

Practicing Information Literacy in the Classroom

Policies, Instructions, and Grading

Af Olof Sundin, Helena Francke og Louise Limberg

Abstract

Artikeln syfte är att skapa en ökad förståelse för de utmaningar som uppstår när man i klassrumspraktiker skapar mening åt informationskompetens i allmänhet och i synnerhet åt trovärdighet. En kvalitativ studie har genomförts i två svenska gymnasieklasser med elever från andra året på samhällsvetenskapligt program. Artikeln ger en inblick i de utmaningar som pedagoger möter i samtidens skola när man rör sig i ett förändrat medielandskap som i ökad utsträckning bjuder in användare till att skapa och organisera digital information. Olika vägar att göra informationskompetens och, mer specifikt, trovärdighet till objekt för undervisningen diskuteras. Vidare identifieras en inflytelserik diskurs kopplad till trovärdighet, en diskurs som fokuserar på kontroll. I studien dras slutsatsen att pedagoger behöver återvända till de traditionella kriterierna för källkritik och diskutera hur dessa kan utnyttjas i digitala miljöer i syfte att erhålla en ökad reflexivitet vid källkritiska bedömningar.

*Olof Sundin, Professor at the University of Borås and Lund University (Olof.Sundin@kultur.lu.se)
Helena Francke, Senior Lecturer at the University of Borås (Helena.Francke@hb.se)
Louise Limberg, Professor at the University of Borås (Louise.Limberg@hb.se)*

Introduction

This article presents and discusses information literacy as it comes across in the syllabi of Swedish upper secondary school, and in the practices of educators in the classroom. The increasing use of digital media in general and not least of participatory media has made information literacy highly topical at both policy and classroom levels. At the same time, there is a lack of empirical research on what is actually going on in relation to teaching information literacy in classrooms today. The article aims, therefore, to describe, understand and discuss the challenges involved in assigning meaning to information literacy (as it is expressed in syllabi) in classroom practices of teaching and assessing both information literacy in general, and credibility evaluations in particular. By presenting a close study of classroom practice and exploring these challenges as they are handled in the classroom, we want to continue the discussion on how to make information literacy an object of teaching (e.g. Hongisto & Sormunen, 2010; Julien & Williamson, 2010; Limberg & Folkesson, 2006). This article draws on a larger project, involving the study of two classes in the Social Science Programme conducting project work in two different Swedish upper secondary schools (Sundin & Francke, 2009; Francke et al., 2011). Here, we focus on the aspects of teaching, assessing and grading information literacy. Particularly, our interest in this area should be seen in relation to the changing media landscape, one which, to an increasing degree, invites ordinary users to become producers of information and its organisation.

Research on information literacy

Previous research of how information literacy is treated in schools has identified a focus on sources, search techniques and pathways. It has also shown that educators see problems in the ways in which pupils handle credibility issues and the use of information (Limberg & Folkesson, 2006; Limberg & Sundin, 2006). Bruce's study showed that the teaching of information literacy in higher education only refers to a few out of many possible conceptions of information literacy (Bruce, 1997). According to Alexandersson and Limberg (2003), pupils tend to search for facts rather than to gain an increased understanding of an issue while exploring the topic of a pupil-centred learning task. The authors explain this as springing from an observed lack of supportive structures provided for pupils involved in independent project work. Limberg (1999; Limberg et al. 2008) has found that a condition for pupils to go beyond a fact-finding approach to information seeking and use, to actively search for and use information, is that the teacher and the librarian provide explicit and consistent guiding in such a direction. In line with this, Daniels (2010) reports on the importance of breaking down credibility assessment into concrete and situated headings in order to improve college students' abilities to evaluate the credibility of sources.

Our recent research has illustrated pupils' difficulties in handling social media in a school context (Sundin & Francke, 2009; Francke et al, 2011). We (Francke et al., 2011) identified four different approaches adopted by pupils when assessing credibility: credibility derived from *control*, credibility from *balance*, credibility from *commitment* and credibility from *multiplicity*. Credibility from control involves what is often regarded as "traditional" ways of assessing credibility, such as controlling the origin of a source, affiliation of the author or the way in which an editorial board controls content in traditional publishing processes. Credibility from balance relates to how a statement on, for example, a website can easily be checked against other statements in other sources. If many sources state the same thing, they are considered to be credible. Credibility from balance is also visible when associated with opposing viewpoints being accounted for in the same text. This method of assessing credibility relates to classical assessment methods of credibility, by comparing two or more independent sources. This is something that seems

to be encouraged by the use of Google, as the search engine's results list makes such a comparison very easy (Lankes, 2008). Credibility from commitment refers to how pupils in the study viewed sources as more credible because of the author's or organisation's strong commitment and position in society. Finally, credibility from multiplicity relates to how sources are sometimes seen as more credible if they are open for public contribution and control and the category captures different ways of describing a phenomenon through crowd-sourcing. This way of relating to credibility is built into some social media, such as Wikipedia. We will return to these four approaches in the discussion.

