. This is so that the teacher can see how they have transcribed their pencilled abbreviations.

The students are also supposed to respond to questions in writing during the lesson. Before he starts reading the actual text, the teacher writes three questions relating to the text on the blackboard. The questions are about the hunting techniques of “bushmen”. It is however not mentioned what is meant by “bushmen”, either by the teacher or in the text that he reads aloud. Thus, the context of the factual text on hunting techniques is limited. While the teacher reads aloud, the students take notes. When the teacher has finished the reading, he emphasises again that:

Now, immediately fill in the abbreviations, write them out. And please remember, those of you who don't have ballpoints, underline everything you write from now on. Thus, what you write from now on should be underlined, otherwise you get your ballpoint pen and fill in, if you have one.

[Translation of: “Ta nu med en gång och fyll i förkortningar, skriv ut. Och så glöm inte det, ni som inte har kulspets, stryk under allt som ni skriver från och med nu. Alltså, det som ni skriver från och med ska strykas under, annars tar ni fram kulspetspennan och fyller i med om ni har en sådan.”]

The rest of the lesson is used for writing fair copies and then responding to the three questions in full sentences. Those students who finish early get various other tasks to work on. Towards the end of the lesson, students who haven't responded to the third question are encouraged to do so quickly. Then all students hand in their work – consisting of notes,

fair copies of the notes, and responses to the three questions – and the teacher says that he will mark it during the upcoming Easter holiday. He also emphasises that he will especially look at whether the students have listened carefully and how they have taken their notes.

In this example, informational reading – which in this case also involves listening – is explicitly taught as involving a type of technique for approaching a text read aloud and noting down specific facts from it. The context and contents of this text are of less importance.

#### **4.4 Approaching fiction through informational reading**

Even though informational reading was primarily tied to non-fiction in the curriculum, some of the recorded lessons show that even fiction could be approached in similar ways. One example is a lesson recorded in the afternoon of 25th April 1968, which is about poetry and *The Emigrants* by Vilhelm Moberg, a 20th century classic Swedish novel. While some students are preparing to read a poem aloud, the teacher reads an excerpt from *The Emigrants* to the rest of the class. The reading is preceded by an introduction to the historical era where the book series is set and an exercise where the students are asked to look up novel words that appear in the excerpt. While reading aloud, the teacher interjects a number of factually oriented questions for the students to respond to, such as “Which ocean did they cross when they travelled from Sweden to America?” [“Vad var det för hav man reste över när man reser från Sverige till Amerika?”] Hence, even a fictional text such as one of Sweden’s most read novels is approached with a string of informationally oriented questions. It is not until the very end of the lesson that the teacher briefly discusses Moberg’s style of writing and states it is one that few master.

## **5. Changes and continuities in educational document work**

The above descriptions make it possible to identify some changes and continuities in how a specific type of document work has been conducted in Swedish primary schools. There are indeed differences between the classrooms situations from the 1960s and classroom situations of today. For example, the classic layout of the classrooms with a blackboard and the teacher’s desk at the front and the students sitting in wooden desks in rows have changed – to different degrees – in present-day classrooms. The style of teaching is also different in that it was heavily textbook-driven in the recordings from the 1960s.

However, the style of reading that the students engage in in the recordings from the late 1960s – which from a pedagogical point of view can be seen as problematic – is similar to informational reading in contemporary educational settings: it is fragmentary, facts-oriented, and procedure-oriented. The practice of finding correct answers, rather than analysing and discussing the contents of a text seems to continue from lessons organised around print textbooks in the 1960s to current inquiry-based and digital teaching. Thus, certain reading traditions seem to persist within the Swedish school system, despite the introduction of new technologies.

When synthesising a number of research projects on the use of information and communication technologies (ICT) in Swedish schools in the late 1990s and early 2000s, Alexandersson and Limberg (2012, p. 134) note that “traditional school activities tend to shape ICT rather than the other way round”. The analysis of this paper supports this claim by

illustrating that certain approaches to texts were taken in Swedish schools well before digital technologies were introduced in classroom practices. Technologically-driven change is not as straightforward as is sometimes suggested in Information Seeking and Learning and Information Literacy research. Rather, new technologies are implanted into socio-historic practices that are changing slowly and in non-linear ways (see Cuban, 2001).

