Five Readers on the Spot:
A Case Study of Readings of Online News Items

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The aim of this study is to discover how readers' worldly knowledge (knowledge of the world through experiences and reading) influences their readings of online news. Readings refer in this study to readings on a practical level (the actual reading process, understanding content and evaluating the credibility of the news items) and interpretations of texts as contextual phenomena. The data were collected through eye-tracking tests, questionnaires, and interviews with three inexperienced readers and two experienced newspaper readers. The study is based on Fairclough's critical discourse analysis and Bhatia's genre theory. The findings show differences in readings between the five readers. On a practical level, eye-tracking showed that while the inexperienced readers' and the experienced readers' reading speeds and reading strategies differ from each other, eye-tracking and the questions on the content proved that all readers have read and understood the text. The inexperienced readers' interpretations concentrated more on the content than experienced readers' interpretations. Besides this difference, we found that the interpretation of the inexperienced readers seemed unsure, whereas the interpretation of the experienced readers seemed either partly overconfident and limitedly critical or self-conscious and critical. It became evident that for all readers their worldly knowledge formed the basis for their interpretations.

Keywords: critical literacy, expertise, eye-tracking, online news, worldly knowledge

1 Introduction

Competence in media literacy can be seen as a civil right inside the EU. For example, Nieminen (2019) proposes that all citizens have the right to competence, which means "equal opportunities to gain the critical skills and education needed to use the media according to their best interests and needs and concerns education and training at all levels". In a knowledge society, citizens have access to many kinds of information, including, for example, online news, which they should be able to understand. Good literacy skills ensure that a citizen is able to participate in the actions of the society and avoid being manipulated. Lately, false news has gained a great deal of media attention. The phenomenon of false news is not a new one, but it seems to be becoming more and more emergent.

However, while it is clear that news items containing untruthful facts are false, some news items that are seen as false are rather representations of the world (see e.g. Fairclough 1992; 2003) from a 'wrong' perspective from a reader's point of view. In order to be able to interpret news critically, a reader should be able to understand news texts as representations and as products of the social context.

Reading is an interaction between contexts, texts and readers (Lehtonen 2000). The news as representations reflect the social context in which they are produced. From this point of view, we approach readers' literacy skills and question whether readers are able to interpret news items as representations of the context. As knowledge of the context can be gained by reading texts beside studying and participating in actions of the society (Bhatia 2004), one could assume that readers' expertise and experience of reading media texts can influence their interpretation of online news. In Finland, freely available online news is offered by evening newspapers, like Ilta-Sanomat and business newspaper Kauppalehti, or websites, like MV-lehti ["MV-newspaper"]. Ilta-Sanomat is generally targeted at 'ordinary people' (but depending on the subject also caters to those interested in, for example, games or business), Kauppalehti is for those interested in business, and MV-lehti for people willing to read news written from an anti-immigration point of view[1]. Because of its availability, reading free online news is a mundane task for many readers, unlike reading news from non-free newspapers, online or printed (Jyrkiäinen 2019). Thus, in this study, we decided to focus on the readers' interpretations of the online news items, which were freely online, with a variety of subjects.

The aim of this paper is to describe readings done by five readers with different levels of expertise. Readings refer in this study to readings on a practical level (the actual reading process, understanding content and evaluating the credibility of the news items) and interpretations of texts as contextual products. In particular, we are keen to find out how readers' expertise and experience of society, economics and business can influence their interpretations of online news items that deal with different subjects. Because it can be assumed that the subjects of news items have an impact for readings, we designed a test setup where five readers read four news items with different (main) subjects. Our research questions are: 1) What are the readings like on a practical level? 2) How critical do the readers' interpretations seem to be?