In the article, people's activities in the world are understood from a socio-cultural perspective as being tool-based and embedded in certain practices (Scribner & Cole, 1981). That is, we depend on cultural (intellectual and physical, including digital) tools when taking part in various practices, such as teaching and assessing credibility in upper secondary schools (Säljö, 1999; 2010; Vygotsky, 1978). The theoretical framework is inspired by research that investigates literacy as a social practice and that accordingly treats literacy in the plural – as literacies (e.g. Street, 1984). The cultural tools for publishing, seeking, storing and in other ways communicating knowledge claims are changing in contemporary society, not least in schools (Säljö, 2010), and, we would like to add, in libraries. It has been claimed that schools and libraries traditionally build on a stable, hierarchical order of knowledge, and that this order is challenged by new digital media (e.g. Lankshear & Knobel, 2008). With a socio-cultural approach, information literacy is analytically treated as being enacted in certain practices (Limberg, Sundin & Talja, forthcoming; Lloyd, 2007; Lundh, 2010; Lupton & Bruce, 2010). In this article, activities and cultural tools are seen as embedded and given meaning in practices, such as when pupils try to meet the requirements for passing their courses in Swedish upper secondary school. Information literacy is thus not treated as a concept with a solid and finite content, but rather as a lens, which can be used in order to highlight certain aspects of a practice, such as carrying out information activities in relation to a project in school.

Method

The material used in this study consists of policy documents on a national level as well as fieldnotes, local instructions, interviews and the educators' written grading comments from two classroom studies carried out in 2008. Both classes attended the Social Science Programme in school year 11 (of twelve) in Swedish upper secondary school.

A description of the information literacy-related goals stated in the syllabi for Swedish, History and Civics forms a first step in the analysis. Information literacy is often discussed in relation to these subjects, and vice versa. The syllabi are analysed with attention to information literacy-related aspects and how these are expressed in four specific courses in the subject areas of Swedish, History and Civics. We take a closer look at how notions of information literacy are visible in the course goals and descriptions for these subjects, as they constitute the framework for the teaching and assessment of information literacy in the two schools we visited.

Furthermore, we followed the work of two secondary school classes when they carried out a group assignment during 6 and 7 weeks respectively. The two classes were chosen because of the interest of their teachers and librarians in the critical evaluation of sources, particularly in relation to social media, such as Wikipedia. In both classes, the teachers had a well developed collaboration with the school librarian, who was regarded as a member of the pedagogical team. In School A, 38 pupils, two teachers and one librarian took part in the study and in School B, 29 pupils, one teacher and one librarian participated. The empirical material analysed here was gathered by observing classroom activities and local documents distributed by teachers and librarians to the pupils. Furthermore, 7 individual interviews were conducted with the teachers and librarians before and after the pupils' project assignment. Finally, the pupils wrote individual blogs, so-called "source diaries", in order to communicate their evaluation and use of sources throughout the project. The empirically grounded approach described here is in line with a socio-cultural tradition. A limitation of the study is that we did not focus even more on the grading practices and the arguments for the grading which, in retrospect, would have been interesting.

Fieldnotes and interviews have been transcribed in detail and quotations have been translated into English. The analysis took its starting point in the fieldnotes together with the local and national documents. These were thereafter supplemented with the interviews and the educators' grading comments. All empirical material has been carefully read and analysed in relation to earlier literature and within a framework of a socio-cultural perspective that gives special attention to the situatedness of information literacy practices.

Information literacy in the curriculum

The national curriculum in use for the Swedish upper secondary school during our material collection covered 138 subjects, divided into 878 courses (SKOLFS: 2000:2).¹ Pupils study core courses, courses specific to their chosen programme and branch, and eligible courses. Information literacy is neither given the role of a distinctive subject, nor a specific course within a subject. Rather, aspects of what is often regarded as dimensions of information literacy are included in various courses. So, information literacy is practiced within different courses and examined as such. The subjects of Swedish, Civics, and History stand out in particular as addressing information literacy issues and we will therefore take a closer look at these. The four courses given special attention in the article are SV1202 – Swedish B, SV1205 – Swedish C (oral and written communication), SH1202 – Civic B, and HI1202 – History B. These are all covered in the classroom studies from which we report below. The goals of each course involve several aspects that could be considered to concern information literacy.

