Negotiating the role of sources: Educators' conceptions of credibility in participatory media

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Abstract

Participatory media are commonly used for a variety of purposes in today's society. The credibility associated with these media is sometimes contested, and their acceptance into school practices has been debated. In this study, focus group interviews with teachers and librarians in upper secondary schools in Sweden are used to investigate conceptions and experiences of practices around the critical evaluation of participatory media, with a particular focus on Wikipedia. Three themes are addressed in the article. The first concerns how the teaching of the critical evaluation of sources is organised and co-managed between teachers and librarians. The second describes educators' experiences of print vs. digital media, and their worry because students have problems negotiating the information architecture of print media. The third theme deals with conceptions of the credibility of Wikipedia. Four conceptions of credibility are identified: credibility is associated with the control and stability of a source; it is considered to be strengthened when several sources support a claim; it is viewed as situational and partial rather than absolute; and it is associated with a multiplicity of voices and democratic forms of production. These findings may be used to inform educational practices around credibility and authority in schools by raising self-awareness among educators of various ways to talk about the credibility of sources with both colleagues and students.

1. Introduction

In late modern society, individuals are expected to take significant responsibility for their choices (Beck & Beck-Gernsheim, 2002; Giddens, 1990). Increasing individualization combined with expectations of personal reflexivity are said to lead to the questioning of experts and their authority. In Sweden, as in many other countries, current pedagogical models in the educational system also encourage students to make choices about their own learning. This includes producing, seeking, and using information in various, often digital, media. These activities are also part of the Swedish curriculum for the upper secondary school, which includes goals that require students to critically evaluate, interpret, and synthesise sources they have found on their own (SKOLFS: 2000:2). These trends in current society and school culture lead to questions about how reflexivity and a questioning of expertise are actually talked about and negotiated in schools.

The media landscape used in school work in many developed nations is also quite diverse. The multitude of media, document types, and genres available on the Internet can create difficulties for determining the authority and expertise of the creator(s), which is commonly used to establish the credibility of a document (e.g. Sundin & Francke, 2009). The situation is further complicated by the many forms of participatory or social media, such as Wikipedia, which lower the level of gatekeeper control prior to publication. The task of supporting students in learning how to critically evaluate various information sources is an important one, both for their abilities to tackle tasks in secondary and tertiary education, and for creating a good foundation for life-long learning, professional life, and for participation in the society.

2. Problem statement

Teachers and librarians work, together or separately, to help their students become skilled at negotiating the traditional, as well as the emerging, media landscape and to manage the resources they find there. That students should learn how to search for, identify, critically evaluate, interpret, use, and re-use information sources is stressed in the curriculum. These activities are often referred to by librarians as constituting information literacy. The present study aims to understand various practices in the Swedish upper secondary school that involve such activities, with a focus on the critical evaluation of sources, set against the backdrop of a broadening media world. The critical evaluation of the credibility and the authority of documents is an important issue to study, because it has been identified as a particularly difficult topic for students to tackle (Alexandersson & Limberg, 2003; Hilligoss & Rieh, 2008; Julien & Barker, 2009; Limberg & Sundin, 2006; Merchant & Hepworth, 2002). If, as we believe, the ability to critically evaluate sources is something which can be learned, it can also be facilitated by providing supportive structures for the learner through instruction. How educators – teachers and librarians – teach the critical evaluation of sources and what their conceptions are of a credible source then become important research questions. In line with this, the aim of the study is to provide an understanding of collective views and experiences, as well as potential tensions, concerning how work around the critical evaluation of sources is organised in upper secondary school in Sweden and what conceptions of credibility educators in upper secondary school express in relation to their teaching.

3. Literature review

Credibility has been studied from various points of view and in relation to different contexts in Library and Information Science (cf. Rieh & Danielson, 2007). We address it in the context of research on information literacy in upper secondary school. Even though teachers and librarians frequently highlight the significance of information literacy, it has proven difficult to treat it as an object of learning (Limberg & Sundin, 2006; Merchant & Hepworth, 2002). In an interview study of relevance to this article (Limberg & Folkesson, 2006; Limberg & Sundin, 2006), Louise Limberg and Lena Folkesson investigated variations in how teachers and school librarians view information literacy education. One of their findings was that activities in school environments often included recommending specific sources, demonstrating tools, or discussing the information seeking process, both in terms of systematic steps and of emotional experience. Information literacy education was primarily treated as being about procedures or generic competencies (Limberg & Sundin, 2006; cf. Lupton & Bruce, 2010). The teaching thus covered only a few of the conceptions of information literacy which have been identified among secondary school and university educators in other studies, such as linguistic understanding, meaning making (Williams & Wavell, 2007), or the higher categories of the seven 'faces' of information literacy identified by Christine Bruce (1997). The critical evaluation of the credibility of sources was seldom addressed as an object of teaching by the participants in Limberg's and

