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Paper presented at the 32st congress of the Nordic Educational Research Association (NERA) in Reykjavik, Iceland, 11th to 13th of March

The critical student –how and by who’s definition

Amanda (8th grade):

- Facts are when he was born and things like that, what he did is like his life.

R:

- That it is true, do you use to check if it’s true?

Ingrid (7th grade):

No [laughs] you hear what your pals have and so on.

The initial excerpts illustrate two problems that students have to handle in the school. Amanda is seeking information on the Internet. Her answer to the researchers question on what she is looking for is facts’ and then she tries to define what a fact is by describing it as something opposite to “the other stuff” “what he did”. Ingrid is wrestling with another problem. Her answer to the question if she usually checks the trustworthiness is “no” and a laugh. She is quite satisfied if she has roughly the same answers as her classmates’.

What is it that makes Amanda concentrate on, what she considers to be facts? What is it that makes Ingrid laugh at the question about checking the trustworthiness of the sources she is working with?

We will argue that both of their answers reflect an attitude towards a prevalent school culture that to a great extent set the rules for how they retrieve and handle information. This is in line with reasoning to Säljö around the textbook as a mediating tool¹ and Marton and Booths around how the students’ construction of there task correlates with the teachers’ conception of the task.² It’s also in line with the reasoning that Almqvist has around how students construct their images of the Internet.³ The excerpts direct our attention to how claims about how students’ needs for information competence are formulated and what ways to obtain these competences that are suggested.

Politics

The often used political statement that we live in an information society where our ability to retrieve information and construct knowledge is our most important asset has put an emphasis on how schools help students develop information competence. This emphasis has been augmented by the possibility to use new ways for information retrieval that are considered to be less secure. In this discourse the student’s ability to critically examine information is

¹ Säljö 2000 pp 217 -

² Marton & Booth 2000 p226

³ Almqvist 2001 p 18

ascribed a growing importance. The curriculum for the Swedish compulsory school (grundskolan) reads:

“The pupils will be able to find their bearings in a complex reality, with a large flow of information and a rapid speed of change. Abilities and methods to assimilate and use new knowledge are therefore important. It is also necessary that students develop their skills to critically examine facts and conditions and to understand the consequences of different alternatives.”⁴

This view is replicated in the civic syllabus which says “In a complex society with a vast flow of information and a rapid rate of change, the ability to acquire new knowledge is essential. The subject provides an opportunity to make observations and to use different sources of information. The aim is to develop the ability to search for, examine structure and evaluate facts, as well as integrate, present and give expression to new knowledge. Analysing, drawing conclusions and determining personal views on the basis of information provide a foundation for critically examining society.”⁵

These quotes singles out a broader definition of the concept of critical thinking where such abilities as the abilities to see consequences and determining personal views can be used to critically examine society. In the public debate critical has been narrowed down from thinking in general and centred on the need to teach students different methods to exercise criticism of their sources especially when they use material from the Internet. These demands we will argue have been aligned with the methods of critical evaluation of sources used in history science and coincides with a new description of the history subject as especially suitable for promoting critical thinking. The portal developed by the Swedish agency of education as a resource on critical handling of information, Kolla källan (Check the source), provides one example of this tendency⁶. The majority of the websites and articles that is presented on this portal uses such a narrow definition and are centred around methodical tips on how to evaluate web pages as sources of facts. This also seems to be the case if you search the Internet for articles concerning “critical thinking” and “the web”. It is common that suggested links lead you to pages with methodical tips⁷ even if you construct search phrases like “critical thinking And the web”.

In this paper we will discuss the implications of narrowing the concept of critical thinking in light of the aims that can be found in the Swedish curriculum. We will also take into account other views on fact construction and critical thinking and what implications they may have for training critical thinking in schools.

A glance at reality

In a study of source evaluation Swedish compulsory education Eklöf⁸ followed how students made sense of their work in retrieving and evaluating materials from the Internet. He found, early in his study, that students had developed an ability to account for problems concerning critical evaluation of sources. They seemed to have adapted a view on dealing with information that implies that if information is going to be handled critically its facts that needs to be checked. Authoritative sites do not need to be checked at all.

Two of the students Anita and Arne can stand as representatives for this awareness.

