

SFU abstract for EPIC

(Centre for Education and Practice in Interprofessional Collaboration)

The EPIC vision: sustainable healthcare and social services through real-life interprofessional education (IPE).

We will create IPE where interprofessional mindset and sustainability awareness are internalized perspectives, and where benefits are maximized for all stakeholders.

In EPIC, students will develop interprofessional competences through solving real-life challenges, and learning with, about and from each other. Real-life challenges will be tailoring interprofessional care plans for patients in the primary healthcare sector and sustainability plans for workplaces to help them obtain the UN sustainable development goals, and interactive educational sessions about health and life mastery for children.

EPIC will be a collaboration between the University of Bergen, the Western Norway University of Applied Sciences, the municipalities of Bergen and Øygarden, and with a pilot partner from the University of Tromsø.

EPIC will have five integral components:

- **IPE model unit.** Will develop a workplace-based IPE model with maximum educational and holistic sustainability; and create an efficient infrastructure with a continuous cycle of development and implementation of workplace-based IPE.
- **Student-driven idea hub unit.** Will 1) build a student IPE network both nationally and internationally; 2) identify enabling factors and barriers for students' learning; 3) develop new and sustainable workplace-based IPE activities.
- **IP mindset unit.** Will nurture an IP mindset in the training and practice of health and social welfare professionals, both in the workplaces and in the educational institutions.
- **Research unit.** Will investigate how IPE impacts learning; healthcare quality; IP mindset; and SDG mindset in students, patients/users and children, health- and social personnel, workplace arenas and faculty.
- **Communication unit.** Will establish and expand mutually inspiring national and international IPE networks; disseminate the work of EPIC; and maximize its SFU value.

PhaCE – Pharmacy Centre for Educational excellence

The Centre for Pharmacy at the University of Bergen is a joint venture between the Faculty of Medicine and the Faculty of Mathematics and Natural Sciences. Despite being the smallest and newest of the pharmacy schools in Norway offering a 5-year degree, it has had a strong focus on educational improvement over several years. Inspired by Fink's taxonomy of significant learning and integrated course design, we have gradually introduced more student-active forms of learning and adjusted our assessments to better align with the learning outcomes. This has resulted in several educational awards, merits and grants, and a development of an academic microculture that is supportive of educational experimentation. Our students have been active partners in, and drivers for, this work.

We would, however, argue that there are some complex challenges facing the field of pharmacy and thereby also pharmacy education that require a more comprehensive approach if we are to tackle them.

The pharmacy education has traditionally had a strong focus on the scientific and technical aspects of drug development and manufacturing, as well as the quality assurance aspects of dispensing medications safely to patients. While there is still a need for these basic skills in the healthcare sector, the more traditional roles of the pharmacist are becoming obsolete by technological advances. Feedback from the Norwegian and international practice field is that the pharmacists we educate are highly knowledgeable, but that they do not have the necessary skills to handle today's and tomorrow's challenges. They tend to think in terms of black and white, are risk averse and prefer to follow regulations and guidelines to the letter. Being able to strictly adhere to protocols is an important skill for pharmacists in some settings. However, successful clinical outcomes often require pragmatism, prioritization, and the need to compromise. Likewise, taking part in developing the pharmaceutical industry and finding new approaches to drug therapy or pharmaceutical services that can impact individual and societal health require an innovative mindset.

In PhaCE we will explore how changing the way we teach and assess our students can change their professional identity, self-confidence, and professional behaviour. We believe that this requires a comprehensive approach to the whole curriculum, the general engagement of staff and the clear voice of the students. Changes need to be driven by theory and followed by research. Working with an international expert in pharmacy education, as well as bringing in new expertise from fields of education, design, and creativity research, will help us imagine new possible futures for pharmacy education in Norway and internationally.

PhaCIL's activities will be rooted in four guiding principles:

- 1) Students as partners
- 2) The engaged educator
- 3) Emergence in society
- 4) Value-driven reflection

The goals of the Centre will be to:

- Increase coherence. Students have given feedback that they lack a sense of coherence, across the faculties, between the different courses, and between what they learn and their future profession. We will work across the faculties and departments to increase the students' feeling of coherence.

And to educate pharmacists who:

- Embrace uncertainty. The pharmacists need to recognize which situations call for strict adherence to protocol, and which require a more flexible mindset. The students need to gain

experience and tools for navigating situations where there is no single right answer, that gives them confidence to assess risk and make decisions, and to be innovative and creative problem solvers.