Furthermore, informational reading, as it appears in the late 1960s, was not a new type of reading practice, but rather part of a long reading tradition involving a rationalistic, utilitarian mode of reading, in contrast to an experiential, emotional mode of reading. Similar distinctions are known from other historical situations, for example, as Mäkinen points out, in the difference between “scholastic” and “monastic” reading in the Middle Ages. While the former was analytical and controlled, an emotional “love of reading” was seen as inherent to the latter (Mäkinen, 2014; see also Dolatkah & Lundh 2016). Thus, informational reading can be seen as part of a reading tradition in which today’s document work – in educational settings and elsewhere – are engrafted. Therefore, rather than conceptualising reading activities as types of information activities or behaviour, as has been done in some information seeking research (e.g. Ross, 1999a; 1999b; cf. Frohmann, 2004a, pp. 81ff), we suggest that many information activities should be seen as expressions of reading activities. In fact, early studies within the field of academic information seeking included the study of the reading habits of researchers (e.g. Paisley, 1965; see also Talja and Hartel, 2007). We do, however, find it interesting how the term “information” is used in the curriculum to describe this type of reading and how it is related to the description of a fast-developing, modern society. Describing certain reading activities as *informational* reading activities is a sign of an ongoing discursive shift.

In this paper, we have problematised the description of contemporary information practices and activities in educational contexts as radically new. We have also suggested that by retracting the idea that the concept of information is what should motivate the study of document work, we can start to ask new types of research questions. In future work, we will continue to explore the information discourse that we have discussed in this work and its effects on the practices we study. In the case of document work and documentary practices in Swedish compulsory education, we will look at why certain ways of reading were taught and motivated; what other ways of reading were suppressed when informational reading was promoted; and why the notion of “reading” subsequently is replaced by notions such as “information searching”, “information seeking”, and “information literacy” and the implications of this development.

---

<sup>1</sup> [It is worth noting, however, that in March 2017, the Swedish government revised the National Curriculum in order to better support and develop students’ digital competences in meeting the consequences of digitisation for society. Education in programming and in various applications of digital technologies, including media and information literacy were included (Swedish National Agency for Education, 2017).]

## **Acknowledgments:**

This study was conducted within the project *Reading, traditions and negotiations: Reading activities in Swedish classrooms 1967-1969*, funded by the Swedish Research Council 2013-2015, ref 2012-4140. The project is part of the Linnaeus Centre for Research on Learning, Interaction and Mediated Communication in Contemporary Society (LinCS) at the University of Gothenburg and the University of Borås, Sweden, funded by the Swedish Research Council, ref 349-2006-146.

An early version of this paper, "Pre-digital information literacy: An historical perspective on information seeking in educational contexts" was presented at the 2016 Conference of the CILIP Library & Information History Group, *Information History: Perspectives and Prospects*, London, 6 May 2016.

The authors would like to thank the DPA original researchers and participants; Jonas Emanuelsson, Oskar Lindwall, Elin Johansson, Charlotte Sellberg and Erik Lundberg at Gothenburg University for all their efforts to preserve the data; Niclas Hardman and Jan Buse at the University of Borås for their technical assistance; and Frances Hultgren at Swedish School of Library and Information Science for her help with the English editing of the manuscript.

## **Biographical Details:**

**Anna Hampson Lundh**, PhD, is Docent (Associate Professor) at the Swedish School of Library and Information Science, University of Borås and Senior Research Fellow at Libraries, Archives, Records and Information Science, the School of Media, Creative Arts and Social Inquiry, Curtin University. Her research interests concern reading practices and discourses about reading.

**Mats Dolatkah**, PhD, is Research Adviser at the University of Borås, Sweden. His research interests include the cultural history of popular reading and reading promotion in Sweden.

**Louise Limberg**, PhD, is Senior Professor at the Swedish School of Library and Information Science, University of Borås and specialises in research on information practices. Her research interests concern the interaction between information seeking and use and learning, linked to issues of information literacy.