⁴ 1994 års läroplan för det obligatoriska skolväsendet, (Lpo 94)

⁵ Kursplan samhällsorienterande ämnen <http://www3.skolverket.se/ki/eng/comp.pdf>

⁶ <http://www.skolutveckling.se/skolnet/kolla/>

⁷ For example Lynch 2002 and Salpeter 2003

⁸ Eklöf 2003

Anita (8th grade):

- It was some time when we had social studies with Anna-Lena, she said that using the Internet were not so good, because you don't know if it is true, and were they have got it. When I was writing about Tornados, there was different information on every site. I didn't know which one to use.

Arne (7th grade):

- Yes if it's made by Anders Svensson in the third grade, the maybe you should not rely on it so much.

Sven (teacher)

- Anders Svensson in the third grade is no good in other words, he might be real good?

Arne (7th grade): -Yes but you should yet use secure sides.

When you read this it easy to come to the conclusion that these students really have internalized a critical way of thinking. Anna notices that sites have different information. Arne suggests that you should use secure sites. We suggest that this is a fallacy. When Eklöf continued his studies of the student's work, it was obvious that the understanding that can be inferred from their talk didn't reflect in their actions. The students made it very clear that their espoused theories of critical evaluation of sources were not theories used in their work with information. Most of the student's did not at all carry out controls or evaluate the status of different sources. They used the same strategy as Ingrid gave expression to in the opening quote. The few students who did any type of controls stuck to a few practices. The quotation from Arne above points at one of the types, and emphasizes one very common problem. He refers to secure sites. How can we make sense of this? Several studies⁹ has pointed out that students have a tendency to look at the site instead of looking at the text itself. They assume that if they find the information in secure places it is trustworthy. In his study Eklöf asked the students about this.

R:

- How do you know that the information is correct only because you find it in NE (net version of the Swedish National Encyclopaedia)?

Arthur (8th grade):

- They make the book of reference; they can't write what they want.

Annelie (8th grade):

- I want a text that is divided and distinct. I take NE because it is a recommended site.

This way of making sense of critical evaluation of sources looking at them as referred or recommended sources shows similarity to the concept of cognitive authority used by Limberg¹⁰. She argued in her dissertation that the students had a tendency to avoid the problem connected with making their own decision on the accuracy of the source based on its contents through choosing a site that was considered authoritative. In a study of how Norwegian 16 year old student's Kolstø¹¹ studied how students tried to estimate the reliability of different sources and found a similar tendency. "In this study instances were not found where pupils tried to analyse knowledge claims in relation to underlying empirical evidence. It was found, that most pupils evaluated sources of knowledge more than they evaluated the content of statements."

⁹ Limberg 1998, 2002; Kolstø 2002; Burton 2000

¹⁰ Limberg, Louise (1998) p 152

¹¹ Kolstø, Stein, Dankert (2001) p 897

If the students found facts in form of calculations, tables or diagram that were not questioned by authorities they had a tendency to accept them as true.

The second type of critical evaluation of sources that Eklöf found had a different character. It was closely connected to directly verifiable facts in the text. This was the only type of control on a text level that could be noticed.

Anita (8th grade):

- Yah wait a moment. It was then he made that travel, it says that he was 20. I don't get it, and then it says that he took his exam in theology 1831.

R:

- Let's se 1808 to 1831 then he will be 22.

Anita (8th grade):

-But here it says that he was 20 and that he took the exam and went directly after that on that journey.

R:

- Yes if that I correct he must have done so.

Anita (8th grade):

- I don't know what is correct. Maybe I should check the book instead. I don't know.

This way of thinking seems to be deeply rooted. Facts are possible to evaluate. Ages, figures, dates were considered facts and thereby possible to evaluate. They could be said to be treated as primary to any actions or beliefs of the actor that had provided them¹². In these students accounts if information could not be categorised as facts it was not worth to be considered for evaluation let alone inclusion in their essays. This is precisely the kind of conceptions that Amanda gave expression to in the opening quote. This way of thinking must emanate from something. We will argue that it is the result of a long exposure to a school culture.

The third kind of practical evaluation that could be seen in Eklöfs study was centred on language and layout. The students noticed bad spelling and simple layout. They then concluded that the site was less trustworthy. The implications of this kind of thinking will not be discussed in this paper.