- Are excellent communicators. The ability to communicate well with patients, the public and colleagues are essential skills for the pharmacist, today and in the future.
- Develop the medicines of tomorrow. The centre will allow us to teach the students novel drug formulation and production skills and engage them in ground-breaking drug discovery research, giving them the competencies needed to contribute to the discovery, development, and manufacturing of new, innovative medicines.

The heart of PhaCIL will be placed at the Eitri Medical Incubator. Here we will establish a working space, **The Educator Hub**, where the staff and students involved in the Centre will be able to meet and work on their educational innovations and share ideas and solutions.

The Centre will have a designated **Pedagogy Task Force**. This Task Force will have pedagogical and innovation expertise, a in depth knowledge of the study program and its individual courses and be strongly connected to the vision and goals of PhaCE. It can be booked by the academic staff to assist in course redesign and help with everything from practical use of digital learning platforms, observation, and feedback, and planning of research to follow the implemented changes. PhaCE will work with Apokus, the Competency Centre for Norwegian pharmacies, who provide primarily online continuing education, to develop new blended learning courses for skills such as supervision, communication, and how to gather, compare and assess information, suited for both students and practicing pharmacists. We will work with NoPSA, the Norwegian Pharmacy Student Association to have a connection with, and input from, pharmacy students from across the country. A range of other activities will be initiated: *Curriculum redesign, Lab as learning arena, Meeting pharmacist innovators, The person behind the medicine* and more. We will experiment with and be inspired by a host of different theories of learning such as significant learning, constructive alignment, experiential learning, and dialogic pedagogies, as well as Nørgård's research on potentials of teaching and learning design in relation to future education and the ethical university.

Reidun L. S. Kjome will lead PhaCE. In addition to our staff from the Centre for Pharmacy and our collaboration with Apokus, our team will include Dr Robert M. Grey Jr, Dep. of Pedagogy, UiB, Dr Ingunn J. Ness, SLATE, UiB, Dr Rikke T. Nørgård, Danish school of Education, Aarhus University, Denmark, and Professor David J. Wright, University of Leicester, UK. We will hire an administrator, a 20 % professor 2, and a lab technician with a special interest laboratory pedagogy. We will also hire an alumni researcher for a year at the time to contribute to the work of the Centre.

All developments will be shared and disseminated – to the other health profession programs at the Faculty of Medicine, to the department of Chemistry, to the other pharmacy educations in Norway, and internationally.

- > o Navn på senteret: **ScaleIT**
- > o Navn på senterlederen: **David Grellscheid / Noeska Smit**
- > o Navn på vertsinstittutt/ansvarlig enhet: **Infomatikk**
- > o Navn på eventuelle formelle samarbeidspartnere (ikke
- > enkeltpersoner, men institusjoner/organisasjoner)

UiB IPED and SLATE

- > o Et «abstract» med en kort beskrivelse av senterets visjon,
- > overordnede mål og planer:

ScaleIT

The SFU ScaleIT will function as a hub to scale up computer science (CS) education activities in order to bring us closer to the CS curriculum of the future. We do this by surveying societal expectations as well as collecting and investigating novel approaches to teaching and learning based on ongoing successful pilot projects.

CS education as it stands does not scale well to provide for a growing technologically literate society. The pervasiveness of technology in all aspects of life makes it necessary for society to have a certain level of technical literacy skills, while at the same time, CS practitioners more than ever need to be aware of the societal impact that their technical decisions have. Current CS education is not well suited to adapt to these rapid changes, with its strong focus on technical content on the one side and on the other, an inability to adjust for previous knowledge students may already have.

We have the following aims:

- Modularize the curriculum to react better to the wide variety of student skills and allow for individualized learning experiences.
- to understand the expectations that industry, academia, and the wider society have of a CS degree in future
- to make better use of in-house expertise present within the university across disciplines.
- to establish better interfaces between CS education and primary and secondary education as well as to develop well-maintained active learning resources that can be accessed by all.

ScaleIT center activities are structured around four focus areas that will bring us closer to the CS curriculum of the future:

- In area 1, we will investigate opportunities to modularize the CS curriculum in order to offer a more individualized learning experience based on a student's existing expertise and goals and aligned with the expectations that industry, academia, and the wider society have.
- In area 2, we will collect and develop novel learning tools and activities and make them easily available and accessible to interested lecturers and students in CS internationally.
- In area 3, we will build connections between computer science and other disciplines across the University of Bergen in order to create mutually beneficial relations that enrich the learning environment in both directions. We will also extend existing successful projects and programs and successful connections with secondary schools and industry in order to better understand the rapidly evolving curricula and industry expectations and the impact that these have on our study programs.