In this study, readings on a practical level are measured by monitoring readers' reading speed, reading strategies and understanding the content by questioning what the topic is and what is being said in the text. Besides this, the readers were asked to evaluate the credibility of the news items. While understanding refers to the basics of interpretations, being able to interpret meanings of the content, reading critically refers to a reader's ability to interpret texts as contextual products and, based on this, being able to give reasons for their evaluations of the credibility of the news items. Thus, reading critically is a more demanding task in which the reader's worldly knowledge, including genre knowledge and knowledge of the subject in question, might be beneficial. A larger goal for this study is to develop a research framework for discovering how readers' expertise and experience of society, economics and business can influence their interpretations of online news items.

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[1] Haasio, Ojaranta and Mattila (2017) define MV-lehti as a fake news website that consists of deliberate disinformation.

2 The Methodology Used to Conduct the Study

The data were collected in the usability laboratory of the University of Vaasa via monitoring and interviewing **five (5) readers**; three young, **inexperienced** readers (I1–I3)[2] who have no special interest in news and read rarely newspapers and two **experienced** newspaper readers (E1–E2) who read newspapers regularly (see Table 1). The data were collected during spring 2017.

Table 1. Readers and background information

	I1	**I2**	**I3**	**E4**	**E5**
Age	11 (novice)	12 (novice)	14 (novice)	33 (expert)	X (expert)
Education & field	Student 5th grade in elementary school	Student 7th grade in comprehensive school	Student 8th grade in comprehensive school	Academic degree in communication studies	Academic degree in economics
Interested in gaming/ economy	-	Gaming	Gaming	Gaming, economy	Economy
Reading habits of media (Abbreviations: HS = Helsingin Sanomat, IS = Iltasanomat, TS = Taloussanomat, IL = Iltalehti)	Regularly: - Occasionally: if dad reads IS, I also might read briefly	Regularly: Kyrönmaa Occasionally: some newspapers, I do not remember the names; if something has happened, I read IS online	Regularly: - Occasionally: -	Regularly: HS, IS, Vaasan ikkuna, articles on games and hunting Occasionally: Pohjalainen, Kauppalehti, Asahi, BBC, Reuters	Regularly: Pohjalainen; HS, IS, TS, IL Occasionally: Ilmajoki-lehti, Guardian, New York Times, Washington Post, Suomen kuvalehti

The readers read five news items, of which the first is meant only for familiarising the readers with the test settings (without informing the readers about this). Therefore, the actual data are based on readings of **four (4) news items** (see Table 2) that were published in two Finnish newspapers, either Ilta-Sanomat or Kauppalehti, or MV-lehti. Because we wanted to test whether different subjects would be read differently, there was a variety of subjects and publishers for the four news items: earning money by cheating in online video gaming (*Ilta-Sanomat/Digitoday*), exports and investments of pharmaceutical industry (*Ilta-Sanomat/Taloussanomat*), sales of electric cigarettes (*Kauppalehti*) and the crime of theft (*MV-lehti*). All news items also have a noteworthy, specific feature, which we thought to have an impact on reading, e.g. one of the publications is considered as being low-grade and racist. Thus, each text also offered the readers opportunities to note different things, e.g. texts 1 and 4 regarding the sources and texts 2 and 3 regarding economic ideologies or marketing purposes. Therefore, we considered that the readings of

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[2] We have taken into consideration ethical issues that are involved in having children as interpretants (see e.g. Morrow & Richards 1996; Alderson & Morrow 2011). In this study, the children participating have been willing interpretants and anonymity is ensured throughout the process. We have also asked for permission from the parents of the children.

the texts would provide us with data that offer diverse ideas for developing the research frame.