Folkesson's study, and when it was mentioned in the interviews, it was often in terms of students' shortcomings (Limberg & Sundin, 2006). The teachers and librarians expressed three different conceptions of how students develop the ability to critically evaluate sources, something which was talked of in dichotomous terms as "separating serious from less serious sources, objective and biased accounts" (Limberg & Folkesson, 2006, p. 64; our transl.). Developing these abilities was viewed as connected to maturity, to personality, or, the least prominent view in the interviews, as abilities that can be taught through instruction (Limberg & Folkesson, 2006, pp. 65 ff.; cf. Williams & Wavell, 2006, pp. 28 ff.). To work with the students to compare different sources was one method of teaching credibility assessment, another was to require students to provide references and lists of works cited (Limberg *et al.*, 2008; Limberg & Sundin, 2006).

Successful collaboration between teachers and librarians around information literacy has been claimed to result in higher quality learning results (see Montiell-Overall, 2008). When teachers and librarians speak of collaboration, they address various aspects of it, such as what the collaboration is about, how it is organised, its purpose, and the roles of the other participants (Limberg & Folkesson, 2006, pp. 96 f.). In Limberg's and Folkesson's study, social conditions, such as the organisation of the education and of physical space, influenced the form that collaboration between teachers and librarians took, whereas the didactic aspects were less often raised. Montiel-Overall (2008) describes four facets of collaboration ranging from *coordinating* planning and events, via *cooperating* by discussing what students need to learn and dividing responsibilities between teachers and librarians, to *integrated instruction*, which is jointly planned and implemented by teachers and librarians (cf. also similar conceptions identified by Limberg & Folkesson, 2006). Integrated instruction can be initiated by individual educators or be encouraged and implemented in an entire school or school district. Collaboration initiators, or catalysts, have an important role in making collaboration happen (Montiel-Overall, 2008).

How issues concerning authority and credibility are treated in upper secondary school has also been studied from the perspective of the students (e.g. Herring, 2010; Julien & Barker, 2009; Merchant & Hepworth, 2002; Sundin & Francke, 2009). In a study by Francke, Sundin & Limberg (2011), four approaches to credibility were identified when students worked on group assignments. The students used strategies of control to determine if a source complied with guidelines they had been taught. These guidelines concerned such aspects of the sources as authorship, use of references, currency, and genre. Another approach was when students tried to establish a balance between sources by comparing several sources to each other or tried to find sources which provided different perspectives (cf. Herring, 2010; Julien & Barker, 2009; Lankes, 2008; Merchant & Hepworth, 2002). Credibility was also associated with a strong commitment to a cause or to society. Finally, an approach was to view credibility as resulting from collaboration and multiplicity. The latter two approaches were less common than the first two, which have also frequently been identified in other studies (e.g. Herring, 2010; Rieh & Hilligoss, 2008). The use of print sources in relation to Internet sources and participatory media sources, such as Wikipedia, in schools has also been addressed in previous research. For instance, the secondary school students in a study by Merchant and Hepworth (2002) expressed more trust in printed sources than in Internet sources, and found the printed sources quicker and easier to find information in. At the same time, they preferred searching on the Internet and seemed to be more comfortable in the digital environment. Not everyone regards Wikipedia as a completely acceptable source in school environments. However, it has been shown to be frequently used by students for background information, even if it is less often referred to in academic assignments (Head & Eisenberg, 2010; Lim & Simon, 2011; Sundin & Francke, 2009).

4. Theoretical framework

The analysis in the article was guided by a socio-cultural view of learning and information literacy practices. One of the consequences of this perspective is that learning is a social activity and that the situation influences what is learned and how. Thus, to learn how to be information literate in a university chemistry department and in a mechanic's workshop are quite different things because the knowledge domains differ, including the information artifacts and terminology one is expected to master. Indeed, it makes sense to speak of different information literac*ies* (Limberg, Sundin & Talja, in press). Hence, different knowledge domains also incorporate different expectations on what is a credible source. Translating these expectations between different domains, such as between school and future work practice, may be quite a complex task.