## References

- Alexandersson, M. and Limberg, L. (2012), "Changing conditions for information use and learning in Swedish schools: a synthesis of research", *Human IT*, Vol. 11 No. 2, pp. 131-154.
- Andersen, J. (2006), "The public sphere and discursive activities: information literacy as sociopolitical skills", *Journal of Documentation*, Vol. 62 No 2, pp. 213-228.
- Andersson, C. (2017), "The front and backstage: pupils' information activities in secondary school", *Information Research*, Vol. 22 No 1, available at <http://InformationR.net/ir/22-1/colis/colis1604.html> (accessed 18 October 2017).
- Black, A. (2006), "Information history", *Annual Review of Information Science and Technology*, Vol. 40, pp. 441-474.
- Bredänge, G., Gustafsson, B., Hallin, G., Ingvarson, A., Odhagen T. and Stigebrandt, E. (1971), *Didaktisk processanalys: presentation av syften, uppläggning, undersökningsgrupper och mätinstrument samt några beskrivande data [Didactic process analysis: presentation of purposes, design, groups, measurement instruments and some descriptive data]*. Lärarhögskolan, Gothenburg.
- Capurro, R. and Hjørland, B. (2003), "The concept of information", *Annual Review of Information Science and Technology*, Vol. 37, pp. 343-411.
- Cuban, L. (2001), *Oversold and underused: computers in the classroom*. Harvard University Press, Cambridge, Mass.
- Day, R.E. (2001), *The modern invention of information: discourse, history, and power*. Carbondale, Southern Illinois University Press.
- Dolatkah, M. and Lundh, A.H. (2016), "Information and experience: audiovisual observations of reading activities in Swedish comprehensive school classrooms 1967-1969", *History of Education*, Vol. 45 No. 6, pp. 831-850.
- Francke, H., Sundin, O., and Limberg, L. (2011), "Debating credibility: the shaping of information literacies in upper secondary school", *Journal of Documentation*, Vol. 67 No. 4, pp. 675-694.
- Frohmann, B.P. (2004a), *Deflating information: from science studies to documentation*, University of Toronto Press, Toronto.
- Frohmann, B. (2004b), "Documentation redux: prolegomenon to (another) philosophy of information", *Library Trends*, Vol. 52 No. 3, pp. 387-407.
- Gärdén, C. (2016), "Information literacy in the tension between school's discursive practice and students' self-directed learning", *Information Research*, Vol. 21 No. 4, available at <http://informationr.net/ir/21-4/paper734.html> (accessed 19 October 2017).

Gärdén, C., Francke, H., Lundh, A.H. and Limberg, L. (2014), "A matter of facts?: linguistic tools in the context of information seeking and use in schools", in *Proceedings of ISIC, Leeds, 2-5 September, 2014: Part 1*, available at <http://informationr.net/ir/19-4/isic/isic07.html> (accessed 19 October 2017).

Hjørland, B. (2000), "Documents, memory institutions and information science", *Journal of Documentation*, Vol. 56 No. 1, pp. 27-41.

Kuhlthau, C.C. (2004). *Seeking meaning: a process approach to library and information services* (2<sup>nd</sup> ed.), Libraries Unlimited, Westport, Conn.

Limberg, L. (1999), "Three conceptions of information seeking and use", In Wilson, T.D. and Allen, D.K. (Eds.), *Exploring the contexts of information behaviour: proceedings of the Second International Conference on Research in Information Needs Seeking and Use in Different Contexts, 13/15 August, 1998, Sheffield, UK*, London, Taylor Graham, pp. 116-135.

Limberg, L., and Alexandersson, M. (2010), "Learning and information seeking", in Bates, M.J. and Maack, M.N. (Eds.), *Encyclopedia of library and information sciences* (3<sup>rd</sup> ed.), CRC Press: Boca Raton, FL, pp. 3252-3262.

Limberg, L., Alexandersson, M., Lantz-Andersson, A., and Folkesson, L. (2008), "What matters?: shaping meaningful learning through teaching information literacy", *Libri*, Vol. 58 No. 2, pp. 82-91.

Limberg, L. and Sundin, O. (2006), "Teaching information seeking: relating information literacy education to theories of information behaviour", *Information Research*, Vol. 12 No. 1, available at <http://InformationR.net/ir/12-1/paper280.html> (accessed 19 October 2017).