Table 2. Texts 1–4

| Headline | Text 1
Teini teki lihavan tilin pelihuijauk-silla – sitten tuli poliisi /
A teen made a lot of money by cheating in a video game – then the police came | Text 2
Lääketeollisuuden vienti ja investoinnit kasvussa /
Export and investments of pharmaceutical industry increasing | Text 3
Sähkötupakka sai kovan haastajan /
Electric cigarette has a tough contender | Text 4
Poliisi otti kiinni romanialaiset mat-kapuhe-linvarkaat /
The police catch Romanian mobile phone thieves |
|---|---|---|---|---|
| Published | 6.4.2017 | 7.4.2017 | 2.8.2014 | 11.5.2017 |
| Publisher | Iltasanomat/Digi-today | Iltasanomat/ Talous-sanomat | Kauppalehti | MV-lehti |
| Subject | Earning money by cheating in digital games | Export and investments of the pharmaceutical industry | Sales of electric cigarettes | Crime of theft |
| Main message | Game cheater has been caught in Korea; the crime is serious, possibly causing the cheater to be jailed | Exports and investments of pharmaceutical industry are increasing, and invigorate the economy | Sales of vapour tanks are increasing, because using a vapour tank is similar to traditional smoking | The thieves were caught |
| Noteworthy issues | Issue is quite affectional and happened in Korea, based on a Korean source, links available | Issue is described positively (investments are growing, good for Finnish economy), based on information from Pharma Industry Finland | Issue is described positively as a future trend, and published as lifestyle and marketing news | The publisher is considered to be a low-grade and racist publication, Finnish Police as the linked source |
| Sources mentioned in the text
Links to sources | Daum-pages, Reddit, Blizzard, 2 older news items in IS/digitoday
5 links | Advocacy group of pharmaceutical industry, Jussi Merikallio
1 link | Reuters, John Wiesehen Jr.
0 links | Police x 2
2 links (to Police's official website) |

In order to shed light on how the reading is performed, we used eye-tracking and an electronic survey providing quantitative data. In addition, we used interviews providing qualitative data. Studies of eye movements in reading and information processing have focused on various topics and have improved through modern monitoring systems (see e.g. Rayner 1998; Liversedge, Gilchrist & Everling 2011). In this study, eye-tracking data provide the gaze replay including the scan paths, fixations and saccades of the reader during the reading task. Based on the eye-tracking data, we determined how the first reading of the texts is processed (reading speed and reading strategies). Additionally, based on the eye-tracking data, we determined how (and in what order) the reader searches for

information with online search engines to help interpret the news item. Electronic survey provided the data to analyse understanding the content and evaluating the credibility of the news items. Qualitative data provided the readers' views in linguistic form which we approach from the perspective of discourse analysis, as it offers opportunities to develop the research frame. Qualitative data are used for analysing the readers' ability to read critically. The test setup is described in a more detailed manner in Appendix 1.

3 Theoretical Background of the Study

Generally speaking, media literacy can be defined as "the ability to access, analyse, evaluate and communicate messages in a variety of forms". Recently, the term 'new literacies' has been adopted for use in studies that concentrate on citizens' skills and knowledge needed in the age of the Internet. (Toepfl 2014: 70) Even though the media industry offers opportunities for audiences to be active in many ways, we focus more on traditional ways to participate actively through communicating with the content of media via interpreting news items (Carpentier 2011: 519–520).

In this study, we approach 'media literacy skills' from quite a narrow scope. First, we focus solely on reading skills, thus differing from those who also include writing skills in literacy skills, and from those who seek to connect skills with behavioural acting. Our approach resembles studies that apply Hall's ([1973] 1980) classic encoding/decoding model for analysing whether readers decode the message of a text in an affirmative, negotiated or oppositional manner (see e.g. Toepfl 2013), because we are approaching the reception of online news through readings of news items. We approach all kinds of texts as representations of the world (Fairclough 1992; 2003), which means that in reporting what has happened, the 'facts' are always presented from a certain point of view, and thus it can be expected that readers interpret a text actively, giving different interpretations of the text (see e.g. Alasuutari 1999: 3; Lehtonen 2000: 106; Das 2012: 269).

