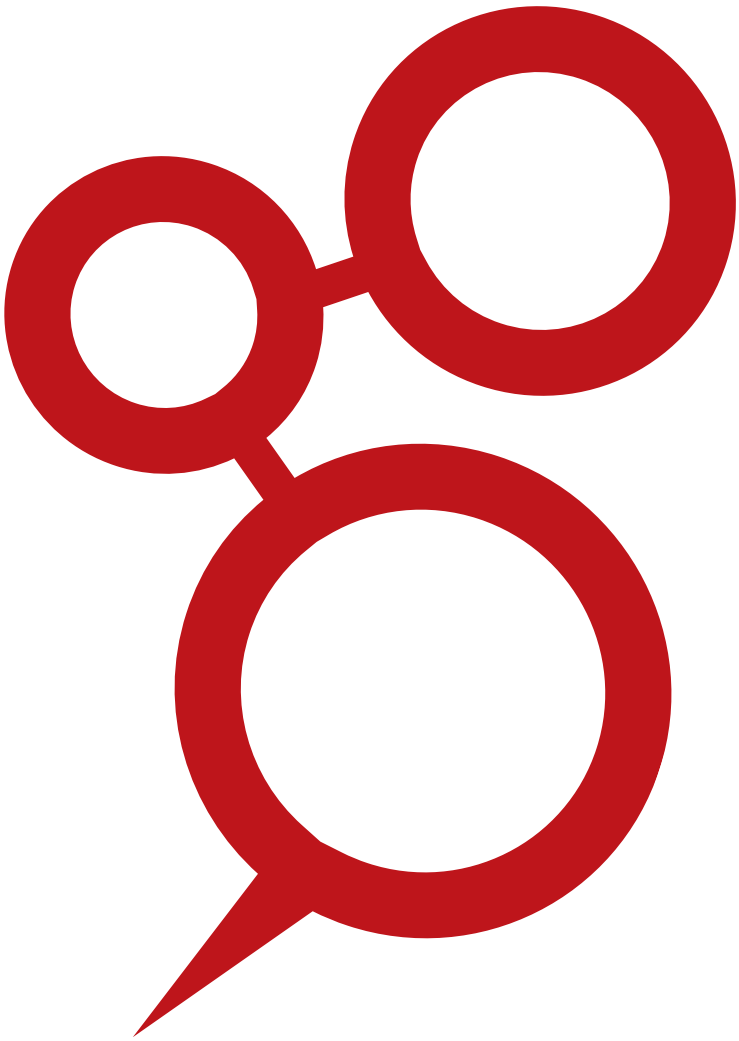

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Interview with Birgitte Holm Sørensen

By FREDRIK LINDSTRAND

In this issue of Designs for Learning our readers are invited to make further acquaintance with professor Birgitte Holm Sørensen, as she gives an account of the interests and influences that have formed a background to the development of her theoretical approach to educational/didactic design.

Birgitte Holm Sørensen is professor and director of the research programme "Media and ICT in a Learning Perspective" at the Danish School of Education, Aarhus University. She is well known to many of our readers for her extensive work within the fields media, ICT and learning, educational/didactic design and learning theory. She has been head of a number of substantial research projects over the years, including "Children Growing up with Interactive Media - in a Future Perspective", "Children and Computer Games", "Media and ICT in new Learning Environments" and "Multimedia Didactics and Learning". In addition to her research, professor Holm Sørensen has also initiated and co-developed LAB (*Language Across Borders*), a research-based virtual language platform for foreign language learning in primary and secondary schools. Among her recent publications are "Skole 2.0. Læring og didaktisk design" (2009, with Karin Levinsen and Lone Audon), "It, faglig læring og pædagogisk videnledelse" (2008, with Karin Levinsen) and "Children's informal learning in the context of school of knowledge society" (2007, with Oluf Danielsen and Janni Nielsen).

FL: As a background to your engagement in questions regarding learning, digital media, different arenas for learning and so on, can you tell me a little about the path that has led you towards the focus you have in your research today? What were you interested in at previous stages of your career as a researcher and what led you onwards to where you are today?

BHS: I started as a PhD student within the field of media education. At that time, in the late 80's, media research in Denmark was concerned with reception research and there was a discussion about critical media theory, which had been the dominating theory in media education since the 70's. Critical media theory emphasizes content analysis and focuses on the ideology of the text, whereas reception research focuses on the person and his/her meaning construction in relation to the text. This shift of perspectives within the field of media education led towards a focus on the children. And it furthermore focused on the opportunities and possibilities of the media. A great part of the earlier research on children and media has been on violence and other risks. I was very concerned with reception research and the possibilities of the media were also my main focus in my research. The project focused on children's own production: their production of film, video and sound. You can say it was against the instructional approach that was dominant in schools earlier. I think the first piece of the theoretical jigsaw puzzle was the focus on children's own production, inspired by Dewey and Freinet, and the reception research approach. That was the first theoretical construction.