The socio-cultural perspective directs focus to how people appropriate and interact with tools which mediate their learning (Säljö, 1999; 2010; Vygotsky, 1978). The conceptions that came across in the study participants' utterances can, together with the material tools of information artifacts, be viewed as cultural tools within professional educational practices (Säljö, 1999; 2010). These tools mediate the ways we act in the world and it is therefore important to make them explicit. Cultural tools, such as various types of technologies, contribute to changes in the social practices in which they are used, but are at the same time the results of these practices (e.g. Tuominen, Savolainen & Talja, 2005). Accordingly, new media types challenge traditional conceptions of schooling which are built on established media and genres, such as the printed textbook (Säljö, 2010). This theoretical point of departure has guided our focus on how digital media and people's views of them shape how information literacies, and credible documents in particular, are conceptualised and practiced in the school.

5. Method

In the study, focus group interviews were chosen as a method because they can provide collective input from participants active in a number of different schools and classrooms, at the same time as they can capture experiences of and perspectives on issues, such as authority and control in participatory media, which are time-consuming to observe because they are often not discussed frequently in class. The focus groups could thus provide a concentrated narrative of perspectives on credibility, authority, and control in new media (Morgan, 1997, p. 13). The method's focus on group interaction also fits with the assumptions of socio-cultural theory that knowledge is socially constructed through interaction between people and cultural tools, such as language. Morgan notes that "Group discussions provide direct evidence about similarities and differences in the participants' opinions and experiences" (1997, p. 10). At the same time, we have been careful to view these narratives as linguistic constructs that do not directly mirror practices in the classroom, even if they do provide a possibility to say something about these practices (Alvesson & Kärreman, 2000).

The focus of the interviews was the authority and control of information sources and how this is discussed and taught in upper secondary school. Five focus group interviews with a total of 8 teachers and 9 school librarians from ten schools were conducted between spring 2008 and fall 2009. Two groups were with librarians and three with teachers. School librarians in Sweden have generally trained as librarians, not as teachers, so the study participants can be viewed as belonging to different occupational groups active in the same work place. The participants and the schools they came from were both similar and different. The participants were homogenous in that they worked in fairly similar schools. The groups were also homogenous in that they consisted of only librarians or only teachers. The teachers represented different study programmes and subjects, such as English, German, Chemistry, and Film studies, but all taught at least one of the subjects Civics, History, or Swedish, which are subjects where credibility issues

are explicitly included in some form in the syllabi. Most of the schools were upper secondary municipal schools with primarily three-year academic programmes, although some of the teachers taught at programmes with a vocational focus. One school was a private school and one a school for municipal adult education. The participating teachers worked in four different schools, and the librarians in eight different schools. The extent to which collaboration between teachers and librarians took place differed a great deal. One of the teachers collaborated more with the municipal library than with the school library, and in one of the schools there was no school librarian. However, the majority of the teachers had at least some collaboration with the school library, and with the librarian who helped to recruit them to the study. Since this is not the case for all teachers, it is something to take into consideration in the analysis (cf. Morgan, 1997).

The participants in the focus group interviews volunteered because they were interested in the topic of the research. They could thus be expected to have thought about these issues before they took part in the study. The participants in some, but not all, of the groups knew each other in a professional context. This did not seem to influence the number of topics that were covered in the interviews or the enthusiasm with which they were discussed as this was quite similar in the groups. Rather, the participants seemed to view it as a possibility to learn from colleagues. The school librarians were recruited through municipal school library services and the interviews took place in the premises of the school library services or a university. The teachers were recruited through school librarians and the municipal school library services and the interviews took place at the schools or the municipal school library services. It proved difficult to recruit teachers, and problems arose in two of the interviews when teachers who had agreed to participate had to cancel at the very last minute. Because of this, two of the groups were smaller than desired, which may have influenced the dynamics of the groups and caused fewer thoughts and conceptions to be raised. However, Morgan (1997) notes that the size and number of groups need to be adjusted to the particular study, and the stories told by the last group of teachers to a large extent mirrored those from the previous two teacher interviews. Both authors participated in the librarian focus group interviews, one as moderator and one as observer. In the teacher interviews, only one author was present, acting as moderator. The interviews lasted between 55 and 115 minutes, with the two librarian interviews being longer than the teacher interviews. All interviews were recorded and later transcribed. Quotes from the interviews have been translated into English. The interviews are identified with either L for librarian or T for teacher, followed by a number. In the study, we have adhered to the ethical and legal research principles provided by Swedish law (Lag om etikprövning, 2003) and by the Swedish Research Council (n.y.).