The Social Science programme is a theoretical programme from which many pupils are expected to proceed to university after graduation. As one of the teachers said: "So you've always got your sight set on university studies" (Teacher interview, School B). The formal descriptions of the subjects, as well as the national goals for the Social Science Programme and the four courses, mention several different types of sources, including specific modes of representation and media, such as verbal, written and picture-based sources in print and digital form. In a couple of cases, specific genres are included, such as "Journalistic, popular scientific and scientific texts" and "databases of different kinds" (SKOLFS:

2000:2, Subject: Swedish). In the goals for History, it is emphasised that "Criticism of sources is the basis of the subject and provides opportunities to promote a problem-oriented and critical attitude to texts, pictures, and other media also from our own time" (SKOLFS: 2000:2, Subject: History). Thus, what is often regarded as crucial elements in many descriptions of information literacy lie at the core of these subjects, subjects which are also central to the Social Science Programme.

Aspects of information seeking, such as searching for and selecting information, are mentioned quite frequently; in particular, the ability to critically examine and evaluate sources is highlighted in all four courses' goals. This is especially the case if the pupil is aspiring to a higher grade than Pass. Various aspects of information use are also included, phrased in terms of processing, interpreting, reviewing, compiling, investigating, or critically using information, sources, and tools. These abilities are further mentioned in relation to such academic skills as critical and logical thinking, the ability to "understand different views on an issue" (SKOLFS: 2000:2, Course: Civics B), to formulate problems, and to "develop an increasingly scientific way of thinking and working" (SKOLFS: 2000:2, Subject: Swedish). Five examples of how information seeking, evaluation, and use are expressed in course goals are:

"be able to communicate views of their own and others in speech and writing, make summaries and investigations, as well as draw conclusions and set out arguments, so that the contents and message become clear and appropriate to the target group and purpose." (SKOLFS: 2000:2, Course: Swedish B)

"be able in different sources, both printed and digital, to search for, select and evaluate and form a view of the material to be able to make compilations, investigations and use these to put forward their arguments." (SKOLFS: 2000:2, Course: Swedish C)

"be able to critically examine and evaluate the arguments and messages of different media." (SKOLFS: 2000:2, Course: Swedish C)

"be able to obtain information from different sources and media, as well as critically examine

and interpret these." (SKOLFS: 2000:2, Course: Civics B)

"be able to show the complications arising from critical sources in the description of both current and also historical processes and situations." (SKOLFS: 2000:2, Course: History B)

Even though information seeking, selection, evaluation and use of various media and genres are emphasised in several parts of the goals, the goals are phrased in general terms. The interpretation and implementation of suitable ways of seeking and using sources, and of what sources are suitable to use in specific situations, are negotiated in the schools and in the classrooms. The goals encourage information seeking and critical assessments of sources, but they do not say anything about how this should be achieved.

To some extent the grading criteria might be used to indicate qualitative differences in these activities. The grading of the pupils who took the courses varied from *Fail* to *Pass with special distinction*. As a way of illustrating the formal basis for the grading, the guidelines for the different levels in the course descriptions of Swedish C (SKOLFS: 2000:2) are presented as an example. We focus here only on the criteria that are the most closely related to information literacy:

"Criteria for Pass

Pupils select and evaluate material from different sources, and compile this with assistance into their own short investigations, reports and presentations so that the main points are clear."

"Criteria for Pass with distinction

Pupils search on their own in different sources, examine these critically, as well as formulate on their own investigations, reports and presentations, where they assess the material and draw conclusions."

"Criteria for Pass with special distinction

Pupils examine and evaluate communication of different kinds on the basis of theoretical knowledge in the area, draw their own conclusions, and apply their knowledge and experiences to both the spoken and written language."

In the two higher grades, the critical component is emphasised, as is the ability to act independently. In the highest grade, what is often seen as traditional information literacy is supplemented with aspects concerning the application of theory and the ability to apply the knowledge that has been gained. Still, the learning goals together with the grading criteria leave the teacher a broad frame for interpretation. In the next section, we will take a closer look at how information literacy is assigned meaning and treated by the teachers and librarians in their local settings.

Inside the classroom: Assessing information literacy

We conducted field studies in two classes in two different Swedish upper secondary schools, School A and School B. Below we focus on how information literacy issues were taught, assessed and graded by the teachers and librarians in each school.

