

Södertörn University

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Type of organisation

SME School University Public Authority
 Training No Profit NGO

Fields of action

SMEs Youth Universities Public Authorities
 Equal opportunities Schools Unemployed

Description of the Organisation

Södertörn University

Södertörn University is situated about 15 km south of the city centre of Stockholm. It is a medium sized university in Sweden with 11 000 students in 72 programmes and 250 courses and with 100 doctoral students. It has almost 900 employees and more than 60 % of the teaching staff has doctoral degrees. The turnover exceeds 80 million euro.

Södertörn University combines interesting subjects to make engaging and often unique degrees. It conducts education and research in the humanities, social sciences, technology and natural science and offer teacher education with an intercultural profile. Research into the Baltic region and Eastern Europe forms a knowledge environment that is among the best in the world.

The university is characterised by a strong belief in the ability to think freely and critically and the desire to produce new knowledge and contemporary innovation. Research and education take place in close cooperation between academia, business and the surrounding community.

Internationalisation runs through all the university's activities and is a natural element of all research and education. Södertörn University has more than 90 partner universities in other countries.

Academic schools at Södertörn University

- School of Historical and Contemporary Studies
- School of Culture and Education
- School of Social Sciences
- School of Natural Sciences, Technology and Environmental Studies

The School of Natural Sciences, Technology and Environmental Studies

The School of Natural Sciences, Technology and Environmental Studies conducts education and research in Media Technology and Informatics, Environmental Science, Tourism Studies, Biology, Mathematics Teaching, Meal Sciences and Geography.

These form the basis of a multidisciplinary environment with a strong focus on interdisciplinarity. Many subjects are young academic subjects, which results in even greater potential for new and exciting collaborations across subject boundaries.

School of Natural Sciences, Technology and Environmental Studies

Media Technology at the department is an interdisciplinary subject that includes technology, social science and the humanities. It covers areas such as advertising, web design, photography, film and design. The subject has both practical and theoretical aspects; including skill-focused activities such as text and image processing, editing and the production of moving pictures, but also more theoretical reasoning on the social role of information technology.

Environmental Science bridges the natural sciences, humanities and social sciences and is a fascinating interdisciplinary field for education and research. Degree programmes and research are closely linked and education is provided from undergraduate to doctoral level. The research area for doctoral studies known as Environmental Studies is broad and currently has 20 doctoral students at the School of Natural Sciences, Technology and Environmental Studies.

Teacher education

Additionally, the university offers Teacher Education and Police Education; organisationally, these report to the Vice-Chancellor with each being run by an Academic Head and staffed by teachers from the university's academic schools.

The degree programmes lead to work in pre-schools, primary and secondary schools, upper-secondary schools or extended schools. All programmes include theoretical courses, placements and independent projects.

Two unique profiles influence the degree programmes: Interculturality and Liberal education. The intercultural profile raises the awareness of people's different cultural backgrounds. Concepts such as ethnicity, class, gender and generation are used to understand society, inside and outside the pre-school and school. Teacher Education is based on the idea of all people's equal value and that everyone's knowledge, experience and convictions must be respected.

Knowledge in an artistic form provides students with the opportunity to broaden perspectives and to deepen experiences and feelings. This is the liberal education profile. Thus, the capacity for reflection on the self is seen as an important goal for students and teachers. Personal contact with children and young people is central to all educational activities.

Specialists at the university teach on the theoretical courses, giving the best possible circumstances for the development of new knowledge, skills and approaches.

Placements are located in municipalities around Stockholm and in a couple of neighbouring municipalities. The students will have several placements during the education. Their first placement will be during the first semester and will coincide with receiving a personal supervisor at the preschool, school or extended school centres. The student also has a mentor at the university who will have meetings together with the supervisor to support the student in their development to a professional teacher.

