



DESIGNS FOR LEARNING

Vol. 6 / No. 1-2

Designs for Learning
Volume6/ Number 1-2
2013



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Editorial

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In this issue we will elaborate further on the discussion about different conceptions of 'design'. Design stems from the Latin word 'designo' which meant depicting. In Swedish and in English 'design' was historically used about maps or sketches of ships and buildings. Design then was more or less thought of as a practical device for creating an object that already existed in our minds or as intentions of God. The possibility to represent salient features of an object before it was built had many advantages in relation to constructions made in a process of trial-and-error.

Currently 'design' have several meanings in different settings and the definition is often debated. In *Towards programmatic design research* Löwgren, Larsen & Hoby define how this debate have created a program for handling the research and design process in collaboration with users, design researchers and other stakeholders. They argue that the notion of design research entails research where design practice forms part of the knowledge production. Based on their characterization of the nature of design, the authors propose to conceptualize this kind of research as programmatic design research.

'Design' typically has positive connotations and maybe that is why so many of us employ the concept for slightly different purposes in various settings. In much the same way as 'art' and 'artists', 'design' has been thought of as objects or milieus developed by professionals, individuals with particular talents and knowledge that distinguished them from non-artists. From this point of view only selected items or processes were recognised as 'design'. This view also attributes design to individuals in the same way as the romantic notion of the great artist working by inspiration of God or Nature.

Nowadays the concept of design is often employed when we want to describe a conscious process of creating something, a product or a text with a precise function, a game, a piece of art, a particular milieu or a represen-

tation of what we know about a phenomenon. In these cases 'design' refers to the different considerations made in the process of creation as well as to the result of the imaginative process. Each design is often believed to reflect aesthetic, practical, technical, ethical or other of kinds of deliberations and values. These considerations are often thought of as inherent features of the particular design possible to 'read'. If we regard design as 'text' we can study (historical) designs and designers by analysing how different deliberations and values are manifested in material and intangible features or in the particular functions of an object, process or milieu.

In current discussions about design everyday communicative acts, meaning making, teaching and learning are labeled as 'design' since they require considerations regarding how to 'best' articulate a particular view on the matter in focus. This discussion is elaborated in the interview with *Diana Laurillard* a philosopher and mathematician who got interested in the design of teaching when using digital tools.

The broader discussion on design in different settings can be understood as a result of social change: Knowledge today is not only content established by a small elite. Knowledge has to be recognised and is constantly negotiated on different arenas. Current technology provides us with many different forms of representations in various combinations of modes and it is easy to use new tools when we want to communicate and make meaning. These changes have led to a renewed interest in rhetoric's: To get the attention of others, to be able to convince and persuade them about your points of view on things are important skills for everyone in 21' century. With new possibilities to convey meanings in different modes we all become designers since we can make deliberations about how to best articulate our views and values even though only particular representations are recognised as signs of learning when assessed in an school setting.

Askeland & Aamotsbakken show how students design their learning by using different learning resources: *Students' use of learning resources for writing in physics and Norwegian*. In the article *Designing Learning Opportunities in Interaction Design: Interactionaries as a means to study and teach student design processes*, Ramberg, Artman & Karlgren have studied complex processes of design in classroom settings and discuss the consequences for teachers and learners based on detailed analyses of interactions and representations.

What then about milieus or objects that have no particular designer to whom we can attribute certain values and considerations featured in a design? How do different configurations of learning settings establish and confine relations between teachers, learners and a particular content? That is a question that is discussed in the article by Vestergaard Louw and Højmark Jensen: *In Search of Learning Opportunities for All - Exploring Learning Environments in Upper Secondary Schools*. Their focus of interest is centred on the structures of the school and the organisation of learning processes as they come into play in the relationship between student and teacher in everyday school life.

In *Between Sudoku rules and labyrinthine paths - a study on design for creative Sudoku learning*, Liao & Shih used a self-developed ARCS learning motivation scale to analyze the effect of Sudoku game on students' learning motivation. The results showed that the Sudoku learning design with illustrations of labyrinthine multipath could help students understand Sudoku rules and enhance their learning interest in Sudoku.



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