School A

The project in School A concerned gender, with information literacy being one of several aspects of the assignment. The pupils were divided into groups and, within the framework of the project and of the goals of Swedish C, Civics B and History B, they were required to formulate their own tasks as well as the methods to accomplish them. The result became a diversified picture of different kinds of tasks, and, in consequence the pupils focused quite differently on the learning goals. The task chosen by one group was, for example, occupation and gender and for another group gender in preschools. We were present in the classroom throughout the project, including the majority of the individual and group meetings between the pupils and the teacher when the grading was communicated and discussed. In addition to individual blogs (see below), the group work was reported through an oral presentation or performance, sometimes accompanied by various forms of interaction with the rest of the class, and a short compilation of the sources used.

The lessons during the project consisted of a mix of short formal lectures by the teachers and group-based work by the pupils that was continuously supervised by the educators. As an introduction, the librarian gave a short lecture on credibility. He managed to create a dialogue with the pupils in which different

aspects on credibility were discussed. His focus was on authorship (the origin of the source) even if other aspects were also touched upon. The lecture concerned, for example, how to identify the author of a website, the comparison between different sources, and the importance of evaluating sources in relation to the situation in which the source is going to be used (fieldnote). At the start of the project, the librarian also circulated two pages of instructions on how to critically evaluate sources and on how to write an individual source diary in blog format. The source diary formed one of the bases for the grading of the projects, particularly the individual grading of information literacy aspects. As we will see later in the case of School B, the pupils were asked to list the sources they used in their individual blogs, along with information on how they found them and how they evaluated them. In the instructions, the evaluation of sources was closely related to the identity of the author or responsible publisher:

“The most important thing to know when you’re using an information source (web page, newspaper article, book, TV broadcast, ...) is who’s responsible for the information or who has created it.

Why? Well, because there are many subjects that we don’t know much about, which makes it difficult for us to determine whether the content is likely to be true or not. That’s why it’s easier to determine the credibility by looking at who’s responsible for the information.” (Instructions to the source diary, School A)

With these more “traditional” instructions, it is difficult to fit Wikipedia articles, with their collaborative origin, into the framework of what is a credible source. Instead, the focus is on controlling the origin of the source. This observation should be contrasted with other occasions on which particularly the librarian, but also the teachers, emphasised an open and flexible attitude toward Wikipedia, such as in the introductory lecture.

Throughout the project work, the pupils were free to move around in and outside of the school, including visits to libraries. The librarian visited the class a few times during the project. Most of the pupils seemed to know the librarian and it was obvious that he had collaborated with the two teachers before. He helped the pupils whenever he got the chance: “The librari-

an drops by and points out to the pupils that they can search for one of the headings in the Word file on the Statistics Sweden website, and that they will then find what they are looking for” (fieldnote). During the librarian’s visits in the classroom, he would talk informally with the pupils. At pre-booked meetings, the librarian would act as an advisor in relation to a student group.

The teachers’ grading of both the project groups’ and individual pupils’ work varied from *Pass to Pass with special distinction* in the various subjects. At the end of the project, the teachers met each group individually in order to discuss the marking. It was possible for us, as researchers, to follow the discussion, and sometimes the negotiations, concerning the grading:

“– Finally, let’s talk about the sources and the blogs.

The pupils sigh loudly. The teacher refers to the instructions for the information seeking blogs and mentions, among other things, that they could have critically evaluated his lectures. The pupils agree. The teacher also says:

– In the blogs, you mainly write about the process, not as much about the sources, and not very much about the evaluation of sources.

The pupils don’t object, but rather seem to agree.” (fieldnote)

This quotation captures many features that frequently recur in the empirical material from School A. In the end, the majority of the pupils had not focused as much on the critical evaluation of their sources and the source diary in their blogs as they were asked to do. In their blogs, the pupils mainly reported on where they had searched and what sources they had found, rather than on how they had assessed and critically evaluated those sources:

"Teacher 2 wonders how Edith feels the blog has worked out. Edith has written a great deal, but not very often. Teacher 2 points out that she has written more about the process than the sources. Edith remarks that it is difficult to know how to do it. (fieldnote)

Despite the weight given to critical evaluation of sources in the learning goals of the courses involved, and despite the instructions, the pupils’ assessment

and evaluation of sources were, according to the educators, in general not exercised in very advanced ways. One of the two teachers said in the follow-up interview that, “/.../ they might post the search paths but they aren’t critical to their sources. And that’s what’s required for the higher grades.” (Teacher interview) It seems as if other learning goals than those of interest to information literacy became central. We will get back to the reasons for this in the discussion.

In sum, the project work in School A was characterised by:

- A high degree of freedom in choosing a topic within the overall theme.
- Credibility/information literacy was one of many aspects in the project.
- Group-based supervision by educators throughout the project work.
- Credibility instructions primarily based on informal dialogue (as a complement to formal instruction in previous courses).
- Aspects of control dominated teaching on credibility, particularly in the written instructions.
- Less focus on the evaluation of sources in the blogs than expected by the educators.