Linell, P. (2009), *Rethinking language, mind, and world dialogically: interactional and contextual theories of human sense-making*, Information Age Publ., Charlotte, NC.

Lundh, A. (2011), *Doing research in primary school: information activities in project-based learning*, Valfrid, Borås, available at <http://hdl.handle.net/2320/8610> (accessed 19 October 2017).

Lundh, A.H., Francke, H. and Sundin, O. (2015), "To assess and be assessed: upper secondary school students' narratives of credibility judgements", *Journal of Documentation*, Vol. 71 No. 1, pp. 80-95.

Lundh, A.H. and Dolatkah, M. (2016), "Reading as dialogical document work: possibilities for Library and Information Science", *Journal of Documentation*, Vol. 72 No. 1, pp. 127-139.

Mäkinen, I. (2014), "Reading like monks: the death or survival of the love of reading?", In Lauristin, M. and Vihalemm, P. (Eds.), *Reading in changing society*. Tartu, University of Tartu Press, pp. 13-27.

- Paisley, W. J. (1965), *The flow of (behavioral) science information: A review of the research literature*. Palo Alto, Institute for Communication Research, Stanford University.
- Radford, G.P. (2003), "Trapped in our own discursive formations: toward an archaeology of library and information science", *Library Quarterly*, Vol. 73 No. 1, pp. 1-18.
- Ross, C.S. (1999a), "Finding without seeking: the information encounter in the context of reading for pleasure", *Information Processing and Management*, Vol. 35 No. 6, pp. 783-799.
- Ross, C.S. (1999b), "Finding without seeking: what readers say about the role of pleasure-reading as a source of information", In Wilson, T.D. and Allen, D.K. (Eds.), *Exploring the contexts of information behaviour: proceedings of the Second International Conference on Research in Information Needs Seeking and Use in Different Contexts, 13/15 August, 1998, Sheffield, UK*, London, Taylor Graham, pp. 343-355.
- Skolverket [Swedish National Agency for Education] (2017), "Tydligare om digital kompetens i läroplaner, kursplaner och ämnesplaner" ["Digital literacy clearer in curricula, syllabi, and subject plans"], available at <https://www.skolverket.se/skolutveckling/resurser-for-larande/itiskolan/styrdokument> (accessed 19 October 2017).
- Skolöverstyrelsen [Swedish National Board of Education] (1962), *Läroplan för grundskolan [Curriculum for the compulsory school forms]*, Stockholm.
- Skouvig, L. and Andersen, J. (2015), "Understanding information history from a genre-theoretical perspective", *Journal of the Association for Information Science and Technology*, Vol. 66 No. 10, pp. 2061-2070.
- Sundin, O. (2015), "Invisible search: information literacy in the Swedish curriculum for compulsory schools", *Nordic Journal of Digital Literacy*, Vol. 10 No. 4, pp. 193-209.
- Sundin, O. and Carlsson, H. (2016), "Outsourcing trust to the information infrastructure in schools: How search engines order knowledge in education practices", *Journal of Documentation*, Vol. 72 No. 6, pp. 990-1007.
- Talja, S., and Hartel, J. (2007), "Revisiting the user-centered turn in information science research: an intellectual history perspective", *Information Research*, Vol 12 No 4, available at <http://InformationR.net/ir/12-4/colis/colis04.html> (accessed 19 October 2017).
- Trace, C.B. (2007), "Information creation and the notion of membership", *Journal of Documentation*, Vol. 63 No. 1, pp. 142-164.
- Weller, T. (2008), *Information history: an introduction*. Oxford, Chandos Publishing.
- Wiegand, W.A. (1999), "Tunnel vision and blind spots: what the past tells us about the present; reflections on the twentieth-century history of American librarianship", *Library Quarterly*, Vol. 69 No. 1, pp. 1-32.

Wiegand, W.A. (2007), "Libraries and the invention of information", in Eliot, S. and Rose, J. (Eds.) , *A companion to the history of the book*, Oxford, UK, Blackwell Publishing Ltd, pp. 531-543.