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The challenge of raising the quality of the textbook and its companion website – Just when is less more?

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Abstract

Companion websites of today typically contain multiple-choice questions on topics already covered by other tasks in the corresponding textbook. Such redundancy does not help to increase usage of digital learning resources in schools, nor does it help to develop a holistic digital competence. Using multimodal social-semiotic theory, I propose that quality criteria should consider the didactical interplay between textbook and its companion website. My claim is that textbooks and companion websites that are better integrated will ensure increased usage by being a qualitative necessity in addition to the textbook.

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1. Introduction

Johannesen, Øgrim & Giæver (2014) propose the specifics of an augmented comprehension of teachers' digital competence. This competence is threefold and consists of "the knowledge needed to perform *teaching of ICT* and *teaching about ICT* as well as *teaching with ICT*" (2014: 310). They warn that maybe 'know-how dimension' of digital competence has become a taken-for-granted competence. With that in mind, I want to call attention to the part of the teacher's competence that allow him or her to evaluate and choose which digital learning resource to apply in his or her *didactical design* (Hudson, 2011). This would correspond to what Johannesen et al. call *teaching with ICT*, defined as "using technology as a tool in other disciplines to achieve added value in learning" (2014: 309). The problem, they state, is that "this kind of technology use does not necessarily develop the holistic digital

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competence as described in the curriculum and national policies” (Johannesen et al., 2014: 309). They (2014: 305) agree that the updated definition of digital skills given in the *Framework for basic skills* reflect their notion of the three aspects of digital competence:

Digital skills involve being able to use digital tools, media and resources efficiently and responsibly, to solve practical tasks, find and process information, design digital products and communicate content. Digital skills also include developing digital judgement by acquiring knowledge and good strategies for the use of the Internet. (Norwegian Directorate for Education and Training, 2012: 12)

A digital learning resource that is a component belonging to a traditional educational textbook, is what we call a *companion website*. Such a website will typically contain tasks, more specifically often many multiple-choice questions on the same content that also has tasks in the textbook. As it is hard to accept that online multiple-choice tasks alone can serve the comprehensive definition of digital competence, in this article, I will argue that we need to add a new type of quality criterion in order to exceed a sole focus on exploiting the digital mode.

2. Usage of Digital Learning Resources

Far from all digital learning resources are companion websites, but as the 2013 survey by The Norwegian Centre for ICT in Education (NCICTE) tells us, about for example the subject Norwegian (L1) in lower secondary school, the two digital learning resources that most teachers state they use among the ones that are publisher developed, are in fact companion websites – totaling 76% of asked teachers. We do not know if the teachers who state that they use these two, namely *Kontekst 8-10* and *Fra Saga til CD*, also use the corresponding textbook. However, it is reasonable to assume that teachers would want to use a textbook and its corresponding companion website, when choosing to use a companion website. In the following, when looking into examples of these two works, I will refer to the revised editions of both textbooks and companion websites. The revised editions are adjusted to be better suited for the revised national curriculum of 2013, and should therefore – as the revised curriculum – even more extensively focus on basic skills. As digital skills are included in that, I find it more relevant to investigate the new editions. They are called *Nye Kontekst 8-10* (Blichfeldt & Heggem, 2014a) and *Saga* (Jensen & Groseth, 2014a),[†] although these are not confirmed to be the two most used ones.

The abovementioned survey (NCICTE, 2013) on usage of digital learning resources in Norwegian schools found that teachers do not particularly use digital learning resources all that much, and that ninth grade teachers of the subject Norwegian use them less than eleventh grade teachers. Generally the teachers would however like to use digital learning resources more than they do. This gap between actual usage and wanting to use the digital learning resources, NCICTE found to be due to a combination of factors. The two most often occurring factors are the quality of the technical equipment and a lack of knowledge about the digital learning resources (NCICTE, 2013: 10). A third factor amongst ninth grade teachers seems to be that they find it takes too much time to use the digital learning resources (NCICTE, 2013: 31).

I claim that lack of knowledge about the digital learning resources also is a factor about lack of time, as well-educated teachers are capable of researching and finding out about digital learning resources. They just do not have enough time to do so. Evaluating what is out there and figuring out how to apply these digital learning resources in their lesson design takes extra time. Thus, lack of time is a major factor why teachers do not use digital learning resources more. The most frequent stated purpose for why they do use digital learning resources is even more interesting. Usage for *variation* is the main reason.

[†] All references in the following when mentioning *Nye Kontekst* and *Saga 9* refer to these books. *Saga* is the name of the series, one main book per lower secondary school grade, whilst *Nye Kontekst* only consist of one main book for all three grades of lower secondary school.