School B

In School B the pupils worked with a project on nuclear power, but the emphasis and underlying aim was that they should learn to “search, find, evaluate and argue” in ways that could be used in any subject (Instructions to the project work, School B). In this project, information literacy and credibility discussions were not just a side-effect, but formed the goal in itself. The specific task for the pupils was to rank 12 sources on nuclear power according to credibility, and to motivate their ranking. They were required to include three Wikipedia articles from different language versions, as well as a few other given sources or pathways for searching sources. The remaining sources, the pupils had to search for and find on their own. Besides the final presentation of their work, the pupils in School B also had to write a source diary in an individual blog throughout the project. The pupils’ work was assessed by the teacher in relation to the objectives of Swedish B.

The project started with two lessons taught in collaboration by the librarian and the teacher on information seeking and the evaluation of sources and ended with each group giving an oral presentation of their work, accompanied by a commented written list of the ranked sources. In between, the pupils worked in groups, primarily outside of the scheduled lessons. In comparison to School A, the teacher and librarian devoted their classroom time to information literacy in a more formal way, through lectures using Power-Point presentations. The first lecture focused primarily on Internet resources – such as Google (compared to other search engines), web directories, Wikipedia, the hidden web – and on how the resources worked – such as page history in Wikipedia:

“They continue, and [the librarian] shows how to use the history function and to edit. She uses the example of [Church X in town Y]. She asks the pupils how it is possible to see who has written something. [A pupil] says that you can check the history. [The teacher] prompts everyone to take notes”. (fieldnote)

The second lecture followed up on the first one, but also covered, among other things, credibility issues in general. For example, the librarian and teacher introduced three questions to the pupils: “Why?”, “When?” and “Who?” The why-question concerned the intention behind a source, the when-question concerned the currency of a source, and the who-question concerned the author of a source. These questions echoed the written instructions of the project in which the pupils were given the following recommendations for how to rank sources: “Who has written this – what’s the author’s level of knowledge? What are the writer’s interests? Is it possible to be neutral?”(Instructions to the assignment, School B)

The instructions to the source diary stated that, “We want to know how you set about the assignment and how you think” (Instructions to the assignment, School B). The teacher and the librarian asked for descriptions of what the pupils did, but also of how they thought and argued. The blogs were meant to document the process of the pupils’ work, particularly how they found and critically evaluated their sources: “In the blog you describe how and where you have searched for sources, what you found that was usable and why” (Instructions to the assignment,

School B). According to the teacher, the blog served as the most important instrument for the teacher’s grading of the individual pupils’ work. After the final lesson, the teacher communicated the grading in the pupils’ individual blogs. Furthermore, the librarian involved in the project often published comments in the pupils’ blogs. Below are a few examples of comments given by the teacher and librarian, accompanying the grading.

The librarian wrote in one blog: “Unfortunately, in your blog I miss a more thorough discussion on how you have found and critically assessed your sources”. The teacher added: “It’s a little too short – it’s almost impossible for me to understand how you have reasoned and thought in this assignment”. In this case it was impossible for the teacher and librarian to actually assess the pupil’s work in more than general terms. The pupil was given the grade *Pass*. Another pupil got the grade *Pass with distinction* and the teacher wrote: “As often, your work is calm and methodical. Your blog shows how you have worked with and reasoned about e.g. neutrality and information bias and influence.” The librarian commented to the same pupil: “In your blog you make well-reasoned reflections on your choice of sources and you also describe how you have found your sources. I am sure that you will benefit from this way of thinking about sources in the future, when you search for and evaluate information.” Yet another pupil got the grade *Pass with special distinction* and the librarian wrote on the pupil’s blog: “Thanks for a great presentation and a detailed blog where you show that you work methodically. It is easy to follow your reasoning [about] where you have searched, how you have searched and not least how you have critically evaluated the sources. I believe and hope that in the future, you will profit from what you have learned in the project.” The teacher is similarly encouraging: “The blog is detailed, clear and precise. There is more than what ended up in the presentation, which always impresses. In the presentation you seemed confident and secure /.../”.

The final grading comments made by the educators treated credibility and information literacy in a general sense and without particular recommendations about what the pupils might have done differently. It should also be mentioned that the teacher commented on the pupils’ work when they made the oral presentations of their work. After the final lesson of the

project, the teacher summarized his assessments of the pupils' work in the following way: "they've dealt well with the things we have talked about, they've included that. They've also handled the search process well. .../ I don't think the evaluation of sources has worked particularly well." (Teacher interview) As in the case of School A, it was easier for the pupils to describe how they had looked for sources than to communicate their critical evaluation of these sources. At the same time, a handful of pupils put a lot of effort into describing their critical evaluation of sources and they also received the highest grades. When asked in the follow-up interviews what surprised the teacher and the librarian most, they both answered that it was the fact that the pupils to such a large extent regarded sources that expressed a viewpoint as less credible. According to the two educators, the pupils considered a source which they thought of as neutral to be the more credible (Teacher interview; Librarian interview).