Besides representing meanings, texts are seen as socio-cultural phenomena that are construed and shared in communities and cultures (Fairclough 1992). In communities and cultures, the theoretical gap between the production and reception of a news items can be bridged by the genre theories: genre conventions and expectations mediate both the production and reception of the news items (Erjavec & Kovačič 2009). In this study, our analysis is based on Bhatia's (2004; see also Swales 1990) genre theory in which genre knowledge is seen as essential when producing and decoding a text. Genre knowledge is gained by writing and reading the texts which are activities of aligning oneself into the discourse community. In discourse communities, texts are used for achieving their communicative purposes, and, based on these, different genres are formed. On the one hand, an expert member of the discourse community has a clear vision of the communicative purposes, which affects the ways of writing, including the textual and linguistic choices chosen into the text. However, on the other hand, from the reader's perspective, her/his

reading is dependent on whether they are able to interpret the communicative purpose as supposed, instead of understanding the intention of individual writer (cf. Johnson, del Rio & Kemmit 2010). The communicative purpose is connected to the discourse community, institution (media) and authors of the text that are acting in their social roles (Bhatia 1993; 2004). Therefore, the prior knowledge of the media, genre, authors and the issues discussed in the text affects how the text is interpreted. In order to be able to read critically, a reader's knowledge of context, including worldly knowledge, genre knowledge and knowledge of subject in question, might be beneficial. It is therefore worth considering how being an expert member, novice or even an outsider of the discourse community affects readings of texts. (See also Katajamäki 2016) The idea of the discourse community and expertise in it might offer an explanation for more equal interpretations in some cases and thus help to define the boundaries of different, active interpretations.

Cultural and discoursal knowledge and all kinds of worldly knowledge are gained through experiences in a society, like in working life, education but also, for example, by reading newspapers. As social phenomena, these processes of participation also always have a discoursal level. All kinds of texts are connected to other texts, as texts are intertextual. Depending on a reader's worldly knowledge the starting point for interpreting a text also varies, because besides understanding utterances and words, a reader should understand the contexts of the text, because meanings should be interpreted as part of the culture, society and institution in which a text is produced. (Cf. e.g. Fowler 1991: 43; Fairclough 1992; 2003; Lehtonen 2000; Bhatia 2004).

To conclude, in this paper, we define reading news texts critically as interpretations in which the context is taken into consideration, such as societal structures and practices, media policies and economy, journalistic and genre practices, as they can form a basis for ideologies and positionings distributed in the texts. Moreover, interpreting critically means identifying the purpose of the text, target audience, point of view and linguistic meanings that represents the world in a certain way.

While the interpretations can be considered to vary based on the readers' level of experience and worldly knowledge, but also attitude, readings at the practical level offer very different kinds of perspective to compare readers' readings, as it is also shown that comparisons of individual interpretations and specific eye-movement patterns are not easily measured. This gap becomes even wider if eye-movement patterns are tracked in realistic, everyday situations. (Jarodzka & Brand-Gruwel 2017: 184, 197–198; see also Rayner 1998: 404).

4 Comparisons of the Readings

In this paper we seek to answer what the readings are like on a practical level and if the participants are able to read news items critically. The practical level of readings was

studied by examining readers' reading speeds, reading strategies, understanding the content and evaluating the credibility of the news items.

Our results of eye-tracking show that inexperienced and experienced readers had differences in reading speeds and reading strategies (see Table 3). Eye-tracking failed for one reader (I3), because the reader had visual impairment. This was concluded as being that all attempts of eye-tracking with the particular reader were unsuccessful. As one can expect, more experienced readers read the texts faster. While reading strategies revealed by eye-tracking have concentrated on a sentence level (see e.g. Koornneef & Mulders 2016), Hyönä, Lorch and Kaakinen (2002) offer a more fruitful starting point. Hyönä et. al. (2002) analysed university students' eye-movement patterns. They identified four reading profiles: fast linear readers, nonselective reviewers, slow linear readers, and topic structure processors to describe how readers process a text. The linear readers proceed without looking back, unlike the non-selective reviewers and the topic structure processors, who did this repeatedly. The topic structure processors were the only ones who read the main points of the text again. Additionally, Kaakinen and Hyönä (2007) found out that prior knowledge in a subject discussed in the text affects how the reader allocates visual attention during reading. While inexperienced readers read reviewing texts non-selectively, only one experienced reader used a strategy of topic structure processing (see Table 3). A slow and fast linear reading strategy was used by both inexperienced and experienced readers.