3. The Present Relation Between Textbook and Companion Website

To unravel wherein the potential to increase the quality of the digital learning resources lies, we need to look into the present relation between textbook and companion website. As the term ‘companion website’ implies, there is a definite relation between the educational textbook and its website. They share the same title and are components of a complete work directed toward specific grade levels in schools. They will have the same corresponding chapter structure as the textbook. This is for example the case for the two books I will focus on, *Nye Kontekst* and *Saga 9*.

The textbooks contain the theoretical content that students should learn, but also the tasks that are to help students learn the content. The blurb of *Saga 9* states that it has a ‘rich web resource’.[‡] The book’s introduction names it in a list of the work’s components as a ‘comprehensive website’. In the entire book there are no sweeping regular elements to signal that a specific type of content can be found online. Comparing this to *Nye Kontekst*, we find a somewhat more visible reference to the website. The blurb lists the URL for all ‘digital components’, however without specifically mentioning what types these are. In the introduction there is an illustration telling us that ‘test yourself’-tasks can be found on the website. Accordingly, all tasks pages mention the website twice, actually, and quite in proximity of each other. The first mention is entitled “Do you know this subject content? Test yourself on [URL]” and the second is “More tasks in *Nye Kontekst Tasks* and on [URL]”.[§]

What these mentioning’s of the websites indicate about the relation between textbook and companion website, is that the website is a marginal extra-product which could be nice to have. It is not however a must-have, as there is no mention of any such elements which are in fact necessary.

If we look into what the actual websites announce, as with the textbooks, there is less signaling in *Saga 9* than in *Nye Kontekst*. For the *Saga 9* website there is only the title you click on to enter into the specific relevant grade level, the title being “Saga 9 Student tasks”, to signal what is to come. For *Nye Kontekst*, there is much more instruction directed toward the students. Upon entering the collection of tasks, the instruction reads: “In the practice room the students will find many different types of drill tasks, such as multiple choice, writing tasks, and categorization of concepts” (Blichfeldt & Heggem, 2014b). Worth noting is that the ‘writing tasks’ consist of simple fill-in-word tasks. Thus, the tasks all have pre-made answers, and are in fact ‘drill tasks’. This is also the case for *Saga 9*.

My preliminary analysis** of comparing the textbooks to each respective companion website point to a tendency of tasks that encourage reading the textbook with a purpose of simply – in reference to the PISA aspects of reading literacy (OECD, 2013) – *accessing and retrieving* the information. This does not necessarily require any learning of the knowledge content of the text. However, where the questions of *Saga 9* seem to demand more inference and collecting information from different places in the text, the tasks of *Nye Kontekst* typically will ask the student to retrieve information which has already been bullet pointed or otherwise highlighted in the textbook. Adding to this, *Nye Kontekst* also has the same type of accessing-and-retrieve tasks, although not multiple choice, about the same content in the textbook as on the website. In comparing these two, one could say that the distribution of tasks to the website in *Nye Kontekst* only adds the interactivity of the digital mode. In this way, the distribution of tasks to the *Saga 9* website adds both interactivity of the digital mode and a chance to ‘drill’ content – i.e. access and retrieve information – which does not have an equal ‘drill’ task in the textbook.

4. Didactical Interplay with Functional Specialization as a Means to Increase Quality?

To look into the didactical interplay between a textbook and a companion website by using multimodal social-semiotic theory, one could say that to employ a *functional specialization* (Kress, 2003: 46), they each need to exploit their medium’s set of modal affordances. One could gather that the fact that the companion website tasks are

[‡] My translation. In the following, all quotes from the textbook and companion websites are mine.

[§] *Nye Kontekst Tasks* [Oppgaver] is an additional textbook component to *Nye Kontekst*.

** By preliminary, I mean analyses of singular chapters (2-3 in each work) in the textbooks and its corresponding chapters in the companion website. This is defensible as textbook and companion website is a genre with a strict chapter recipe.

multiple-choice or interactive fill-in-word tasks, that they exploit the digital medium's possibilities and as such, tasks are employing a functional specialization. Consulting a relevant quality criteria framework for digital learning resources, such multimodal and interactive exploitation is positively valued (NCICTE, 2012).