In the follow-up interview, the teacher also said that due to lack of time, he had not offered the pupils a supportive enough structure during the project: "I won't deny that a more focused teacher could have been more present, and could have made comments to guide the pupils a bit more" (Teacher interview). Likewise, the librarian had expected more interaction with the pupils during the project: "I had thought that I would be working more with the pupils in the library, which didn't happen, probably for several reasons" (Librarian interview). One of the reasons that the librarian mentioned was a reconstruction of the school library during the project. For the teacher it was more a question of time and he stated in the follow-up interview that next time he introduced a similar assignment, he would: "Spend a bit more time on the group assignment and less on the PowerPoint presentation". Besides the time spent on lecturing on information literacy at the beginning of the project, the educators did not have much dialogue with the pupils during the project. In this way, the project in School B echoes some of the difficulties reported in previous research (e.g. Alexandersson et al., 2007).

In sum, the project work in School B was characterised by:

- A structured assignment for the pupils with less freedom than in school A.
- Credibility as a focus, through an assignment concerned with a controversial issue.

- Little supervision during the project.
- Credibility instructions primarily based on formal lectures.
- Aspects of control dominated teaching on credibility, particularly in the written instructions.
- According to the teacher, the pupils' blogs focused on process, but sources were also discussed.

Discussion

Above, we have tried to give an inside view of two classes' project work in upper secondary school with a focus on the educators. Without going into great detail, we will begin by relating the project work to the four approaches to credibility, aggregated from pupils in the Swedish upper secondary school, that were introduced at the beginning of the article: credibility from control, credibility from balance, credibility from commitment, and credibility from multiplicity (Francke et al., 2011). In the first of these, credibility draws on various forms of control. Traditionally, the system of publishing relies on controlling the contents in advance of publication. The task for a pupil then becomes to check the reputation of the control filters or, for a more advanced evaluation of sources, if the before-hand control has been carried out properly. The growing number of web publications in general, and social media contributions in particular, has given renewed attention to credibility issues, not least in education. Publishing outside of established media and their publication processes has fundamentally changed the possibilities of accessing information which has not been controlled by someone other than the author before publication. When the media landscape is constituted by an increasing number of sources without control prior to publication, the "necessity" of revealing information such as the origin of a text and the reputation of an author has been emphasised. The current interest in schools in credibility issues could be seen in this light. As we found in the two classes, the approach of control is also often at the heart of teaching credibility. In the lectures and, particularly, in the instructions to the source diaries, aspects of control, such as identifying the author of a source, were given a dominant position. Other, modified, aspects of control were also present, such as control using the media-specific properties of, for example, Wikipedia (discussions, page history etc.). A discourse of control has strong roots in librarianship (Muddiman, 1999), and the dominance of control in information literacy instruc-

tions can be related to the argument in Kuhlthau (2003) that there is a dichotomy between uncertainty and control.

The matter of control continues to be a necessary and basic approach to assessing credibility, including using media-specific properties of social media for evaluating credibility, but it is not the only one. To balance and weight different sources against one another is something which was also discussed in the classrooms. The librarian in School A in particular included balance as part of the information literacy teaching, but it was also mentioned in School B. A related aspect of balance is when different viewpoints are balanced within the same text. One teacher claimed to have been surprised when he evaluated the pupils' work and their preferences for what they regarded as "neutral" sources. In both classes, credibility from multiplicity was also treated through the example of Wikipedia, but multiplicity and balance were not related to the control ideal with its focus on origin and author. As a result, the strong presence of control in the instructions, particularly the focus on identifying the author, turned out to be incompatible with how Wikipedia, with its many anonymous authors, works. Credibility as deriving from commitment was not discussed by the educators.

In the two classrooms, we witnessed two different ways of approaching the learning goals concerning information literacy. In the following, we would like to discuss these two ways and their consequences when it comes to making information literacy an object of teaching (cf. Limberg & Folkesson, 2006). The assignments in the two classes were different. In School A, the pupils were not required to report the project in written form, other than as a compilation of references. This is probably one explanation to why the pupils did not discuss their sources more than they actually did, as the sources became a less visible part of their work. Furthermore, in School A the pupils had more freedom in constructing their own tasks, which made the pupil groups' reliance on sources very different from each other, despite continuous supervision. Some groups formulated tasks that made external written sources necessary, while other groups constructed their tasks differently, involving other forms of input, such as interviews with family members or field-work. In School B, on the other hand, the task at hand was less flexible for the

pupils. All groups had the same assignment, which they could fill with slightly different content. The assignment demanded active discussion and a critical evaluation of written sources in a way that lead the pupils to discuss credibility, even if it was not done to a sufficient degree to entirely satisfy the educators.