The interviews were fairly open and participant-driven, but followed an interview guide with topics that the moderator made sure were addressed. The interview guide invited the participants to describe their work with students and their collaboration with teachers/librarians and contained follow-up questions on this, as well as two scenarios of situations that might occur and where the participants were asked to describe how they were likely to act. One scenario brought up credibility issues in interaction with students, the other in interaction between librarians and teachers. The guides for the teachers and the librarians differed somewhat, particularly in the scenarios, to capture situations which might be relevant to each of the occupational groups.

Focus group interviews, such as these ones, aim to capture utterances in group interaction which bring up both agreement and tensions in relation to a particular focus (Morgan, 1997). The utterances were analysed as discursive descriptions of activities and perspectives that are perceived as acceptable in the school context. They are thus viewed as indicative of the social tools that influence, and are influenced by, the practices in Swedish upper secondary schools. A number of themes were identified in the interviews at a first read-through of the transcripts. Each author constructed a separate set of themes, which were compared, discussed, and combined.

Some of the themes had been anticipated because they had been included in the interview guides, whereas others were unexpected. All mentions in the transcripts of a particular theme were coded together, and if a new theme or sub-theme was identified in a more careful reading, it was added. Variations in the experiences and conceptions within the themes were identified. Wikipedia, in particular, became a generator of the discussions of authority and control of information sources. Even though the questions often used 'new media' or exemplified new media with e.g. blogs and Wikipedia, Wikipedia was the tool that most participants focused on and that was perceived as most used in the schools. Wikipedia evoked reflection and discussion which illustrated different ways of relating to expertise and authority in environments with a low degree of traditional teacher control. In addition to the Wikipedia theme, two themes were selected as particularly interesting. One concerns how the teaching of source credibility is organised, which was a topic where the two occupational groups told different stories. The other theme concerns the use of print sources, where the findings offer a perspective which adds to those that have come out of previous studies. The transcripts from all five focus groups were analysed together, and the experiences and perspectives of librarians and teachers were often similar in relation to the students. However, the two occupational groups were analysed separately with regard to the descriptions and discussions of how work is organised and how teachers and librarians interact in school.

6. Findings

6.1 The teaching of the evaluation of sources as a situated practice

When and where is the critical evaluation of sources addressed as part of teaching activities? In the focus group interviews, there was some discrepancy between the teachers' and the librarians' views of each other's expertise and of what aspects of information literacy are addressed with the students. The librarians described talking about information seeking in their meetings with classes, particularly they talked about seeking information in the library's holdings of books and databases. Some also discussed web search, even though they often found that the students thought they knew enough about it. Credibility was addressed to varying degrees, and the librarians often found the students more willing to listen on this topic. One example of how school librarians work is described in the following quote:

> We, too, have an introduction for the students in their first year [of upper secondary school] where we generally show some databases that we subscribe to and, well, not least, the library catalogue, we generally try to encourage them to learn how to use it. We have also done quite a bit of teaching on how to critically evaluate sources on the web. That's more 'on demand', but the idea is that we will go on to include it in the schedule. We used to do a fair amount of teaching about information seeking on the web. But it was often quite difficult to get through to the students, they felt they already knew it. (Interview L:1)

In the teacher interviews, credibility was talked of as something that was integrated into the teaching activity, not least because it was part of the syllabi for some subjects, e.g. History and Civics. One teacher described how she provided feedback to the students when they were working on an assignment:

> I think that's something you do when they're working. Let's say that they're working with an assignment on something, then you walk around and talk to the students, and then you see if somebody's only on Wikipedia, or if you see them on a blog, then you have to point them in the right direction, or at least question if they think it's a good page or... (Interview T:2)

In class, the teachers reported discussing such things as tendency in sources, the role of media in society, and references when the students used sources of various types. Sometimes credibility was highlighted, as in one school where it was the topic of a particular cross-subject theme which ran over a couple of weeks. In particular, credibility was discussed in relation to written assignments and when the students did a more ambitious project. Then, several of the teachers required students to submit not only a list of references but also motivations for why they thought that the resources they had used were credible (or why not) (cf. Limberg & Folkesson, 2006). However, the teachers noted that even though the demand for a discussion of motivations could sound ambitious, some students kept it at a very basic level:

> It might sound quite good to have a discussion with some of them about sources, but some keep it at a really, really basic level, I mean, they only write that they have used a textbook and it's got really good summaries. So they've thought about it, but there's no real depth there. But that's got to do with the grading criteria, as well. That's what decides if you get a better grade. (Interview T:2)

In two teacher focus groups, the teachers said they collaborated quite frequently with the librarians. The fact that so many collaborated is likely to be a consequence of the sampling technique, because in these two cases librarians helped to recruit the teachers. There is a possibility that the participating teachers talked more about the importance of the library than they would otherwise have done because they thought that the authors knew the librarians. Another possible reason for this could be that we presented ourselves and the study as belonging to the discipline of Library and Information Science. To a large extent, the collaboration seemed to consist in the librarian identifying suitable sources for the theme-based projects, but the participants reported that the librarian sometimes also came to the class to talk about sources at the start of a project. When asked if the librarian also addressed the credibility of sources, one teacher remembered that the librarian had offered to talk about credibility, but that the teachers had done it in the classroom instead, and had asked the librarian to introduce subscription databases and other resources available through the library. It was very much the librarian's expertise in finding good sources and making them available that was emphasised.

> [...] he knows the library better than both we [the teachers] and the students do. So that's why we should benefit from his knowledge, but then you have to give him reasonable conditions, too. So if he knows about [an assignment] three days in advance, then he'll put together a book-trolley full of good material. (Interview T:3)

Thus, teachers and librarians often seemed to divide various aspects of teaching information seeking and use between them according to what they conceived of as their respective expertise. In this division of labour, teaching students how to critically evaluate sources rested mainly with the teachers, even though the librarians had strong views on the subject and saw themselves as reflecting quite a lot on credibility.

6.2 Negotiating the information architecture of print

Several studies have shown that students often associate credibility more with printed sources than with digital ones (e.g. Merchant & Hepworth, 2002; Sundin & Francke, 2009). However, when it comes to the medium and technology used, issues of credibility in schools are also interlaced with other aspects of how students use sources. One aspect which came across quite strongly in our interviews was a concern among both teachers and librarians with how students negotiated the architecture of print artifacts. For instance, the students were perceived as having problems with distinguishing a table of contents from an index, with looking things up in print encyclopaedias, and changing the scale of a printed map.

> Some always ask me: "On what page is it?" "Look in the table of contents...." And then quite a few look at the very back. I say: "That's not the table of contents, it's at the front. That's the index." To a large extent, it's that they don't know the method, they haven't learned the basics. (Interview T:3)

This finding differs from what was indicated in Merchant and Hepworth's (2002, p. 84) study, conducted a few years before the present study, where a few students pointed to indexes and print encyclopaedias as simplifying searches. In our study, it was mentioned in several interviews that students think it is time consuming to look things up in printed sources, whereas the educators saw it as time-saving compared to aimless web searching (cf. Julien & Barker, 2009, p. 14; Limberg & Folkesson, 2006, pp. 54 ff., 118; Merchant & Hepworth, 2002, p. 84). One librarian mentioned the organisation of books as a way of organising knowledge which differs from how knowledge is organised on the web, which creates difficulties for the students. As the educators considered it important to be able to negotiate the information architecture of print media, the effort they made to get the students to use print material sprang not only from a concern with directing them to credible sources, but also from a wish to develop the students' abilities to use a broader set of media. To require students to refer to at least one book in an assignment was viewed as a method to achieve this, as were various verbal cues directed at students who wish to get good grades emphasising that the teacher values the use of print sources.

6.3 Credibility in participatory media

In the interviews, focus was on evaluating and teaching about the credibility of sources, particularly in digital, participatory media. The teachers and librarians expressed quite varying opinions about what is a credible source to use in the school context. Even though the questions were constructed to capture various types of participatory media, many conversations circled in on Wikipedia. In previous studies, Wikipedia has come across as having a complex role among students: it is easily available and findable through search engines; its texts are written within the encyclopaedia genre, and students appreciate its focus on 'facts'; but authorship is often anonymous; and it is a highly flexible text (e.g. Sundin & Francke, 2009). The fact that Wikipedia is thought to be a source that students use a great deal for school work as well as for other activities makes it necessary for educators to relate to it in some way. Other participatory media seem to have a less contested role in Swedish schools (cf. Francke, Sundin & Limberg, 2011). The different reactions to Wikipedia can be used to illustrate conceptions of what constitutes a credible source in school. These conceptions are located between two radically different views of what is reliable and legitimate knowledge: one which places much weight on acknowledged experts and sources that are perceived as 'stable' and one which emphasises the value of collaborative, 'democratic' knowledge formation.