Table 3. Reading speeds and reading strategies based on eye-tracking

Reading speeds					Reading strategies				
	T1	T2	T3	T4		T1	T2	T3	T4
I1	02:22	01:58	02:32	01:15	I1	Non**	Slow	Non	Slow
I2	01:18	01:14	01:10	00:44	I2	Fast	Slow	Non	Fast
I3	-	-	-	-	I3	-	-	-	-
E1	1:05 xxx*	00:41	00:54	1:10 x	E1	Fast	Fast	Fast	Slow
E2	00:47	00:31	00:26	00:12	E2	Topic	Topic	Fast	Fast

* x = Clicked links in the texts; ** Fast = fast linear readers, Non = nonselective reviewers, Slow = slow linear readers, Topic = topic structure processors

After reading each text once, the readers answered a few questions regarding the content of the text. The ability to understand and remember content of four texts was tested with 15 multiple-choice questions. Inexperienced readers had 12 to 13 and experienced 12 to 14 correct answers. After answering multiple-choice questions, the readers were asked to read the texts again and evaluate the credibility of texts, whether they thought the text credible (Yes) or not (No) (see Table 4).

Table 4. Evaluations of the credibility of the texts

Texts/ Readers	T1	T2	T3	T4
I1	No	Yes	No	Yes
I2	Yes	Yes	Yes	Yes
I3	Yes	don't know	Yes	don't know
E1	Yes	No	Yes	Yes
E2	Yes	Yes	Yes	Yes

* Yes = The text was interpreted as credible. No = The text was interpreted as not credible.

One important aspect regarding the readers' evaluations of the credibility of the texts was the possibility to use the Internet. While evaluating credibility, the readers were told that they have the option to click links in the texts and use the search engines, although only one of the readers (E1) actually used the option (see Table 3). There might be several reasons for mainly evaluating all four texts as credible. First, the test situation in which the readers were able to see the entire webpages might have given an authentic feeling to the texts, and thus they did not start to view the texts as false. Second, the genre of texts was news, in which it is, according to Livingstone (2006) for example, positioned to a reader to whom facts are told and thus it does not seem to invite critical readings (see also Katajamäki 2016). Third, the results depend on the definitions of credibility. In this study, we selected news texts that were not untruthful and false in this sense. However, as text 1 contains a huge success story, text 2 is based on a statement from the representative of the pharmaceutical industry, text 3 views the increasing sales of vapour tanks in a very positive light and text 4 is published in MV-lehti, the credibility of these might have been questioned and, at least in some cases, verified by clicking the links in news or by using search engines. In the next chapter, we describe the readers' interpretations and give some further considerations that can be linked to evaluations of credibility.

5 Interpretations of the Interviews

While all readers' interpretations were different, inexperienced readers' interpretations had many similarities and, thus, descriptions of three readers' interpretations are combined in the results. In contrast, interpretations of experienced readers vary and are described individually. We report our findings by starting from the point of the most lacking interpretations in terms of their criticality, and ending with those most fully finding the potentiality of the meanings of the texts. In this paper, our examples are from the MV-lehti news item, because it seemed to offer the clearest way of explaining our interpretations.

All three young readers' interpretations can be described as unsure and concentrated upon the content. In the interviews it became clear that content (not context) and their worldly knowledge of it was the basis for their evaluations of credibility. While they

seemed to understand the content, as shown by the correct answers to multiple-choice questions, the typical answer to questions of a genre, a communication purpose or a writer was "I do not know" or something like that. Thus, we concluded that they had difficulties in situating the texts in context. Interestingly, two of three readers had previously had 'a news project' at school, but this project did not seem to help them to answer the questions. However, inexperienced readers were able to answer questions regarding the credibility of the news items. These answers revealed that the inexperienced readers' interpretations were based on their own worldly knowledge and experiences of subjects discussed in the news items, as in example 1. in which a reader related the subject of the news item to her knowledge of mobile phones and foreigners. The inexperienced readers have also some insight of target groups, which is also related their worldly knowledge, as in example 2.