Experience of the organization in previous European projects

ALFA- II0439:

A New Rural Enterprises and Agrarian Development, a contribution to the development of management capacities. Paulina Rytönen

ERA-NET (FP6, FP7):

Norface network, Ann Runfors

Marie Skłodowska Curie Actions:

International Career grant, Jenny Berglund

Fellowships: Sona Luterova, Anna Janowiak, Elzbieta Korolczuk

Training networks: Gunnar Flume, Italo Marconi

Erasmus+ Do Well Science Ann Mutvei

Erasmus+ Kimmo Granqvist

BONUS:

Baltspace, sustainable management of the Baltic Sea, Michael Gilek

InterReg:

Smartzoos, Kai-Mikael Jää-Aro

Biodiversity, Paulina Rytönen

Archipelago – strategic partnerships for business development, Paulina Rytönen

Shared expertise in Baltic urban planning, Kari Lehtilä

Immigrant inclusion by eParticipation, Mauri Kaipainen

Agora – network sustainable tourism, Göran Andersson

Experience and Expertise of the organization in the project's subject area

In general, the objectives of the project are in concordance with many of the present activities at the School of Natural Sciences, Technology and Environmental Studies.

Science education

Since 2011 there has been an active development of the teaching of science. The main focus has been on teacher training and improvement of the skills of students to teach science from pre-school and onwards. This development was promoted by support from Södertörn University which made it possible to employ prof. Svein Sjøberg from Oslo University as guest professor 2013–2014. It has resulted in more than twenty publications describing improvement of science education. Thus, we have, e.g., found that interdisciplinary teaching and learning promotes understanding and skills in the individual disciplines; cooperative learning usually give better results compared to individual studies; increased capacity of problem solving, reasoning and understanding promote further learning. Our findings are implemented in the education of preservice teacher students.

Media technology

Media technology is a crossdisciplinary design-oriented technology subject at the School of Natural Science, Technology and Environmental Studies. The subject was established in 2001 with focus on design and analysis of digital media. Media Technology has both practical and theoretical aspects and include craft-oriented skills, such as text and image management, and the editing and production of moving

images, but also more theoretical discussions about IT's role in society. Media technology is taught on undergraduate and graduate level. The research in media technology is partly interdisciplinary, since it may combine artefact and design science with subjects from social sciences and humanities. The subject has four major directions of research: interaction design, game design, information systems, media, technology and society. Examples of current research themes are data journalism, e-democracy, sustainability, the maker movement, norm critical design and competitive intelligence.

Contributions that can be provided to the project

Our competences in science education and media technology combine skills that are necessary for the project. These skills are used to investigate science teachers use of digital competences in the education of students in secondary schools. Our research backgrounds are useful when writing a review investigating the national experiences using digital tools in science education in schools and to create guidelines for teachers and policy makers.

Reasons of involvement in the project

In Sweden, the Curriculum for compulsory school was revised 2018 with additions of “digital tools” in the Overall goals and core content of all subjects. Therefore, we are interested in examining how well teachers are prepared for this task in their teaching. The project give us also an insight how different tools can visualize processes and concepts in science and improve students in learning science. This could be compared with our previous investigations of pre-service teacher students and how practical work, such as field studies and laboratory work, influence learning processes. Furthermore, the project will give information about weaknesses and strengths in teaching digital tools in schools.

Contact Person's Experience and Expertise

Ann Mutvei is a senior lecturer at Södertörn University. She got a PhD in biochemistry 1988 at the Stockholm University and spent three years as a postdoc at the EMBL (European molecular biology laboratory), Germany. After the postdoctoral period, she started her own research group working on the characterization of nuclear envelope proteins in yeast. The last years Ann has been involved in the development of science education with teaching based on evolutionary perspective. Currently, her research is focused on how to develop learning in natural sciences. The research has been directly linked to the learning situation and how to develop the learning of students in the natural sciences. She is interested in the development of methods for performance assessment and in using conceptual profile to understand development of the students and their learning outcome.

She is currently involved in a project that examines how aesthetic learning processes can improve students' understanding of natural sciences. She has many years of teaching experiences in biochemistry, cell biology, molecular biology and science for preservice teacher students.

Kai-Mikael Jää-Aro is a senior lecturer at Södertörn University. In 2004 he got a PhD in Human-Computer Interaction from the Royal Institute of Technology in Stockholm with a thesis on computer-supported cooperative work in virtual environments. After graduation he worked at various media technology companies as UX designer, technical writer, and quality control engineer, until taking up his current position at Södertörn University in 2014. His research at Södertörn University has included the development of location-based mobile games. He has 25 years of experience of teaching at university level.