Critical thinking contra source criticism

Why is this a problem? First we will argue that the way students make sense of and practice use of information is not in line with Swedish curriculum and civic syllabus. In a previous study Eklöf¹³ examined the discourse on source criticism in Swedish political documents concerning compulsory education. He analysed texts about critical thinking and source criticism in Swedish curriculum from the implementation of the coherent compulsory school in 1962 up to the present curriculum.

In these texts little is said about critical use of information. In the early documents he found some implicit statements about critical thinking treating it as a necessary competence in a modern society. It was stated that it is the obligation for school to foster critical students. The 1962 curriculum reads *“In a democratic society were you wish to place a growing responsibility on the individuals, the intellectual training is of great importance The aim should be on qualities as clearness, mobility and sharpness of the mind, capability to examine critically and independently, stand up against tendentious influence and to analyse, compare*

¹² Potter, Jonathan 1996:116

¹³ Eklöf 2002

and summarize.”¹⁴ The concept used 1962 is thus critical thinking. The same emphasis is upheld through the curriculum’s of 1962, 1969 and 1980. In the 1980’s curriculum for the first time there are passages about source criticism as a method. In the syllabus for the history subject it is stated that students will be trained in using different historical sources and methods. In the 1994 curriculum however we can see a radical change. Critical thinking is described as a fundamental competence. This new status of critical thinking coincides with a new role given to the history subject. One argument for history education is that it can be used as an instrument for critical thinking and that a goal for the school is to teach the students’ to analyse the value of different sources. *”The history subject will provide the students with instruments to develop their ability of critical thinking and an analytical way of looking at things.....The education in history will develop the students ability to critically analyse the image of the past in mass media and propaganda. Through this the pupils will receive increasing capability to make versatile judgement of facts and developments.”*¹⁵ The reason for this change is said to be the large amount of information that the students have to relate to. In the revisions in 2000 and 2001 the critical thinking skills are even more emphasised and the new information society is used as a reason for why these competences are seen as so important. This leaves us with the question why the history subject is singled out as suitable and as *the* subject where critical thinking should be practiced.

We make note of that the basic concept that can be found in governing documents is critical thinking and not source criticism. A search in a Swedish newspaper database returned 28 hits on the search phrase “källkritik AND skola” [Source criticism AND school] during the last twelve months, but only 6 on “kritiskt tänkande AND skola” [critical thinking and school]¹⁶ We have noted that linked sites at Kolla Källan lead to pages that give tips on how to practice source criticism rather than critical thinking. Why is it then that the public examples and debate has been centred round the source criticism? We believe that one reason can be the that history subject is singled out with a special mandate to foster critical thinking skills among the students in the 1994 curriculum. Criticism of sources has since long been an integrated part of the history science albeit not presented in the Swedish syllabus on history until 1980s’. All history teachers from grade 7 – 12 have been trained to use these methods as a part of their education. When curriculum puts the emphasis on the history subject as suitable for the training of critical thinking skills it seems reasonable that they use methods they have been trained to use. When the discourse about the perils of free and uncontrolled information in the digital information society enters the school system, a fact is already established. The main responsibility for fostering the students in critical thinking belong to the history teachers’. The classical methods for evaluation of sources have suddenly become the method.

Here we can see two different trajectories. Educational policy texts makes a slight move from statements about a general need for a *“capability to examine critically and independently, stand up against tendentious influence and to analyse, compare and summarize”* in a democratic society towards texts where the history subject is singled out and where classical methods of source criticism mentioned. We can see an opposite and more dramatic movement within the history science (and science as a whole). Foucault suggests that the “historian’s history finds its support outside of time and pretends to base its judgements on an apocalyptic objectivity”¹⁷ something which is only possible because of its belief in eternal truth. Börjesson 2002 claims that this marks a new view of history that leaves us with two types

¹⁴ Sfs 1962 p 1308

¹⁵ Skolverket 1996 p41 - 42

¹⁶ The results for the search round critical thinking and school were actually 33, but most of the hits were about the concept of religious schools’. We did only count hits that were about the content of the education related to critical thinking.