(1)   *It is plausible that someone is trying to steal the mobile phones, because new phones are common and many people steal those. Also because foreigners are often doing bad things in Finland. (I2)*

(2)   *Maybe for those who are going to buy new phones, because iPhones are expensive. (I1)*

Likewise, experienced readers' interpretations are in some cases based on their worldly knowledge of the subject. However, the experienced readers' interpretations are richer compared to unexperienced readers' interpretations and differ clearly from each other. **The interpretations of the experienced reader with economic expertise we describe as being that of a partly overconfident reader who omits critical perspectives**. In the interview it becomes evident that the reader has the ability to make evaluations. He notes that news items seem 'real', because it is possible to notice that they are published in Ilta-Sanomat and Kauppalehti, which gives an impression of trustworthiness. He acknowledges his lack of knowledge of games and e-cigarette industries, which might affect his ability to recognise the inaccuracy if this were to be the case (but even if it would be possible to check sources by clicking, he does not do it). He trusts his own ability to evaluate but does not (want to) question the credibility of news texts. This attitude is evident in example 3 (see underlined part) as he *chooses* to view the news item as "credible and neutral", and thus not as representing issues by certain kind of point of view, even though he notes that due to the publisher there seems to be an emphasis on some of the content. In general, he seems to view news items as windows to reality which are quite simple productions, rather fast-edited (in enterprises) products that might even be produced by robots in the future rather than products created requiring journalistic professionalism. His answers reveal that he has a great deal of knowledge of journalistic work practices, as nowadays editing news rapidly is often the reality behind the creation of news items. In example 3, this knowledge can also be seen to be stated: Rather than interpreting all journalistic work as not demanding expertise, it describes the reader's attitude and knowledge of fast-edited news items.

(3)   *If I do not take the magazine into consideration (and I do not), I think the news text is credible and neutral, a typical crime news text **even though the magazine seeks to highlight that***

> ***suspected thieves were foreign (bolded content**), the news text could be published in other*
> *newspapers, producing this does not demand expertise. (I5)*

While the reader with economic expertise is capable of evaluating and seems to have contextual knowledge of genre and journalism practices, his interpretations cannot be described as critical when defined as identifying ideologies behind the news items. For example, as the beliefs of the news item about the pharmaceutical industry it is described that "the industry is growing, giving solutions for the people and thus helps the wellbeing of people", but he does not question the motives and states that "I do not consider the news items as very ideological". One reason for seeing the news item as unideological seems to be that the reader believes the factuality of the news genre. Because the reader is an expert in economics, the other reason might be that the reader is indoctrinated into economic thinking. As a conclusion, it seems that willingness to contest motivations behind the news items is also crucial and this willingness can and should be created by teaching critical literacy skills.

The reader with communication expertise interprets meanings achieved linguistically and has clear expectations of what makes news texts credible or not (depending on publisher, source, links) or how economic goals might be pursued in texts. Even though the reader is specialised in communication and game studies, he is not overconfident but wants to click all the links and in the case news of the item of MV-lehti finds out that the source is the webpages of Police of Finland (see also Haasio, Ojaranta & Mattila 2017: 106–112). Example 4 shows how the reader is able to evaluate the linguistical ways to construe meanings of distancing oneself and to identify that his presuppositions affect his interpretation. After reading the text in a methodological manner, he concludes that text is credible. In addition, generic notions are made, as the reader mentions that the more desirous comments might be given in the different section.