The view was expressed that most free Internet sources are easy to produce and possible to manipulate and that digital subscription sources or print sources, generally produced by acknowledged experts in their fields, are the more credible option. This had consequences for the students' use of Wikipedia. In one school, the teachers had decided that Wikipedia was not an acceptable source to refer to in school assignments of a certain scholarly standard, even though there was no agreement on the use of other (Internet) sources. Participants in the other interviews described similar recommendations to students.

> There are useful links and stuff, but I tell them [the students] that I don't want to see Wikipedia in the list of references. (Interview T:2)

The hesitation to let students refer to Wikipedia articles was mainly expressed in relation to the possibility of changing the text in the articles – and the associated risk that articles are

manipulated. However, both in this and in several other interviews, the participants mentioned that Wikipedia was used as a background; sometimes they even encouraged the students to look at Wikipedia first but to then move on to other sources, which is similar to how many students use it (cf. Head & Eisenberg, 2010; Lim & Simon, 2011; Sundin & Francke, 2009).

As in previous studies (Francke, Sundin & Limberg, 2011; Limberg & Folkesson, 2006; cf. also Lankes, 2008; Meola, 2004), comparing claims from several different sources was brought up as something both teachers and librarians often encouraged students to do. Comparison became a strategy for dealing with uncertainty about the authority of sources, primarily on the Internet. In a way, quantitative measures come to replace qualitative analysis of authority. But comparison also seemed to become a tool that teachers and librarians used when they did not want to go into a discussion about why the credibility of a source could be called into question, especially if they perceived that the students felt strongly about a source. If students are required to find corroborating claims in several different sources, the authority of the individual source becomes less of a problem. For instance, as described in the quote below, students might begin their search in Wikipedia, but the librarian expected them to compare their findings to what she considered a credible source:

> […] if they use Wikipedia, they should always double-check with another source, and that means twice the work. (Interview L:2)

Comparisons could also take the form of checking references in the Wikipedia article, or using the Wikipedia article as a starting point to find references to other sources that could be useful.

A reason to allow students to refer directly to a Wikipedia article in school assignments mentioned in the interviews was when it was perceived that there were very few alternative sources, in particular print sources. Current trends, new technology, and popular phenomena were mentioned by the educators as examples of topics where Internet sources, including Wikipedia, could be used. In the absence of more credible sources, Wikipedia was considered an acceptable option since the information was seen as up-to-date, and there were few other sources to recommend to students. One teacher explained:

> [The students had] focused on an unusual phenomenon called black metal, a kind of heavy metal music. And there's really no established source of information there, so they've used the Internet a great deal. And in this case, for example, I've considered Wikipedia an excellent means to get at it because it had quite a lot written on the subject. But there's no real research literature about this, nothing established […] (Interview T:1)

This is an expression of a more pragmatic view of web credibility, but also one that requires a certain amount of knowledge in an area. Rather than allowing completely free use of a complex and diverse source such as Wikipedia, this is an example of the view that it can be used for certain purposes, and that some articles are more likely to be reliable than others. It is approaching the view that any source can be acceptable for use in school assignments, as long as there is a well-argued reason for using it, which was expressed by one of the librarians:

> They've been taught that they absolutely can't use Wikipedia as a source, and that's really quite wrong. Because what source you use depends entirely on what assignment you're working on and on why you use the source. You can use an opinion piece that's really subjective as long as you're aware of how you use it. (Interview L:1)

However, this does not necessarily mean that all sources are credible; there may be reasons for referring to a source other than proving a 'fact', reasons that have nothing to do with whether or not the source is credible. Wikipedia articles were also presented as having varying degrees of credibility. The participants connected this with specific topics; some topics are more likely to

invite manipulation or graffiti than others. This means that the credibility cannot be assessed for Wikipedia as a single source, but that articles need to be assessed individually.

