**Symposium SKRIV! LES! 2019**  
**Educating for 21st century literacies**

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**Symposium Abstract**
This symposium brings together Nordic scholars to consider practices to support skills that are needed to be literate in 21st century. Reading and writing in the digital age raise new demands on students’ meaning making practices. Learners are required, for example, to select relevant and trustworthy sources on the Internet, deal with controversies, integrate information from multiple texts, and make meaning from multimodal texts. In this symposium, the presenters will discuss how these aforementioned skills could be supported in the classroom. Presentations share instructional practices designed to support students’ literacies in different educational levels from elementary to upper secondary school. The presentations represent studies conducted in Danish, Finnish, Norwegian, and Swedish classrooms. The instructional ideas that will be shared in the session are relevant, in particular, for teachers and teacher educators.

The first presentation introduces a pedagogical model that was designed to support students’ online inquiry skills including searching, evaluating, and synthesizing information. The model was applied and tested in the intervention study among sixth graders in Finland. The second presentation also introduces learning activities that were designed to support students’ online inquiry skills that would help them to deal with and discuss about the controversies that they face online. The third presentation focuses, in particular, on activities that draw students’ attention to sourcing when they read multiple texts on controversial issues. The studies in the second and third presentations were conducted in upper secondary schools in Denmark and Norway. In addition to educating students to be critical thinkers when reading information that vary in quality, they need to be able to make sense from information that is presented through different modalities. The final presentation adds this aspect to the symposium by showing how Swedish elementary school students negotiate meanings of multimodal texts and how teacher can scaffold them in these processes.
Presentation 1

Designing learning experiences for online inquiry

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The Internet is rapidly becoming the defining technology for literacy and learning and, as a result, it is essential for today’s educators to teach students to become skilled online readers. This presentation introduces an instructional model that was designed to support students’ online inquiry skills. The instructional model, consisting of two main components, was implemented in 9 classrooms by classroom teachers. First, each online inquiry component skill - searching, evaluating, and synthesizing information - was explicitly taught to students (3 x 45 minutes / component skill). Second, students applied the learned skills in two online inquiry projects.

Explicit teaching of each online inquiry component skill proceeded in five phases: 1) Students observed a video where two virtual students modeled effective strategies, 2) Students analyzed modeled strategies with a work template, 3) Students discussed about their analysis with a partner followed by a teacher-led discussion, 4) Students practiced the strategies with tasks that were designed to support learning of a specific component skill, and 5) Students assessed their learning with the help of reflection questions. Students applied online inquiry skills in a social science project (4 x 45 min) and in a science project (8 x 45 min). The social science project was conducted in a restricted online environment with a limited amount of sources whereas the science project was conducted in an open Internet. The project work was supported with work templates.

The efficacy of the instructional model was evaluated with an intervention study conducted in a sixth grade. The analysis that we have completed so far shows that the model supported at least students’ evaluation of online information. In the presentation, the instructional model and learning materials will be critically reflected and lessons-learned will be shared.

Presentation 2

Matching factfulness with dialogic literacy in online inquiry tasks

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The web provides easy access to information and opportunities for dialogue, but online information is of varying quality, while the online debate is often polarised and sterile. In this context, both learners and teachers tend to perceive online inquiry as a process aimed at finding correct answers, thereby establishing who is right or wrong.

Being able to find and evaluate online information is undoubtedly a critical competence, but also biased, misleading or factually wrong sources can have educational value, as long as they are treated as a window into elements of public discourse such as polarisation, misconceptions, more or less
rational fears, and downright manipulation. Our working hypothesis is that educational intervention ought to aim at fostering both factfulness and dialogic literacy in order to prepare learners to living and collaborating with other members of a community.

This study describes the design and preliminary results of a classroom activity for the upper secondary school that takes as a point of departure a sharp increase in the number of Danish girls who opted out of the national HPV vaccination program, as a consequence of social media, TV programs and newspaper articles reporting severe side effects of the vaccine.

In the first part of the activity, the students are asked to individually a) observe data about participation in the HPV vaccination and find out how many girls were opting out of the program; b) look for explanations for the decrease in participation; c) find information about side-effects of the vaccination (which we expected the students had previously identified as a critical topic); d) find information on how well vaccination prevents cervical cancer, and try to calculate the incidence and expected mortality rates for the illness.

As a group activity, the students are then asked to write a recommendation for an imaginary younger sister of a fellow student, whose parents disagree about whether she should take the vaccination. The younger sister is the primary addressee but it is expected to be read by her parents too.

Preliminary results of this study suggest guidelines for additional learning activities based on ‘good dilemmas’, where individual online inquiry integrates with group discussion and written production to support students in making informed judgements.

Presentation 3
Activities designed to support students’ sourcing skills

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Students need to take source information, such as author expertise, publication date, type of text, into consideration when selecting, processing, and using textual resources to complete multiple document literacy tasks. Theories of source comprehension share insights regarding how source information is used for interpretation and assessing information (i.e. was the information reliable and accurate or not?). Explicit instructions and practice are of importance to mitigate the risk that students overlook source information. This presentation reports from an intervention in six classes from upper-secondary school, with the aim to improve upper-secondary school students’ sourcing skills. The intervention was embedded into students’ regular curriculum in language and arts and implemented by their teachers. Before the intervention, teachers had participated in 3x3 hours of professional development, in which detailed guidelines for the intervention were shared and discussed extensively. The intervention had three focus: to develop students’ sourcing strategies when selecting information, when reading the information, and when using the retrieved and read information to communicate it back to an audience. A central design feature in the instructions was contrasting cases. Through contrasting two fictive students’ sourcing strategies of varying quality, students were supposed to notice the “good” strategy. In the presentation the instructional design is elaborated and implications for new interventions are discussed.
The socio-technological changes in the communication and representation of meaning provide opportunities for more hybrid, intertextual and creative texts that go beyond traditional modes, conventions and genres. This study explores the significance of digital mediation and multimodal text design for students’ understanding of specific content, and with it the role that teacher’s scaffolding may have in such a modified learning environment with access to digital technologies. Access to digital technology in the classroom enables the composition and organization of ideas on screen, which demonstrates learner's knowledge with varieties of modes and media. The focus is in particular on the semiotic choices that 8-year-old students make when composing and making meaning from digital multimodal texts: where the students direct their semiotic attention and how does the text design influence their reading, what modal and digital strategies they apply and what is the role of the teacher’s scaffolding for their understanding. Theoretically the study is informed by the perspectives of social semiotics assuming that the relation of form and meaning is motivated by the interest of the sign-maker and the social context. I will discuss the complexity of making meaning from digitally mediated multimodal texts in regard to the hybridity and blend of semiotic resources that affords the students a wide range of available designs. These young students predominantly interacted with the visual modes influenced by their prior experience as novice readers as well as the semiotic meanings of the text. Teacher’s re-directing of students’ semiotic attention played a significant role in their processing of meaning. The findings imply a need for a holistic approach to literacy teaching that involves an understanding of the multimodal design and hybridity of texts as well as semiotics of technology. There is a significance of developing multimodal and digital pedagogies to support understanding of both the production and reception of multimodal design of digital texts.