The Department of Science Education (DSE), University of Copenhagen, Denmark, has become increasingly involved in developmental work and research in Africa (Burkina Faso, Egypt, Ghana, Kenya, Mali, Senegal, South Africa, Tanzania and Uganda), both as a partner in research projects with a focus on educational capacity building within higher education and through teaching and training of prospective secondary school teachers, faculty and PhD advisors. This engagement has made it evident that Africa as a spinoff of two decades of economic growth is in the early days of an educational revitalization revolution. Four times as many young people are enrolled in higher education than ten years ago and private universities are mushrooming all over the continent. The next big push will be on reforming and updating teaching practice and learning paradigms. DSE is well positioned to enhance its global engagement, and expanding research and development activities is an institutional priority area which will be strengthened in the coming years through strategic partnerships and competitive funding.

Research: DSE is the largest research unit in Denmark in science didactics. The research findings from DSE must first of all be of high international standards and at the same time valuable for science education in Denmark as its main constituency. Secondly to attract resources it must be nationally appreciated in the educational milieu and other learning and research environments. Thirdly, in a global knowledge economy DSE research and learning activities must be internationally appreciated as being among the best, as being innovative in combining several traditions and approaches, as well as being inspirational and original in other ways. DSE is heavily engaged in research on science education co-creating new scientific knowledge and new teaching methods with partners in Africa and other parts of the Global South.

As a consequence DSE is strategically addressing these goals in a number of ways: By successfully competing for large international research grants; by obtaining prestigious invitations as guest lectures and keynote speakers; by participating in various competitively funded development projects and by being a very productive research environment in terms of publication outputs. An example of internationally appreciated research is the book “Higher Education and Capacity Building in Africa”, which was co-edited by a researcher from DSE and published by Routledge in 2016. The book explores what role specific places and relationships have in knowledge production, and analyses how cultural experiences are included and excluded in teaching and research.

Education: DSE offers a range of courses and programmes for members of faculty within University of Copenhagen. Students from any faculty can attend DSE courses and complete project work in science didactics, science communication and science studies. There are roughly 10 PhD students and 15 MSc students at any given time at DSE and DSE offers a range of international PhD courses on the global marked. Tailored training and mentorship for science lecturers in developing countries is a growing service area. The objective is to create efficient and effective learning systems through strengthening local science based teaching competencies and capacity, as well as to form regional didactic networks among themselves.

Competencies: In our global engagement in training and research programmes, such as EDULINK, ENRECA and Building Stronger Universities, DSE has acquired competencies within the following topics:

- Establishing and/or upgrading PhD programmes (scientifically, administratively and managerial)
- Develop common PhD courses (e.g. in science didactics, theory of science, qualitative methodologies)
- Enhance international partner universities capacity in terms of research expertise within educational research and support systems and facilities to conduct quality research of direct relevance for higher and secondary education
- Train and capacitate local PhD supervisors to become resource persons and trainers
- Assist in designing academic oriented PhD associations
- Implementation of research based teaching in higher education
- Training of science and medical faculty in inquiry approaches to teaching
- Secondary science teacher training