> (4)   *The news text fits well with the reputation of MV, the writer has distanced himself or herself,*
> *my presuppositions of MV affect my reading, the news text is **credible** because the source is*
> *the police and there is a link to the source. - - After all it is neutral in a certain way, it is not*
> *taking a stand, which surprised me and did not appear to be transparent but maybe desirous*
> *comments are published in the comments section. (I4)*

The reader also makes some critical comments while interpreting the news item discussing exports and investments of the pharmaceutical industry. He questions the morals behind the goals of pharmaceutical companies, because "they make business with the lives of people". He also considers that it is possible that the reporter is being given an order or a request that he or she has to write about the issue, because the newspaper is commercial which always affects their goals. This view is repeated while the reader interprets the news item about vaping, which he interprets as aiming at advertising the product. Thus, because the reader is aware of his presuppositions, linguistic meanings and their context-boundness, we describe **the reader as self-conscious critical reader**. It might be that studying communication supports the eagerness to interpret the news more critically and

to use in a more methodological manner the ways offered to ascertain the credibility (links).

6 Conclusions

This paper has focused on developing a research frame for discovering how readers' expertise and experience influence their interpretation of online news items. Combining eye-tracking with interviews has provided valuable information for our study: Even though the young, inexperienced readers repeatedly answered "I do not know", when interpreting the news items, eye-tracking and the questions of the content prove that they have read and understood the text on the surface level. Moreover, while the differences between the inexperienced readers' and the experienced readers' reading speeds and reading strategies exist, these differences can be seen be more as mechanical in nature. Moreover, differences between understanding the content seemed to be quite narrow.

In contrast, the readers' interpretations varied notably. The inexperienced readers seemed to have very limited worldly knowledge, but when they read news items that they were able to connect their knowledge to, this knowledge of subjects offered a basis for evaluating credibility. While knowledge of subjects also helped the experienced readers, they were also able to interpret news items as products written in a context. Therefore, we conclude that differences between the inexperienced readers and the experienced readers are more related to abilities for critical readings, probably due to the inexperienced readers' limited worldly knowledge. This finding also brings to the fore that while more mechanical reading skills can be quite good, critical reading skills might need to be enforced through education. As worldly knowledge is also gained through participating in various kinds of cultural and social practices, such as education, communicating with parents or friends, reading newspapers, or following stock markets, it seems to be fundamental in order to be make interpretations of texts as contextual products. As gaining worldly knowledge through socialisation is an individual task for each learner, whether a child or an adult, we see that developmental phase in terms of cognitive and social access into social processes affects readings, and is thus worthwhile to take into consideration in further studies.

The settings of experiment, whole social context and knowledge affect the ways of readings and answering. Even though young readers were familiar with news texts (discussed at school), they were not able to utilise the knowledge in this context. It seemed that in a new situation and with a new task, young readers were not able to "think for themselves". In further studies, a primary research focus could be on differences between critical reading skills. Certainly, gathering information by using more informants, and, for example, by using focus groups that have same background, would help to deepen the study. Moreover, while test situations are never entirely natural, some situations might be easier depending on the familiarity of social situation. For example, the young test subjects might

be able to answer more elaborately for a test taken at school, in which case permission for research has to be applied officially through school authorities. If possible, the context should be so relaxing (also socially) that an interpretant would not feel the need to avoid expressing her/his views and interest towards, for example, own economic status, smoking or preferences what kind of media they follow.

By using several news items with different subjects, our study also showed that the selection of the subject of a news item is crucial. However, reducing the number of news items is beneficial in order to perform more in-depth interviews. Besides this, some genres might invite more critical readings than news, and thus might offer more fruitful results. In some cases, other methods could provide more detailed answers. For example, a *think-aloud method* might help to emphasise that a reader can freely express his or her thoughts and is not questioned and evaluated based on their knowledge. For this study, we decided not to use this approach, because we prioritised obtaining eye-tracking data from as genuine readings as possible. However, the settings of data gathering might clearly have affected reading and answering. In conclusion, it seems that the young interviewees might know more than they were able to communicate.

