Södertörn University (SW)

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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.

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 and ongoing European projects

ALFA- II0439:

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

ERA-NET (FP6, FP7):

Norface network, Ann Runfors

Marie Sklodowska Curie Actions:
International Career grant, Jenny Berglund

Fellowships: Sona Luterova, Anna Janowiak, Elszbieta Korolczuk

Training networks: Gunnar Flume, Italo Marconi

BONUS:
Baltspace, sustainable management of the Baltic Sea, Michael Gilek

InterReg:
Smartzoos, Kaj Mikael Jää Aro
Biodiversity, Paulina Rytkönen
Archipelago – strategic partnerships for business development, Paulina Rytkönen
Shared expertise in Baltic urban planning, Kari Lehtilä
Immigrant inclusion by eParticipation, Mauri Kaipanen
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.

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 almost twenty publications, most of them in concordance with the objectives of this project. 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.

The last years the school has had formative assessment in focus which also is in line with the proposed project.
Media Technology at the school is an interdisciplinary subject that includes technology, social science and the humanities. The activities cover areas such as advertising, web design, photography, film and design which are similar to the objectives of this project. The objectives of the proposed project are similar to those at media technology as these often include group activities where students with different skills have to cooperate in order to solve problems.

Contributions that can be provided to the project

During this project, we will have the opportunity to use our own skills in order to supervise the use of the didactic material developed by the schools involved as contractual partners and also to evaluate the scientific and pedagogic reliability of that material. It is also possible to use the platforms in our own teaching. In this project, we can contribute to chapters in a publication on science education with focus on 1) how to deal with the large individual variation of observations and cognition when using web platforms, 2) assessment of the quality of the learning using these platforms, and 3) also how to use statistical methods in order identify the important factors enhancing or diminishing the learning and understanding of the students.

Reasons of involvement in the project

The project is an opportunity to identify young people's interest in science connected to daily life. Very often the scientific themes that are chosen in school do not attract younger generations and this is probably one of the reasons why students lack motivation. We would like to investigate if the interests of the students differ between European countries. Another interesting issue is if practical activities with digital tools could 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.

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. We are interested in the development of methods for performance assessment and in using conceptual profile to understand development of the students and their learning outcome. Our personal development to our skill of today has been based on experience of earlier teaching activities closely connected to the teaching, mainly within teacher training programmes (since 2004) but also of environmentalists and biologists.

Ann has also been involved in the development of new methods of assessments of the quality of the teaching and learning based on the 4 R's of Doll's, recursion, relations, richness and rigor. Further, we have found differences between how observers perceive the same situation. To solve these problems we have, established methods for training of observations and also how to create situations in order to promote the understanding for these different individual experiences of the same event.

Ann has published articles in many different research journals in her fields as well as 17 articles on different aspects of research in science education.