In the beginning of the 90's we were a group of researchers who started a Danish national network called *ICT and multimedia and Learning* (supported by the Danish Research Council). It was very important for me to be in that research network, because multimedia and learning were the pivotal points and because the research group was very inspiring. Multimedia had come up as a new word that led to a number of questions concerning the nature of multimedia and the consequences of thinking in multimedia instead of dividing between the different modes – sound, pictures, text etc. What were the challenges of thinking these expressions together - and what are the consequences for the way of teaching and learning? The theoretical approach was inspired by the Vygotskij tradition, and Wenger's approach to social learning was a great inspiration. His findings were very important for me in the project *Children growing up with interactive media - in a future perspective* which started in 1997. It was a project with nine researchers and I was the leader of that project. We studied children's use of digital media in school, at home, at recreation centres, at libraries and at computer cafés. We were present in all the places where children used computers. My focus in that project was learning, and it was very interesting to study learning outside school because the social approach to learning was so evident. The social way of learning with ICT was the most important findings for me because it was so new to see how the children learned in ICT based communities, and how they learned in ICT based networks. We developed the concept of learning network and learning hierarchies. How children learned in hierarchies; how the oldest or the most ICT skilled children were the most important. Sometimes the youngest children were the most ICT skilled and the older learned from them. Learning hierarchies and learning networks was our way to conceptualize their learning in these organizational forms. And if I compare the way children learned outside school their ways of learning were very similar to the way adults learn in an enterprise. Our results were compared to Wenger's studies about learning in an enterprise.

FL: It's kind of beautiful in a way that it's similar. It seems to say something about the way we are as social and cultural beings.

BHS: Yes. And it was a contrast to school and its traditional emphasis on individual learning. It is not until the emergence of project pedagogy that you

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see children learn together in school. The social learning and the different social learning forms was the next piece of the theoretical puzzle. The approach to ICT based social learning outside school was also very important for me because I saw it as potential for the school system.

After that project came the next piece, when I started an action research project (2004-2007) in a school near Copenhagen. I would call that school a "knowledge society school". They had rebuilt the school with new, big spaces where three classes – first, second and third level; fourth, fifth and sixth level; and so on – could be together. Each class had their own room but they could also be together in smaller rooms and in a big space called "the common space". Project learning was central for the pedagogic approach of the school and ICT was available in all rooms. In that project I studied children's use of ICT in their learning processes. Since it was an action research project, I could give the school some suggestions based on my research of children's use of ICT *outside* school and the teachers were very open to trying new practices. The findings of that project were that the relations between teachers and students have changed. The relations are not only vertical, but also horizontal. Another finding from the project was that students are seen and used as resources in school, due to their competences within the field of ICT. Some of the children are more ICT competent than the teachers. The teachers changed their view of the children and saw them as resources instead of seeing them as persons who should only learn from the teachers. This change towards a view of children as a resource is very important for the school. We also found that children's social learning outside school social learning forms are efficient ways of learning in the school. The children worked together in communities and we also saw evidence of learning hierarchies and network learning.

FL: Interesting. Did it involve the teachers as well?

BHS: Yes, the teachers would in some cases be at the bottom of the learning hierarchy in relation to ICT. And they were very open in relation to the children as a resource, and they really used them as resources in school. Another finding was that ICT offer new possibilities in the field of didactic design. The teachers begin to think in innovative ways and to prepare in different ways. They used the Internet in their preparations and some teachers only used Internet when preparing for a lecture. There was a shift and this appeared at the end of the project. Some of these findings are also bricks in the theoretical puzzle.

With web 2.0 the school acquires new possibilities for teaching and learning. Web 2.0 offers new services and resources for design for teaching and learning. Web 2.0 actualizes participation, socialities, collaboration, knowledge sharing, production, creativity, publication and globalization. When these concepts are based on ICT they are new within the school context. The way of thinking about these concepts in school is a challenge and change the way you design

for teaching and learning.

FL: In what way?

BHS: I think there are two big challenges for the school. On the one hand we have technology, digitization and web 2.0 right now (soon web 3.0, with new challenges), which is one big challenge for the school, especially in relation to design for teaching and learning. The other challenge is the development of competences in a knowledge society perspective, that one needs other competences in the knowledge society than in the industrial society. Castells (2000) used the concept of the self-programmed person who takes up new challenges and is able to learn by herself and in connection to other people and. find information on the internet etc.

In the Danish network I mentioned earlier, we worked very well together and when the network ended we all agreed that we needed to continue our collaboration. And in 2000 we started a master education *Master in ICT and Learning* (MIL) as a collaboration between five Danish universities. In the construction of this education we made a module called ICT and didactic design, and that was the first time I used design in relation to didactics.

Today I talk about ICT based didactic design (when I am in a German-Scandinavian context) or ICT based design for teaching and learning. I understand didactic design as a process concept. Design is not only something you do before the practice. You design before, but you also design during the practice. So it is a concept of process and it is open and changeable and it is connected to the context. Didactic thinking must be new every time and it is therefore a question of designing every time you teach and learn. And the next thing in this is that didactic design traditionally has been the teachers' concept and within the teachers' field of practice, but in my view both teachers and students are didactic designers. Didactic design concerns both teaching and learning, and when you talk about the teachers as didactic designers, the teachers must design their teaching and make a design for the students' learning, while the students make a design for their own learning. And then the question is how the design of the teachers and the design of the students are connected.