The different ways of approaching information literacy in the two classes fall back on the formulation of the task and the guidance by the educators during the project. Had the teachers and/or librarian in School A more clearly brought the idea of sources into focus in the supervision sessions where they discussed the formulation of the groups' tasks, the outcome may have been different (cf. Limberg et al., 2008). The pupils in School A tried to balance many different learning goals from three different courses in their projects. For some of the groups, seeking and using sources they had not already been provided with was given low priority in relation to other goals. In School B, the educators pointed out that there was a lack of supervision due to external factors. This meant that some groups remained uncertain of what was expected of them until quite late in the process. These two examples illustrate, through both successful and less successful outcomes, that for meaningful information seeking and critical evaluation of sources to take place, it is important to create a clear structure for the work and supervision in relation to independent project work (Alexandersson et al., 2007)

In summary, there seems to be a strong discourse of control associated with credibility in school. In the present study, we find some promising examples of how this discourse is reshaped to also incorporate properties common to digital media. The discourse of control is difficult to avoid in the classroom, despite the best intentions and knowledgeable educators. One way of achieving a broader treatment of credibility as an object of teaching might be to widen the repertoire of approaches to credibility. The focus on control could be further developed so that the assessment of mechanisms available for review before publication are combined with assessment after publication of the paratexts and metadata produced in, e.g., Wikipedia. The four approaches to credibility which have been used in this discussion can then function as cultural tools in information literacy education, and thus contribute to reflections regarding the strengths and weaknesses of different approaches to credibility, seen as partial and relational (cf. Ri-

vano Eckerdal, 2011). Furthermore, the two cases very clearly demonstrate the importance of pupils' formulation of researchable questions in their school projects (cf. Limberg, 2007), which demand the seeking and use of information. Without these, it is difficult to make information literacy in general, and credibility in particular, an object of teaching and, thus, learning.

Conclusion

In this article, the focus is on the actions of teachers and librarians in their teaching and grading. This near-sighted perspective is supplemented with national syllabi and grading criteria. Previous research has shown that pupils are often left on their own, without particular support from teachers and librarians, as far as the critical evaluation of sources is concerned (Limberg et al., 2008). In the present study, the educators worked hard to provide such support to the pupils in different ways. Nevertheless, our research indicates that teachers and librarians are struggling hard to find ways to embed information literacy in their teaching and to make information literacy an object which is considered in the grading of pupils' assignments. We have identified that the gap between the abstract and generic goal statements in the national documents and the challenges actually facing educators (and pupils) in the practice of teaching and learning aspects of information literacy become a dilemma. There is a need to revisit and discuss the traditional criteria used in the critical evaluation of sources and to further develop tools for working with credibility in relation to new digital media. This article is an attempt to take this discussion further by relating practices of teaching information literacy to the syllabi in upper secondary schools. Yet, there is a need for more empirically grounded and theoretically informed research in order to renew the didactics concerning the teaching of information literacy in a quickly changing media landscape.

Acknowledgements

We are very grateful to the study participants as well as to the two schools for allowing us to take part in their activities. We are also grateful to two anonymous reviewers for their comments, which helped improve the article. This study was conducted within the project Expertise, Authority and Control on the Internet (EXACT) funded by the Swedish Research Council, dnr 2007-3399. The project was conducted

within 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.