As a conclusion, we believe this study provided evidence on differences between mechanical and critical reading but also described possible modes of interpretation that would be worthwhile to study further and more deeply by gathering larger and more detailed data. In order to describe how texts can be read critically, readings of one text offer possibilities to not only connect reading to background of readers, but also to subjects of texts, discourses in which they are linked and readers' relationship with a discourse community in question.

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Links to the news items:

Text 1) Teini teki lihavan tilin pelihuijauksilla – sitten tuli poliisi
http://www.is.fi/digitoday/esports/art-2000005158852.html
Text 2) Lääketeollisuuden vienti ja investoinnit kasvussa
http://www.is.fi/taloussanomat/art-2000005159973.html
Text 3) Sähkötupakka sai kovan haastajan
http://www.kauppalehti.fi/uutiset/sahkotupakka-sai-kovan-haastajan/mAMLZNd4
Text 4) Mv-lehti: Poliisi otti kiinni romanialaiset puhelinvarkaat
http://mvlehti.net/2017/05/11/poliisi-otti-kiinni-romanialaiset-matkapuhelinvarkaat/

Appendix 1. The test setup

An SMI Redn Scientific eye-tracker and SMI Experiment Center software package are used for the tests. The data is recorded at 60Hz. The setup for the eye-tracking tests was the following: A standard desktop PC running Windows 8.1, with a 27" screen and Mozilla Firefox as the web browser. The reading conditions were made as comfortable and familiar as possible although the test was conducted in a laboratory envi-

ronment: No headrests or other movement-restricting appliances were used. The articles were 'live' meaning that the content was not copy-pasted into any offline document. This meant that there were also advertisements on the web pages of the articles in question. The SMI Experiment Center software program was configured for recording the entire screen during the tests (Screen rec. stimulus) and not just the web browser. This was done in order to make it possible for the reader to have full control over the screen and use the browser either in window mode or in full-screen mode depending on their preference. **At the beginning of each test we instructed readers to read like they usually read texts.** It was emphasised that there were no right or wrong answers because we were interested in genuine reading practices. The data gathering procedure had the following phases:

Eye-tracking phase:

1) A reader read the texts 1-5 in the web browser, and after reading each one the reader answered the multiple-choice questions regarding the content of the text using an electronic form in another window of the web browser. The readers read five news items, of which the first one offered the reader the possibility to see what to expect when reading the texts 2-5. Thus, the test text is left out of the report and the other texts have been numbered as texts 1-4.

2)

The form had one page of questions for each article. The navigation of the form was not automatic. The reader had to click "Next" on the previous page of the form in order to get to the questions after reading the article. The questions covered the whole article in a way that one question focused on the beginning of the text, one question focused on the middle section of the text and one question focused on the end of the text. For example, for the article regarding the pharmaceutical industry, one of the three multiple-choice questions dealt with the name of the person mentioned in the article. There were three alternatives for answering: one correct and two incorrect ones. The idea was to ask questions that would be easy enough for the reader to maintain normal way of reading instead of trying to memorise every possible detail in the article.

3) After answering all of the questions the reader read texts 1-5 again, and was encouraged to evaluate the credibility of the article. The reader had the possibility to use common search engines (Google, Bing etc.) to help evaluate the credibility. After reading the article the second time, the reader answered a question "Was the text credible or not credible?" using the open-text field of the electronic form.

Qualitative phase:

The reader was interviewed and questioned by the researchers. In this phase, the reader had a possibility to review the texts and was given the texts in print. The reader was requested:
1) to evaluate the credibility, communicative purpose and genre of the texts; ideas of beliefs put forward by the texts; writers' aims of communication and the identity or attitude towards readers, impressions of writers' occupation or professionality or at whom the text was targeted; the reason for writing the text (what has happened), why the writer had decided to write the text, where he or she got the information from and why was it being considered to be important enough to be published.
2) to characterise the publishing newspaper and its target group.
3) to answer whether a reader had read about the issues of the text previously and if he or she was generally interested in the topic of the text.