¹⁷ Foucault 1971 p 87

of historical writing one that would “claim that idiocy one upon a time was discovered as a medical diagnosis (realism) or that it was defined as an individual or social problem at a certain point in history and from specific social circumstances”. These traditions according to Börjesson treats the representation as the actual object. The contextual criticism, were you put more emphasis on the contextual surroundings of a text and its relation to established facts, attracts more interests. Hultqvist writes about this transformation “*The history subject is furthermore nothing that is definitely, there are constantly discussion about what it is, how history can be studied – by what means – and as a consequence the conceptions about the character and the content of the subject are altered. The homogenous history, with advocates as Weibull is now part of times long past*”¹⁸ Leth and Thurén has written a book on Source criticism for Internet, which is widely spread an often quoted in Swedish schools. One of their claims is that all the classical methods for source criticism is still applicable but the must be completed with new criteria’s especially to meet the problems with handling information on the Internet. These new criteria are all of an ideological nature. They are concerned with the concept of the world, the trustworthiness and the sources entitlement to speak about reality¹⁹. The distance between source criticism and reconstruction is narrowed down²⁰. We argue that in their writing the historical scientific methods are brought closer to the concept of critical thinking as described in the Swedish curriculum. What is stressed is the impracticability to differentiate between fact and interpretation, the need to be sensitive to language, the idea that all texts are ideological and the necessity to place all statements in their historical context²¹. Börjesson however would claim that much is left and that traditional education about scientific methods would still teach methods got critical source evaluation that implies that what is written in a public report is more true than what is written in a ladies journal. Börjesson goes on to say²² “*That the police’ statistics, or the hospitals, is governed by an amount of institutional conditions may not be mentioned Society statistics must be a reflection of the reality, otherwise it will be too complicated*”. *Such different views on science still run deep among scientists*

But what trajectory does school practice follow? In 1882 Carl Rosander wrote “The knowledgeable schoolmaster”. He wanted to gather all the knowledge that was necessary in one textbook. It’s not fare fetched to look upon Rosander as a representative of an even older tradition, emanating from the age of enlightenment and Diderots work with the great encyclopaedia. He writes in the preface (our translation) “*This book is mainly intended to be an easily comprehensible schoolbook for the uninformed; but shall also be able to use as a kind of lexicon*”²³ The difference between his view and what can be seen in today’s textbooks is maybe not as different as one would imagine. Questions to the text are often about facts?. This is not only a phenomenon in the books but also in the whole conception of education. From early age children are trained to read texts to find facts, which of course is a necessary skill. This way of thinking is deeply rooted in compulsory school from its starting point in the nineteenth century. If you see it this way it’s maybe easier to understand why Amanda and Anita think as they do. School of today works under other conditions. The ways to find information today are many and the amount of information immense. Reports suggest that school moves away from the single authoritative text. There seem to be a change in focus in school from information searching” that is to look for information in a simple search in one

¹⁸ Hultqvist & Pettersson 1995 p 22

¹⁹ Leth & Thurén 2000 pp 30

²⁰ Ekman 1993 p 36

²¹ Alvesson & Deetz 2000 chapter 5

²² Börjesson 2003 s 9

²³ Detta verk är väl huvudsakligast beräknadt att vara en tydlig och lättfattlig lärobok för den okunnige; men på det att detsamma äfven skall kunna tjenstgöra som ett slags lexikon. Förordet till den kunskaprike skolmästaren, Rosander 1882.

document, to “information seeking” to see the search as a gathering information from several documents.²⁴ Though there is change in school its still far from the ideas about critical thinking in science and school curriculum. In science you look at data in a different way, and place it in a social and ideological content. If we are going to take the curriculum passages around critical thinking seriously, we can not leave any information source unchallenged. What has been so painful in the scientific society must no be applied also to the compulsory school.

The prevailing school culture in relation to facts’.

While there seem to be a case for arguing that there are slightly different trajectories in educational policy texts and history science texts about how to handle information critically we will not argue that they explain the practices of Amanda and her friends. Why then their incessant interest in checking facts that is obvious in Eklöfs study and reflects the portal Kolla Källan? Is it so that this strong tendency reflects a school culture where statements about the world are considered to reflect a naturally existing reality rather than one where constructions are the products of the representation? Have discussions in the scientific society not yet oozed down to the actual school practice or are they not considered to be appropriate there. What about school? Are school textbooks and information handling still characterized by a thinking that emanates from a conception that there are authoritative sources with factual information that need not be questioned? Is the task for the student still to assemble, understand and use such information shunning what may come from other sources.