Notes

1. A new national curriculum for the Swedish upper secondary school was introduced in 2011.

References

- Alexandersson, M & Limberg, L (2003). Constructing meaning through information artefacts. *The New Review of Information Behaviour Research*, 4, 17–30.
- Alexandersson, M, Limberg, L, Lantz-Andersson, A, & Kylemark, M (2007). *Textflytt och sök slump: Informationssökning via skolbibliotek*. 2. uppl. Stockholm: Myndigheten för skolutveckling.
- Bruce, C (1997). *The Seven Faces of Information Literacy*. Adelaide: Auslib Press.
- Daniels, E (2010). Using a targeted rubric to deepen direct assessment of college students' abilities to evaluate the credibility of sources. *College & Undergraduate Libraries*, 17 (1), 31–43.
- Francke, H, Sundin, O & Limberg, L (2011). Debating credibility: The shaping of information literacies in upper secondary schools. *Journal of Documentation*, 67 (4), 675–694.
- Hongisto, H & Sormunen, E (2010). The challenges of the first research paper: Observing students and the teacher in the secondary school classroom. In: A. Lloyd & S. Talja (Eds.), *Practising Information Literacy: Bringing Theories of Learning, Practice and Information Literacy Together* (pp. 95–120). Wagga Wagga: Centre for Information Studies.
- Julien, H & Williamson, K (2010). Discourse and practice in information literacy and information seeking: Gaps and opportunities. *Information Research*, 16 (1). Available at: <http://informationr.net/ir/16-1/paper458.html>
- Kuhlthau, CC (2003). *Seeking Meaning: A Process Approach to Library and Information Services*. Westport, CT: Libraries Unlimited.

- Lankes, RD (2008). Trusting the internet: New approaches to credibility tools. In: M. J. Metzger & A. J. Flanagin (Eds.), *Digital Media, Youth and Credibility* (pp. 101–122). Cambridge, MA: MIT Press.
- Lankshear, C & Knobel, M (2008). Introduction: Digital literacies – concepts, policies and practices. In: C. Lankshear & M. Knobel (Eds.), *Digital Literacies: Concepts, Policies and Practices* (pp. 1–16). New York: Peter Lang.
- Limberg, L (1999). Experiencing information seeking and learning: A study of interaction between two phenomena. *Information Research*, 5 (1). Available at: <http://informationr.net/ir/5-1/paper68.html>
- Limberg, L (2007). Learning assignment as task in information seeking research. In: *Sixth International Conference on Conceptions of Library and Information Science (CoLIS6): Featuring the Future*, August 13-16, 2007, University of Borås. Available at: <http://informationr.net/ir/12-4/colis/colis28.html>
- Limberg, L, Alexandersson, M, Lantz-Andersson, A & Folkesson, L (2008). What matters? Shaping meaningful learning through teaching information literacy. *Libri*, 58 (2), 82–91.
- Limberg, L & Folkesson, L (2006). *Undervisning i informationssökning: Slutrapport från projektet Informationssökning, didaktik och lärande (IDOL)*. Borås: Valfrid.
- Limberg, L & Sundin, O (2006). Teaching information seeking: Relating information literacy education to theories of information behaviour. *Information Research*, 12 (1). Available at: <http://informationr.net/ir/12-1/paper280.html>
- Limberg, L, Sundin, S & Talja, S (forthcoming). Theoretical perspectives on information literacy. *Human IT*, 11 (2).
- Lloyd, A (2007). Learning to put out the red stuff: Becoming information literate through discursive practice. *Library Quarterly*, 77 (2), 181–198.
- Lundh, A (2010). Studying information needs as question-negotiations in an educational context: A methodological comment. *Information Research*, 15 (4). Available at: <http://informationr.net/ir/15-4/colis722.html>
- Lupton, M & Bruce, C (2010). Windows on information literacy worlds: Generic, situated and transformative perspectives. In: A. Lloyd & S. Talja (Eds.), *Practicing Information Literacy: Bringing Theories of Learning, Practice and Information Literacy Together* (pp. 3–27). Wagga Wagga: Centre for Information Studies.
- Muddiman, D (1999). Towards a postmodern context for information and library education. *Education for Information*, 17, 1–19.
- Rivano Eckerdal, J (2011). Young women choosing contraceptives: Stories about information literacy practices related to evaluation and use of information sources. *Danish Library Research*, 7 (2-3), 19-31.
- Scribner, S & Cole, M (1981). *The Psychology of Literacy*. Cambridge, MA: Harvard University Press.
- SKOLFS (2000:2). *Upper Secondary School*. Stockholm: Skolverket. Available at: <http://www3.skolverket.se/ki03/front.aspx?sprak=EN&ar=1011&skolform=21&infotyp=2&id=21>
- Street, BV (1984). *Literacy in Theory and Practice*. Cambridge: Cambridge University Press.
- Sundin, O & Francke, H (2009). In search of credibility: Pupils' information practices in learning environments. *Information Research*, 14 (4). Available at: <http://informationr.net/ir/14-4/paper418.html>
- Säljö, R (1999). Learning as the use of tools: A sociocultural perspective on the human-technology link. In: K. Littleton & P. Light (Eds.), *Learning and Computers: Analysing Productive Interactions* (pp. 144–166). London: Routledge.
- Säljö, R (2010). Digital tools and challenges to institutional traditions of learning: Technologies, social memory and the performative nature of learning. *Journal of Computer Assisted Learning*, 26 (1), 53–64.
- Vygotsky, LS (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.