

## Innovative learning systems

At DSV, research on Design for Learning (DEL) has been conducted since the beginning of the 1970ies. Scope and focus of interest has varied over the years but taken together, the research conducted has formed a critical mass of competence at DSV in this research area. Design for learning has also been named a candidate for selection as a leading research area at Stockholm University. This expertise constitutes a firm ground for conducting research of highest international and competitive standard. Our research have resulted in a considerable and impressive theoretical and methodological expertise in the area. We are also active in a number of national and international research projects, incl. EU projects.



At DSV we have a unique combination of psychological, pedagogical and technical expertise, which together with our research focus on DEL has led to a number of very interesting projects. The research conducted is internationally recognized and stretches from psychological/pedagogic studies, over mobile learning, to simulation solutions with virtual actors. Systems developed by DSV researchers have won international prizes and are used at leading universities all over the world.

In our work, we are focused on both developing innovative learning systems as well as performing research on those and other DEL environments.

Our research aims at:

- Contribute to the ongoing scientific discourse in the field of educational technology regarding the complex and contradictory realities of technology usage within different educational settings
- Explaining the potential roles of DEL and in particular, how mobile devices and other learning solutions can be used in the school context, from an empirical and critical theoretical basis
- Develop and study how simula-

tion and virtual cases can be used to enhance education, training and assessment

- Investigate how flexible learning solutions can improve education in both industrialized as well as in developing parts of the world
- Identify conceptual and social transformations that the use of DEL introduces into conceptual key-domains such as for instance mathematics and language education
- Providing a body of empirical results based on assessments of the learning environments and the underlying theories
- Our approach is interdisciplinary. Our team focuses not only on technology but take into account and also deal with behavioural, cultural and social contexts as equally important aspects
- In order to emphasize the importance of flexible education, DSV is since 2010 heavily involved in open education and other flexible learning models.

We are open for discussions regarding potential collaborative projects, EU-proposals etc. in our field.

### Contact

If you wish to learn more or discuss future cooperations please contact:  
Professor Staffan Selander, coordinator  
[staffan.selander@dsv.su.se](mailto:staffan.selander@dsv.su.se)

# Design for Learning, DEL

The fast development of contemporary technology and techniques is changing conditions for learning in profound ways. Learning has, with the wide spread use of technology, like lap top computer, smart phones, and tablet computers in conjunction with high speed internet connections, become ubiquitous. Indeed, the world of education is currently undergoing a second revolution where digital technologies are transforming how we think about schooling and learning. Design for Learning, DEL, is one of the candidates to be a leading research area at Stockholm University. This is an acknowledgement of the growing importance of technology enhanced learning both for academia and for the business world. This is also one of DSV's four profile areas.

## Innovative educational applications

In our work, we are focused on understanding how information and communication technologies, best can be used to support learning, teaching, and competence development throughout life. We also design and develop innovative educational applications.

Our approach is interdisciplinary. Our team focuses not only on technology but take into account and also deal with behavioural, cultural and social contexts as equally important aspects.

Our work is conducted in projects that are financed by a number of foundations both in Sweden and abroad.

### Research areas

**Mobile Learning** This research area aims at understanding the intricacies and complexities of introducing mobile technologies into school's curriculum and accepted teaching practices.

**Social Media and Learning Environments** Our research interest is to investigate pedagogical models that can be adjusted to support learning and teaching in "the digital era" and to develop and design learning environments accordingly.

**Virtual cases for learning and assessment** Virtual cases (VCs) can be described as a computer based simulation of real life situations. VCs allow training in any time, any place and repetitive. VCs facilitates the creation and use of multiple cases in most various domains and are found to be superior to traditional teaching cases in terms of learning outcomes and assessment results.



## Contacts

Staffan Selander  
Teresa Cerratto-Pargman  
Uno Fors  
Preben Hansen  
Henrik Hansson  
Patrik Hernwall  
Petter Karlström  
Harald Kjellin  
Ola Knutsson  
Sirkku Männikkö  
Robert Ramberg  
Matti Tedre  
Gunnar Wettergren

Please consult the weblink below for contact information.

## Ongoing projects

Math edUcation and playful LEarning (Mulle)  
mVisible - Mobile Inquiry-based learning  
IT support for Master's and PhDs students  
PLACES - Purposeful Learning Across Collaborative Educational Spaces  
A study on the role of representational artifacts in interaction design: Sketching as an embodied practice (Dekal)  
We.learn.it  
Co-operation in Instructional Technology (ICT in Education)  
Writing to learn In Digital Environments (WIDE)  
Creating filmed drama of simulated problem solving which is used for students self-examination  
Virtual cases for learning and assessment