The participants who were most willing to accept various types of sources expressed the view that the flexibility of web sites such as Wikipedia invite perspectives which are not authoritarian or elitist, a 'knowledge of the masses' which should be as highly valued as that of the 'elite'. One Civics and History teacher in particular advocated this view, which was associated with his concern that the students should become aware that reality is always described from a point of view – the descriptions are never neutral:

> I think Wikipedia is a great example of knowledge which is actually updated quite frequently, and which is free and independent in some sense, instead of commercial services provided by some company. […] I am sceptical to the view of knowledge which says that there are experts who know, and sure, there are… […] But that it would be the only true knowledge, I mean, I think the general public know quite a lot about quite a lot, too. And *that* knowledge is worth something. And you can critically evaluate it just as you should critically evaluate *anyone* who's said something. (Interview T:1)

In the eyes of this teacher – similar views were expressed to some extent in the other interviews – the openness of Wikipedia was a positive thing which allowed for corrections to be made and for several authors to contribute to the description of a topic. Embracing such participatory sources was done from a position which emphasised the voice of 'the other' and of resistance, rather than that of established and institutionalised truths, which can be detected in the conception of credibility as something found in controlled sources. However, such an accepting view of Wikipedia did not necessarily mean that 'anything goes' – the teacher mentioned that the credibility needs to be judged from case to case and be compared to other sources.

These self-reported descriptions of how teachers and librarians talk to their students about the use of Wikipedia and set up explicit or implicit guidelines for referring to or in other ways using Wikipedia in school work can be connected to four different conceptions of credibility and the use of sources.

Control	Credibility is associated with the *control* and *stability* of a source; establishing the source's origin, intention, and sustainability are important
Comparing sources	Credibility is associated with a claim rather than with a source and can be assessed using strategies for *quantitative measures*; if the same claim is found when comparing several sources it is likely to be correct
Relational & partial	Credibility is *relational* and *partial* rather than absolute; whether or not a source is 'credible enough' is determined in relation to the purpose and the situation, as well as in relation to what alternative sources that are available
Multiplicity	Credibility springs from the source's association with *multiplicity* and *democratic forms of production*; the fact that many people can contribute to the source, that it is considered 'open' and independent, is important

The conceptions above are not necessarily exclusive, and one participant could embrace several conceptions in the same interview. However, depending on which conception is foregrounded, the approach to using participatory media, and Wikipedia in particular, as information sources

will be very different. This was also something that many of the participants seemed to struggle with. Although few participants expressed views that emphasised either control or multiplicity very strongly, many expressed that Wikipedia could be used to get background information, but that other sources should be consulted as well. The question of how conceptions have changed over time became a topic in some of the interviews. In particular, several of the librarians described how their view of Wikipedia had changed. This was done through the metaphor of a 'journey' which had taken them from being very sceptical of Wikipedia, towards greater acceptance. The 'journey' was often not perceived of as completed, nor was Wikipedia fully respected as a credible source.

> I've done the same journey. I mean, I always said NE [a print encyclopaedia] first. Check NE first and then you can move on. I was actually pretty negative towards Wikipedia. The fact that anyone... And I know I've said... because I held these introductions. Anyone can write anything. [...] It's not until recently that... I attended a seminar, some researcher from XX who said: so good and you build knowledge together and stuff. Of course, it's another type of knowledge. It's more like a construction site where you add different aspects. But perhaps a bit more difficult to find the core of the knowledge, sort of thing. But of course, there's some sort of process going on in my head about what knowledge is and how to relate to this new type of... Because as I said, you *have* to relate to it. And I don't think I will say that any more, always start in NE, but... Well, I feel a bit as if I'm on shaky ground here. And not quite sure of where it's going, but I would like to learn more [...] (Interview L:1)

The quote describes how the librarian came to be more accepting of the use of Wikipedia as a source. The reason was not one of defeat to the fact that students use Wikipedia anyway, nor explicitly a reaction to improvements in Wikipedia's quality, even if that was discussed further on in the same interview, and the *Nature* study comparing Wikipedia to *Encyclopaedia Britannica* (Giles, 2005) was mentioned several times. Rather, the growing acceptance was formulated in terms of a learning process, an ongoing re-evaluation of what knowledge is and how it is produced.

7. Discussion

The media landscape facing Swedish upper secondary school students presents a number of challenges, and learning to negotiate it involves understanding various media practices. The educators in the focus groups highlighted not only media practices associated with the Internet, but also difficulties in handling the architecture of print media. Credibility was seen as an important, but often difficult and contested, object of teaching. Although similar conceptions of what a credible source may be came across in the stories of both teachers and librarians, they did not necessarily tell the same stories about how and by whom it may be introduced in the education.