FL: It's like a thriller.

BHS: Yes. There must be a connection. I have constructed a model that combines a number of aspects that I think are important in relation to design for learning and teaching in a web 2.0 perspective. Web 2.0 provides many new possibilities. In a few years ICT will be part of the environment of the school, and a part of the way you think. My approach is based on the German-Scandinavian approach to didactics, which is different to the anglo-american way of understanding didactics. Traditionally, didactics, learning

and pedagogical theories are the three main parts of didactic thinking. What is coming up now is the multimodal approach. It changes the way of thinking didactically because didactics has, traditionally, been bound to the book and to the verbal text. The use of pictures, animation, sound and other modes changes the way of learning. Another aspect of this has to do with a stronger, emphasis on communication. Communication theories must be a much bigger part of the didactic design today, also in relation to multimodality. Similarly, play and games are also a part of the model. If you take the self-programming person Castells (2000) talks about as a new way of conducting your life in the future, theories of play are needed. Construction play and role playing can be seen as examples of this. Children's different ways of playing must be included to a greater extent in school. Their way of playing can be continued in the project work in the school. But in order for this to be successful children should be allowed to work with projects from the very beginning of their time in school. Otherwise they will assume that play has no place in school. The play approach is a way to conduct and to develop different learning strategies.

FL: So you mean that children need to learn that play is part of the learning strategy?

BHS: I especially think that construction play and role play are ways of learning. When children play they are creative and productive and make changeable plans for their play. They construct new challenges to bring their play further and the collaboration is a part of the play. When children start in school they already have these experiences which are useful for the project work in school. In the action-research project in the school, I mentioned earlier the children were engaged in projects from the beginning of their school time and we could see that they adopted some of their play strategies in the projects. I have written about that in a book that will be out later this year (Sørensen, Audon & Levinsen, 2009).

Another aspect of the model is game. Game has always been a part of all people's ways of being together. Computer games and online games play a big role in children's, young peoples' and some adults' leisure time and we have brought games – learning games, serious games and different traditions and variations of games – into school. I find that games can contribute to the learning processes in school, partly due to the competitive aspects that are part of them. When used in a constructive way, I think competition can in some cases be a driving force in the learning processes.

FL: So that is one of the potentials you see in games for learning?

BHS: Yes, but I also see a potential in the narratives found in a lot of games. Bruner (1996) points out that the narrative is very important in the learning processes and I agree with him. The sociality of games and play is another

important aspect, related to what I have talked about as social learning. In a research project conducted in 1999 we asked children why they played games, and the children answered "to be together with others". Competition was another important factor for the children.

FL: Looking at the different approaches you have applied in various projects, you have had quite a few different ways of approaching research. Apart from the texts you have produced in relation to your various projects, some of the projects have also resulted in artefacts etc. Within your current project about serious games you took part in designing prototypes for games and another project led to the development of a platform for language learning.

BHS: Yes, a group of researchers, teachers, ICT designers developed a platform for foreign language learning. The development of the platform was based on the project "Children growing up with interactive media – in a future perspective". In that project we found that children between 12-14 years were chatting in English. They started in Danish social communities and continued to international social communities. I found that it was important for the school to know that, and therefore asked a lot of teachers if they knew that children were chatting in English outside school. The teachers did not know about that at that time. And then I told one of my colleagues who is in the research field of foreign language learning in a pedagogic perspective and she was very interested. Subsequently, we started the project. We were funded by the Danish ministry of Education. Based on the findings in the other project we asked: How to use the fact that children like to chat and communicate with other children around the world - and how to use game based activities we have founded in the project? The platform was developed in collaboration with teachers and children from a user driven perspective. And we got an EU award for the platform.

FL: In that way you seem to take your results and your engagement one step further.

BHS: Yes. When I have some findings from my projects that seem fruitful in an educational perspective I try to think of how to bring it in action in the school system. And then I contact other researchers and teachers and try to start a project.

FL: To conclude, what do you see as the biggest challenge within the field of learning and ICT within the nearest future – for school, for the research society or for both of these?

BHS: The biggest challenge is to develop a school suitable for the knowledge society. I think that ICT will be part of the environment in the future school

and I also think that the school will not be viewed as isolated from the society in the same way as the school of the industrial society was. You will see a local global school. Children's' global life outside school will be brought inside the school and the teachers will also be interested in the global dimension. A challenge is to develop ICT based design for teaching and learning in a local and global perspective. Our recent research shows that ICT can facilitate learning and provide better learning results but it depends on the design for teaching and learning. Children use ICT outside school as an every day practice and they want to use ICT in the school as an every day practice. I have interviewed some children in project work who say if we don't have ICT in school what can we do? We can spend the time in school by talking with other children and then we can go home and do the work on the computer. So the learning process is outside school if they don't find the computer in school.

FL: The learning is where the computer is.

BHS: Yes, in some children's perspective. A pencil is only used for writing shopping lists.

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