The fact oriented student.

We suggest that one fruitful way to explain how students make sense of critical thinking comes from looking at the assignments they are given. Ingrid and Amanda answers in the introductory quotes can be seen as reflecting actions that are governed by their assignments and the importance attributed to different ways of solving these assignments by different actors in their school environment. There are several studies that stress the importance of looking at how tasks are constructed²⁵. Nilsson discusses different kinds of reproductive and creative techniques²⁶ used by students. He uses a categorization that also is a taxonomy. A reproductive techniques he mentions “the copyist”, the sampler”, “the recreator”, “the referent” and the interview referent”, were the copyist stands fore the least elaborate way of handling information and the interview referent as the most. The creative techniques he uses is the storyteller and the examiner. The distinction between reproductive and creative techniques is centred on whether the students are trying to say something in “his own voice” or is merely transferring the voice of someone else. His discussion can be applied to techniques used by students when they exercise critical thinking and critical evaluation. If the assignment is constructed in such a way that it’s easily or even best solved by just rearranging the texts from the source documents, why then put a lot of work into critical examination of its contents? The bottom line of such an argument is that assignments can be constructed in such a way that they steer students towards critical examination or away from critical examination. Only if the students receive tasks that force them to be communicative about their own assessment of the content the accuracy and the implications of what is said will be of importance fore them. Limbergs²⁷ findings that the most common way for students to find information on the net is to search until they find an answer to their search question seem to

²⁴ Limberg 2002 s 22

²⁵ Limberg 1998; Stigmar 2002; Jacobsson 2001; Nilsson 2002

²⁶ Nilsson 2002 chapter 5

²⁷ Limberg 1998 chapter 9

support this conclusion. There were only a few students in her study that continued their search until they had an understanding of the subject a behaviour that Limberg considered to be more in line with a good information competence. Bias instead turned out to be an unwanted complication for most of the students.

Another problem that may explain reluctance to critically examine sources may be carried from Khultau²⁸. In her studies she discusses the importance of the emotional aspects of a search process. She divides the process into six different stages and emphasises that the basic feeling in two of these stages are insecurity and anxiety. If you add the complexity of critical thinking and evaluation of sources to the already demanding task of information searching, or even more in seeking, you will enhance the students stress to an even higher level. If this happens when the task is formulated in such a way that the students own voice in relation to the content is the least important, and critical evaluation is not made part of the task, it can be a good stress relieving step from the students' to skip the extra challenge. Eklöf saw this happen several times in his study. The easiest way out is to re-enter into a fact oriented school culture and only conduct controls of a more empirical kind.

The non speaking student

We could see in Eklöf's study that the students didn't use critical thinking or different methods of source control as an integrated part of their work. The discussion above about school culture and the fact oriented student suggests some ways of understanding why. But we also have to understand why the espoused theories that Arne and Anita (and several other students) gave expression to didn't result in a theory-in-use.

To be able to understand the difference between what the students seemed to understand during the teachers first introduction and what they actually did during there one work we will use the conceptions rhetorical awareness and exercised awareness. There is some resemblance to the concepts espoused theory and theory-in-use attributed to Argyris and Schön²⁹. Rhetorical awareness is defined as the student's ability to discuss critical examination and evaluation of sources. The difference here to the concept espoused theory lies in the fact that an espoused theory is a theory that give voice to students ideas about how things should be. Rhetorical awareness is a display of awareness of the existence of a phenomena. Using this concept we make no assumptions that this awareness is an awareness of that critical examination should be a part of their action though they may actually make such a claim as they make suggestions and give examples of different methods that can be used. It is this kind of awareness that we have seen in introductions and discussions between the teacher and the whole group, alternatively between the teacher and individual students. Exercised awareness is defined as the awareness shown by students using critical thinking or critical source evaluation in action as part of a repertoire in concrete work, through independent evaluations and attempt to carry out controls. In this case there is a close relation to the concept theory-in-use used by Argyris and Schön. But it is also a widening of the concept. To be able to speak of an exercised awareness what is actually acted on is the rhetorical awareness. The conception implies a highly developed thinking around criticism of sources and critical thinking. The exercised awareness can be said to be built on different competences on different qualitative levels. It contains a basic awareness of the openness of the Internet which can result in different type of forgeries, badly controlled facts and extreme opinions. It also contains awareness about that the character of the net will affect the students writing, if he uses the net as a source. This has to be combined with a fundamental attitude that correctness and