However, we need to look further into the interplay that supports the more comprehensive holistic definition of digital competence. An example of such content can be seen in chapter two of *Saga 9*. This book has a 22 pages long chapter on screen texts. In the beginning of the chapter, four of the five learning goals are conspicuously digital: "To read hypertexts and on-screen composite texts", "to recognize the specifics of screen texts", "to write texts as hypertext", and "to evaluate the content in a website" (p. 30). Surprisingly, the only corresponding tasks for this content online are two multiple-choice questions with the headline "Photography online": "What do you know of picture copyrights?" and "What do you know of pictures and being webwise?" (Jensen & Groseth, 2014b). In the textbook, you will find tasks that facilitate a more holistic digital competence. For example, on page 51 in *Saga 9* you can find a task that instructs students to search online for websites about protection of personal privacy. This is followed by an instruction to make a list of the most important webwise rules and a discussion task about how to actually succeed in following these rules.

This example clearly shows how self-supporting the textbook is meant to be, independent from the companion website. Putting the theoretic content only in the textbook, even for an explicit digital topic, could be defended as a useful distribution to help the students attain an overview of subject contents in one place, namely the textbook.^{††} Also putting the holistic digital competence tasks in the textbook, though, is not necessary to achieve an overview of the theoretical content. The indirect message sent by the fact that this type of learning-facilitating tasks only can be found in the textbook, rather than the companion website, is a means of communicating that the important stuff always is in the textbook.

5. Functional Load Distribution Between Textbook and Companion Website

Having the important stuff only in the textbook, could be seen as a means of letting the textbook carry the *functional load* (Kress, 2003, p. 46), compared to the website. Before addressing the question of what harm there could be in this, since the textbook still has tasks that address holistic digital competence, I need to introduce Van Leeuwen's concept of *information linking* between text and image (2005, p. 230). His two main categories are *elaborative* and *extensive* information linking between text and image. A sub-category of extensive information linking is similarity; an effect you would achieve if the tasks were about exactly the same, only in a different mode. The two elements would be deemed redundant. As my analysis of tasks in the textbooks and companion websites suggests, this type of linkage or interplay – the redundant kind – is most common. Thus, the teachers seem to be quite accurate when stating that they use digital learning resources for the purpose of *variation* (NCICTE, 2013).

Now, approaching the question of a potential harm in this his interplay between the textbook carrying the functional load and the companion website having redundant content for the purpose of variation, it is useful to look at image-text relations of textbooks. In her study, Løvland (2010) claims that the massive redundant information linking between text and image in lower grade textbooks – a redundancy meant to help young readers – in fact creates a risky habit for the students. They learn to not expect important information in textbook images. When, for example, seventh-grade textbooks employ more complex information linking, where necessary information may lie in illustrations, students will miss out on this content.

My suggestion is that the redundancy between textbooks and companion websites is quite comparable. As with too much redundancy in how the image relates to the text in a textbook, too much redundancy in how the companion website relates to the textbook, will also leave the teacher left with few reasons to deal with the redundant mode or medium. When the functional load is carried by the textbook, and the website only holds redundant content, slightly different because of the digital and interactive mode, that is exactly what creates 'usage for variation'.

^{††} *Nye Kontekst* has extra multimodal resources such as film clips, interview clips and instructional clips directed toward the student, but not contextualized in terms of instructing the students on what to do with the clips. The result is therefore that the resources, in a hidden way, is more directed toward the teacher. Similarly, *Saga* has such resources and additional tasks (not multiple choice) in the teacher section. In the limited format of this article, I will only look into that which is directed toward the students.

More importantly, *variation* is another way of making teaching not boring. Thus, indirectly, the purpose of companion websites can be interpreted as adding entertainment. This is troublesome. Blikstad-Balas (2012) has shown how implementing technology in school practices increases the complexity in teaching. She argues that many schools make the false assumption that students will just attune to using the Internet educationally, without explicit and clear guidance or a visible educational purpose for the educational digital activities. Others have also shown how the educational didactics need to become clearer in the classrooms (see for instance Haugsbakk, 2011; Skagen, 2014).

My point is that in not letting the companion website carry any functional load, only allowing it the exploitation of the ‘fun’ interactive, digital mode, students are not taught a holistic digital competence. Thus, a truly functional specialization does not only exploit the technological possibilities, but also signal the companion website’s importance by letting it carry the functional load that suits its modal affordances. This will better facilitate the teacher to use the companion website more so, than if the website offers almost the same content as the textbook.

More research is needed in terms of analyses of existing companion websites and qualitative research on actual usage. However, I already do propose that teachers should include a new quality criterion in their evaluations of digital learning resources, namely the interplay of a purposeful distribution of functional load between the textbook and its companion website, thus ensuring a truly functional specialization of each medium. More of the same is actually sometimes less.

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