Collaboration between teachers and librarians as it was described in the focus groups concerned mainly what Montiel-Overall has called coordination (managing collaboration) and cooperation (dividing responsibility between the educators), and showed few examples of jointly planned and implemented teaching (Montiel-Overall, 2008). In the teacher interviews, librarians came across as closely associated with the library holdings and web site, rather than with information seeking and use at large, even among teachers who collaborated more or less closely with librarians. This confirms previous findings that teachers and librarians collaborate when it comes to providing students with documents. Participants described how teaching of information literacy is organised and divided between librarians and teachers so that each takes responsibility for what they are perceived to do best. This can be viewed as a way to maintain the borders between the two occupational groups (Limberg & Folkesson, 2006, pp. 97 ff.). Thus, the roles need not be

renegotiated. One possibility is that the time associated with learning to work closer together, to collaborate by crossing borders and addressing each other's areas of expertise, is deterring. (Cf. Limberg & Folkesson, 2006; Montiel-Overall, 2008) Teachers often attributed authority to librarians when it came to information seeking and digital resources, which was something the librarians themselves thought they are good at, at least in comparison with many teachers. At the same time, the librarians often mentioned that they have less authority than the teachers, because the teachers have the authority associated with grading. Consequently, the students follow – and need to follow – the teacher's instructions in the school context. This emphasises the importance for librarians to discuss issues of credibility not only with students but also with teachers.

However, differences in conceptions of what is a credible source to use in a school context did not seem to be related to membership of a particular occupational group, which opens up opportunities for potentially fruitful discussions in schools. At the same time, the conceptions span a fairly wide spectrum and illustrate both a strong desire to facilitate the students' work by providing very clear guidelines for what is acceptable, and a view of credibility as something which is constructed and negotiated in specific social activities. The four conceptions of credibility identified above show similarities to the approaches to credibility that have been found in the work of high school students (Francke, Sundin & Limberg, 2011), which originated in control, balance, commitment, and multiplicity. The environment for the two studies, Swedish upper secondary school, is the same, so the similarities corroborate the results. However, there are some notable differences. For instance, some of the nuances of the approaches to credibility found among the high school students are not present in the interviews with teachers and librarians. Examples include the view that presenting arguments for conflicting sides on an issue makes a source more likely to be credible, as well as its opposite, the view that a strong commitment to a cause or a responsibility on the part of an author or organisation makes it credible. These are perhaps approaches which educators take into consideration from a critical perspective in relation to the use of a particular source. Furthermore, the conception that credibility is relational and partial, and thus should be assessed in relation to the purpose of the text, was less clearly expressed among the students. The likely explanation to this is that from a student's point of view, the credibility of a source is always also judged in relation to what the grading teacher will accept as 'credible enough'. What is credible enough for a student in the school context is thus always a matter of credible or not credible, depending on what the teacher finds acceptable or unacceptable.

8. Conclusion

The propagation of digital media led the educators in the interviews to express a constant need for further education and training. It has also meant an increasing focus on credibility issues, in all media forms. The four conceptions of credibility that have been identified in the article may be used to inform educational practices around credibility and control in schools by raising self-awareness among educators of various ways to talk about the credibility of sources with both colleagues and students. Thus, the conceptions may function as cultural tools that can mediate learning about credibility in participatory media, especially Wikipedia, by providing grounds for reflection on what counts as a credible source in upper secondary school. It is our belief that this can be of use for negotiating discussions of and learning about credibility not only in a Swedish context, but also in other countries where teachers and librarians face a similar media landscape. Stories told in the focus group interviews indicate that views of how credible digital media resources are (Wikipedia in particular) and of what should be acceptable sources to use in various ways in school work change over time, as people become more familiar with new genres and technologies and as these genres and technologies are discussed more both in general discourse and in academia. Knowledge technologies and the practices around them interact with and co-

construct conceptions of credibility in school activities (cf. Säljö, 2010). Learning is a social activity, and to learn which sources are viewed as credible in school is still closely associated with establishing the origin of a source (cf. Sundin & Francke, 2009). To emphasise the conception of credibility as something which is relational and partial, a conception embraced in some way by many of the educators in the study, may support students in shifting their credibility assessments to knowledge domains outside of school.

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