²⁸ Khultau 1993

²⁹ Li 2001

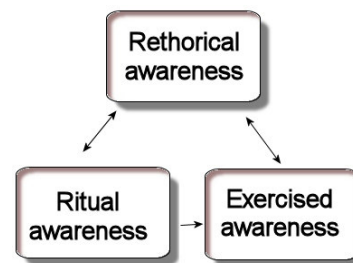
ideological clarity is essential for the writers on sake. Nils-Erik Nilsson³⁰ uses Goffmans terminology and means that only when the students see themselves as principles to there text only if they are trying to say something that is expressions of there own thoughts it will be a necessity for them to be accurate and conduct critical evaluations. It is obvious that the students have met the discussion about critical evaluation on web sources. They are in that discourse and have no problems in participating in the conversation. It's also a possible thought that the school culture, the construction of assignments, the teachers' conception of the content and the students stress relieving strategies are part components in explaining the mis-match between rhetorical awareness and exercised awareness.

We now turn to strategies that could lead to a transformation from rhetorical awareness and exercised awareness that are required if we shall succeed in implementing the qualities that authority mean is necessary in the digital information society. Those are the qualities that were described in the Swedish curriculum.

The critically thinking student.

Primarily we have to think on the relation between the rhetorical awareness and the exercised awareness. The former we consider a presumption for the latter. Without an understanding of the concepts of critical thinking and source criticism it is an impossibility to exercise it in practise. One of the main problems is that the students perception of the demand behind their tasks differs from the perceptions made by the teachers when the constructs the assignments. The students often have strategic or ritual motivations³¹. The strategic motivation is defined as a motivation to achieve a certain goal for example to receive I certain grade. In conducting a ritual action you are part of the activity for its own sake just going through the ropes. You may perform a certain action because you are a part of a school culture, and the school culture defines how you act. The teachers' motivations are often communicative; they want the students to understand. If having a ritual or strategic standpoint, plagiarism will not be a problem for the students. Were the teachers are oriented towards the content, and are motivated by a desire that the students will learn, the students main motivation is to show the teacher that he has done his assignment. One way of changing the school culture is to make the critical thinking and source criticism an emphasised part of the assessment. If the teachers emphasises these abilities in introductions, guidance and the work in judging and commenting the task, the process and its outcome, it will be an incitement for the ritually oriented students to take these kinds of thinking and methods in consideration.

If they then start to make critical examinations, it's not as a result a real exercised awareness but something else. We choose to call this intermediate form "ritual awareness". This can of course led to that students refrain from these concepts if they are not explicitly emphasised, but in the long run it is very likely that what started as a ritual transforms to an integrated part of the culture. For this to happen the students have to take the position of principal, and must be led there by assignments that forces them to communicate.



An other way of approaching this is to challenge the concentrations on texts. When we speak of critical thinking and source criticism it's nearly almost directed towards different kinds of text. Why not use forms of expressions that the students are more at ease with, like images, films, sounds as entrances to build the ability of critical thinking.

³⁰ Nils-Erik Nilsson 2002 s 68

³¹ Nilsson 2002 p 22

How the students handle their assignments is determined by a lot of factors. The knowledge they have when the start, the construction of the tasks, the school culture, their attitudes, the interaction between students and teachers, their understanding of their working artefacts and their methodological knowledge. All of these determinations must be challenged. In this digital age, even the concept of facts and fiction is challenged. Today is merged together into fiction. "We cannot persist in the belief that if only the pupils learn to distinguish between authentic and manipulated, facts and fiction, they will be prepared to handle the many pitfalls and manipulations of the digital media."³² The concentration merely on teaching the students different source critical methods will only be a shallow superstructure that doesn't really change anything.

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³² Langager 2004

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